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Endangered and Threatened Species: Final Rule To Revise the Critical Habitat Designation for the Endangered Leatherback Sea Turtle; Final Rule

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 0808061067–1664–03]

RIN 0648–AX06

Endangered and Threatened Species: Final Rule To Revise the Critical Habitat Designation for the Endangered Leatherback Sea Turtle

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

ACTION: Final rule.

SUMMARY: We, the National Marine Fisheries Service (NMFS), issue a final rule to revise the current critical habitat for the leatherback sea turtle (*Dermochelys coriacea*) by designating additional areas within the Pacific Ocean. This designation includes approximately 16,910 square miles (43,798 square km) stretching along the California coast from Point Arena to Point Arguello east of the 3,000 meter depth contour; and 25,004 square miles (64,760 square km) stretching from Cape Flattery, Washington to Cape Blanco, Oregon east of the 2,000 meter depth contour. The designated areas comprise approximately 41,914 square miles (108,558 square km) of marine habitat and include waters from the ocean surface down to a maximum depth of 262 feet (80 m). Other Pacific waters within the U.S. Exclusive Economic Zone (EEZ) were evaluated based on the geographical area occupied by the species, but we determined that they were not eligible for designation, as they do not contain the feature identified as essential to the conservation of the species. The total estimated annualized economic impact associated with this designation is estimated to range between $188,000 and $9.1 million U.S. dollars.

DATES: This rule becomes effective February 27, 2012.

ADDRESSES: This final rule and supporting documents (Economic Report, Endangered Species Act (ESA) Section 4(b)(2) Report and Biological Report) are available electronically on the NMFS Web site at *http://www.nmfs.noaa.gov/pr/species/turtles/leatherback.htm#documents*, or at the Federal eRulemaking Portal *http://www.regulations.gov*. Hard copies are available by contacting: Chief, Marine Mammal and Sea Turtle Conservation Division, NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Sara McNulty, NMFS, Office of Protected Resources, (301) 427–8402; Elizabeth Petras, NMFS Southwest Region, (562) 980–3238; Steve Stone, NMFS Northwest Region, (503) 231–2317.

SUPPLEMENTARY INFORMATION:

Background

Under the ESA, we are responsible for determining whether certain species, subspecies, or distinct population segments (DPS) are threatened or endangered and for designating critical habitat for those species (16 U.S.C. 1533). The leatherback sea turtle was listed as endangered throughout its range on June 2, 1970 (35 FR 8491). Pursuant to a joint agreement, the U.S. Fish and Wildlife Service (USFWS) has jurisdiction over sea turtles on the land and NMFS has jurisdiction over sea turtles in the marine environment. The USFWS initially designated critical habitat for leatherbacks on September 26, 1978 (43 FR 43688). This critical habitat area consists of a strip of land 0.2 miles (0.32 kilometers) wide (from mean high tide inland) at Sandy Point Beach on the western end of the island of St. Croix in the U.S. Virgin Islands. On March 23, 1979, NMFS designated the marine waters adjacent to Sandy Point Beach as critical habitat from the hundred fathom (182.9 meters) curve shoreward to the level of mean high tide (44 FR 17710).

On October 2, 2007, we received a petition from the Center for Biological Diversity (CBD), Oceana, and Turtle Island Restoration Network to revise the leatherback critical habitat designation by adding areas in the Pacific Ocean. On December 28, 2007, we announced a 90-day finding that the petition provided substantial scientific information indicating that the petitioned action may be warranted (72 FR 73745). On January 5, 2010 we published a combined 12-month finding and proposed rule to revise the critical habitat designation for this species (75 FR 319), followed by a notification of public hearings (75 FR 5015, February 1, 2010), and a notification of the extension of the public comment period for an additional 45 days, (75 FR 7434, February 19, 2010). As proposed, this rule identified eight specific geographic areas in the U.S. EEZ off the U.S. West Coast as critical habitat for the leatherback turtle, based on the presence in these areas of certain biological or physical features essential to conservation of the species for which special management consideration or protection might be required. In determining the areas that may be eligible for designation as critical habitat, regulations published at 50 CFR 424.12(a)–(b) direct the Secretary to consider those physical or biological features that are essential to conservation of the species and that may require special management considerations or protection; and to focus on the principal biological or physical constituent elements within the area that are essential to the conservation of the species. Primary constituent elements (PCE's) in the proposed rule included migratory pathway conditions (i.e., the state of the areas through which leatherbacks traverse for feeding and reproduction), and the separate PCE of quality and quantity of prey.

This final rule describes the final critical habitat designation, including responses to comments, a summary of changes from the proposed rule, and supporting information on leatherback sea turtle biology, distribution, and habitat use, and the methods used to develop the final designation. Based on review and evaluation of the comments received this final designation differs from our proposed designation in the following ways. We: (1) Eliminated ''migratory pathway conditions'' as a primary constituent element (PCE); (2) clarified the prey PCE to explicitly identify density of prey as a characteristic of the PCE; and (3) revised the boundaries of the specific areas in which the PCE is found. As a result of these changes, several occupied areas no longer meet the definition of critical habitat, and we have eliminated those areas from consideration in this final rule. These changes are reflected throughout the rule, and are described in detail below in the section ''Summary of Changes from the Proposed Rule.''

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 before making a final designation. The Secretary has discretion to exclude an area otherwise meeting the definition of critical habitat from the designation if the benefits of the exclusion (i.e., the impacts that would be avoided if an area was excluded from the designation) outweigh the benefits of the designation (i.e., the conservation benefits to leatherbacks if an area was designated), so long as exclusion of the area will not result in extinction of the species.

This evaluation process introduced various alternatives for the revision of designated critical habitat for the leatherback sea turtle, all of which we

considered. The first alternative, not designating critical habitat for leatherbacks, would impose no economic, national security, or other relevant impacts, but would not provide any 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 to the extent such benefits could be gained through designation.

The second alternative, designating a subset of the areas that meet the definition of critical habitat and are therefore eligible for designation, our preferred alternative in the proposed rule, was also rejected. In our proposed rule we identified 8 particular areas meeting the definition of critical habitat and concluded that 5 out of these 8 areas were eligible for exclusion based on the ESA section 4(b)(2) analyses. We then proposed to exclude all 5 areas from the critical habitat designation. However, as detailed in subsequent sections of this final rule, after reviewing the public comments and subsequently eliminating the migratory conditions PCE, and making boundary adjustments that resulted in the addition of area 9, we concluded that 6 areas, including the 5 areas identified for exclusion in the proposed rule, did not contain the prey PCE and thus did not meet the definition of critical habitat. We confirmed that the three areas initially identified as critical habitat and proposed for designation continue to meet the definition of critical habitat. Our final 4(b)(2) analysis was revised to address only the three areas that meet the definition of critical habitat.

The third alternative, designating the three areas as meeting the definition of critical habitat (i.e., no areas excluded), was considered and selected. We selected this alternative after conducting an ESA section 4(b)(2) analysis, and determining that the benefits of exclusion, including the avoidance or reduction of economic impacts, did not outweigh the conservation benefits to the species. The total estimated annualized economic impact associated with this designation is estimated to range between $188,000 and $9.1 million U.S. dollars. However, as explained below and detailed in the ESA Section 4(b)(2) Report (see **ADDRESSES**), the conservation benefit to the species outweighs these costs. We selected this third alternative because it would result in a critical habitat designation that provides for the conservation of the species and meets joint NMFS and USFWS regulations concerning critical habitat designation under the ESA (50 CFR part 424).

Leatherback Natural History

The leatherback is the sole remaining member of the taxonomic family Dermochelyidae. All other extant sea turtles belong to the family Cheloniidae. Leatherbacks are the largest marine turtle, with a curved carapace length (CCL) often exceeding 150 cm and front flippers that can span 270 cm (NMFS and USFWS, 1998). The leatherback's slightly flexible, rubber-like carapace is distinguishable from other sea turtles that have carapaces with bony plates covered with horny scutes. In adults, the carapace consists mainly of tough, oil-saturated connective tissue raised into seven prominent ridges and tapered to a blunt point posteriorly. The carapace and plastron are barrel-shaped and streamlined. Leatherbacks display several unique physiological and behavioral traits that enable this species to inhabit cold water, unlike other sea turtle species. These include a countercurrent circulatory system (Greer *et al.,* 1973), a thick layer of insulating fat (Goff and Lien, 1988; Davenport *et al.,* 1990), gigantothermy that limits heat loss (Paladino *et al.,* 1990), and the ability to elevate body temperature through increased metabolic activity (Southwood *et al.,* 2005; Bostrom and Jones, 2007). These adaptations also enable leatherbacks to have a larger geographic range than other species of sea turtle.

Leatherbacks have the most extensive range of any living reptile and have been reported circumglobally throughout the oceans of the world (Marquez, 1990; NMFS and USFWS, 1998). Leatherbacks can forage in the cold temperate regions of the oceans, occurring at latitudes as high as 71° N. and 47° S.; however, nesting is confined to tropical and subtropical latitudes. In the Pacific Ocean, significant nesting aggregations occur primarily in Mexico, Costa Rica, Indonesia, the Solomon Islands, and Papua New Guinea. In the Atlantic Ocean, significant leatherback nesting aggregations have been documented on the west coast of Africa, from Guinea-Bissau south to Angola, with dense aggregations in Gabon. In the wider Caribbean Sea, leatherback nesting is broadly distributed across 36 countries or territories with major nesting colonies (>1000 females nesting annually) in Trinidad, French Guiana, and Suriname (Dow *et al.,* 2007). In the Indian Ocean, nesting aggregations are reported in South Africa, India and Sri Lanka. Leatherbacks have not been reported to nest in the Mediterranean Sea.

Migratory routes of leatherbacks are not entirely known. However, recent satellite telemetry studies have documented transoceanic migrations between nesting beaches and foraging areas in the Atlantic and Pacific Ocean basins (Ferraroli *et al.,* 2004; Hays *et al.,* 2004; James *et al.,* 2005; Eckert, 2006; Eckert *et al.,* 2006; Benson *et al.,* 2007a; Benson *et al.,* 2011). In a single year, a leatherback may swim more than 10,000 kilometers (Eckert, 2006; Eckert *et al.,* 2006; Benson *et al.,* 2007a; Benson *et al.,* 2011). Leatherbacks nesting in Central America and Mexico migrate thousands of miles into tropical and temperate waters of the South Pacific (Eckert and Sarti, 1997; Shillinger *et al.,* 2008). After nesting, females from Jamursba-Medi, Indonesia, make long-distance migrations into the central and eastern North Pacific, westward to the Sulawasi and Sulu and South China Seas, or northward to the Sea of Japan (Benson *et al.,* 2007a; Benson *et al.,* 2011). Turtles tagged after nesting in July at Jamursba-Medi arrived in waters off California and Oregon during July-August (Benson *et al.,* 2007a; 2011) coincident with the development of seasonal aggregations of jellyfish (Shenker, 1984; Suchman and Brodeur, 2005; Graham, 2009). Other studies similarly have documented leatherback sightings along the Pacific coast of North America during the summer and fall months, when large aggregations of jellyfish form (Bowlby, 1994; Starbird *et al.,* 1993; Benson *et al.,* 2007b; Graham, 2009). Leatherbacks primarily forage on cnidarians (jellyfish and siphonophores) and, to a lesser extent, tunicates (pyrosomas and salps) (NMFS and USFWS, 1998). Leatherbacks forage widely in temperate and tropical waters and exploit diverse open-ocean and coastal habitats characterized by oceanic processes that aggregate prey, such as convergence zones, coastal retention areas, or mesoscale eddies (Morreale *et al.,* 1994; Eckert, 1998; 1999; Benson *et al.,* 2011).

Summary of Comments and Responses

We requested comments on the proposed rule and associated supporting reports to revise the critical habitat designation for leatherback sea turtles on January 5, 2010 (75 FR 319), and on February 19, 2010 (75 FR 7434), we extended the comment period through April 23, 2010. We held two public hearings to facilitate public participation, we made the proposed rule available on the NMFS Web site, and we accepted comments via standard mail, facsimile, and through the Federal eRulemaking portal. We received over 57,000 comments on the proposed rule

from private, local, state, tribal and Federal entities. We also received peer review comments on the economic report and biological report. Comments ranged from general support of the rule to specific concerns regarding the analysis of threats. We have considered all public comments and peer review comments, and those that are responsive to the designation are addressed in this final rule in the following summary. We have assigned comments to major issue categories, and where appropriate, have combined similar comments.

Peer Review Comments

In August 2009, a draft biological report developed by the critical habitat review team (CHRT) was provided to five external scientists with expertise in leatherback sea turtles and leatherback prey species. All peer review comments were incorporated into the proposed rule and associated supplementary documents prior to publication in the **Federal Register.** Therefore, no peer review comments regarding the biological report will be detailed in this rule.

As a result of public comments on several sections of the draft biological report and the proposed rule, we updated the final biological report by adding detailed information on the presence of the prey feature considered a PCE in each of the areas identified in the proposed rule, as well as adding analysis and discussion on the usage of each area by leatherbacks for foraging.

A draft of the economic report was sent out to four peer reviewers in October of 2009. Many of the responses received prior to the publication of the proposed rule were incorporated into the economic report. The comments detailed below were received after the publication of the proposed rule, and have been addressed in this final rule.

Comment 1: One peer reviewer asked if there was a way to make the oil spill costs variable across areas, based on historical spill or area size.

Response: In response to this and other comments, we reviewed additional data from the U.S. Coast Guard and NOAA Office of Response and Restoration on oil spill response to determine if costs could be broken down further; however, due to vast uncertainties in the size and location of oil spills, and the absence of existing data on the effect of U.S. West Coast critical habitat designations on the cost or even the extent of a potential spill response, we have decided it is not feasible to provide meaningful quantitative estimates of the incremental cost of oil spill response due to this leatherback critical habitat designation. As such, the oil spill response cost estimates provided in the initial economic report and the proposed rule have been omitted from this final rule. In our final economic report we have detailed a qualitative discussion regarding potential economic impacts to oil spill response. This revision (i.e., replacing quantitative costs with a qualitative discussion of economic impacts to oil spill response activities) as a result of the high level of uncertainty is consistent with NMFS' economic analysis for the recently designated critical habitat for black abalone (76 FR 66806; October 27, 2011).

Comment 2: One peer reviewer questioned how our economic analysis treated proposed desalination plants, which may not ultimately be permitted or constructed. Specifically, each specific area evaluated has different ratios of existing to proposed desalination plants, so their ranking could be affected if you discounted the proposed plants in some way.

Response: In our analysis, we identified desalination plants as a potential threat to leatherback critical habitat in two areas (Areas 1 and 7) off the coast of California. We contacted Dean Reynolds and Ray Hoagland at the California Coastal Commission in order to obtain information on the probability that proposed desalination plants will be permitted and constructed. They conveyed that they do not have any statistical information on probability of proposed desalination plants being permitted or built. They also said that there are a wide variety of environmental, economic and political factors that affect whether a proposed desalination project is permitted. Also, although some desalination projects listed in the economic analysis may not ever be finalized, others will be proposed in the future, so they felt the economic analysis was sufficient given the available information. Therefore, we did not revise the analysis of desalination plants.

Public Comments

Comments on Specific Area Boundaries

Comment 3: Several commenters questioned the delineation of area boundaries with respect to prey abundance. Overall the comments on this topic appeared to seek additional information on how the area boundaries were created and whether the abundance of prey contributed to the location of area boundaries and the subsequent designation, particularly in the areas south of Point Sur, California.

Response: Many factors were used in determining the proposed area boundaries, including geographic and oceanographic features, leatherback presence, and leatherback prey concentration.

Neritic waters off the central California coast were included to encompass a prominent oceanographic front that occurs between cool, nearshore upwelling-modified waters and warmer offshore waters of the California Current. The front is located within 60 miles of the coast, providing a mechanism for aggregating leatherback prey, primarily brown sea nettles that have been advected from neritic central California waters, and moon jellies (*Aurelia sp.;* Benson, unpublished). The southern and offshore areas have been used by foraging leatherback turtles equipped with satellite-linked transmitters (Benson *et al.,* 2011) and are part of a contiguous marine bioregion that extends from Cape Mendocino to Point Arguello, California.

In response to this and other comments, we have reviewed all boundaries of our proposed specific areas and made several adjustments. These changes are detailed in the final biological report and below in the section, ''Summary of Changes from the Proposed Designation.''

Comment 4: A number of commenters stated that our proposed Area 7, which is located nearshore and offshore from Point Arena, to Point Vicente, California, should be modified to exclude the area south of Point Arguello, California due to the different ocean conditions and lack of jellyfish in the area. Other commenters questioned the offshore boundary of Area 7, which extended to a line connecting 38°57′14″ N./126°22′55″ W. and 33°44′30″ N./121°53′41″ W.

Response: As stated above, based on this and other comments related to the usage and boundaries of Area 7, we re-evaluated the features within this area and determined that it was appropriate to revise the boundaries for this area and provide a more detailed justification for these new boundaries. Due to differences in the geography, oceanography, and usage by leatherbacks between the northern and southern portions of our proposed Area 7, the southern portion of Area 7 (south of Point Arguello, California) is now identified as a separate area, Area 9. This separation of the southern and northern portions of our proposed Area 7 allowed us to look at areas with more uniform value in terms of leatherback habitat. Additionally, in an effort to be consistent with other area boundaries

marked by geographic features, the offshore boundary of Area 7 has been moved east to the 3,000 m isobaths. Additional information on changes to the area boundaries can be found in the section ''Summary of Changes from the Proposed Designation.''

Comments on Areas Included or Excluded From the Designation

Comment 5: Many commenters specifically suggested that NMFS should designate Areas 4, 5, 6, and 8 (or a subset of these four areas) as critical habitat for leatherback turtles because they are important migratory corridors necessary to gain access to the coastal foraging areas, and others stated that these offshore areas should be designated to be precautionary and account for oceanographic variability.

Other commenters provided general suggestions that since leatherbacks do not have predictable migration routes NMFS should designate large sections of ocean as critical habitat, if those areas are used by leatherbacks during their migrations.

Some commenters also suggested that Area 5 should be included for its importance as a secondary foraging area, as well as its importance for access to both the northern and southern coastal foraging areas, while another group of commenters suggested that Area 8 should be designated, as it is an area in which leatherbacks wait for upwelling to subside and water in Area 7 to warm, and because it is used as a passage to and from coastal foraging areas.

Response: We grouped these comments together, as they all recommended inclusion of offshore areas in this designation, many with particular interest in designating migration routes or areas that allow leatherbacks to access coastal foraging areas. In response to these comments and concerns, we re-evaluated the occupied areas within the U.S. West Coast EEZ, the boundaries of each of the areas, and the criteria used to determine whether the areas are eligible for designation as critical habitat and finally whether they were eligible for possible exclusions. Through this process, we detailed how each of the offshore areas are used by leatherbacks. This evaluation resulted in some adjustments to the area boundaries to better reflect the geographic and oceanographic features, leatherback presence, and prey concentrations, as well as the addition of a ninth area. These changes are detailed below in the section ''Summary of Changes from the Proposed Designation.''

In response to the comments focusing on the need to designate offshore areas for their value as migratory areas or corridors, we re-evaluated our analysis of all areas in terms of our proposed migratory pathway PCE. In our proposed rule, we recognized that to complete their life history, leatherback turtles must migrate through the offshore areas to access nearshore foraging areas; therefore, we proposed that an essential feature of leatherback habitat is ''migratory pathway conditions.'' We acknowledged, however, that based on the most current scientific information it was difficult to define specific migratory corridors, and we were therefore not able to provide any detail about what physical, biological, or hydrographic features specifically define ''migratory pathway conditions.'' We solicited additional information on this PCE during the public comment period. However, peer review and public comments did not provide any additional information leading us to identify such features, and many commenters agreed that available evidence indicates that leatherback turtles do not have predictable migration routes. While water temperature gradients may influence leatherback migration pathways, at this time we cannot identify any known or consistent physically defined migratory corridors or associated specific areas that would consistently contain features of a migratory corridor for leatherbacks off the U.S. West Coast. As such, we have eliminated the migratory pathway PCE from this critical habitat designation. Additional information detailing this change and the analysis can be found in the final Biological Report and below in the section ''Summary of Changes from the Proposed Designation.''

Given the elimination of the migratory pathway PCE, we then focused our response to this comment on the prey PCE and the foraging activity that was occurring in offshore areas. In our proposed rule, we noted that there is a distinct difference between nearshore and offshore areas with regard to leatherback foraging behavior and the availability of the prey PCE to leatherbacks. The intention of our prey PCE in the proposed rule was to differentiate between foraging areas and determine which areas truly contain the prey feature essential to the conservation of the species. Through discussions evaluating these public comments, we determined that our evaluation of the prey PCE should more systematically consider the quality, quantity, and density of prey in each area. As such, we have added the term ''density'' to the prey PCE definition in order to explicitly recognize that density of the prey is a critical characteristic of the prey PCE. Further clarification with respect to the components of the prey PCE is provided in later sections of this rule (see ''Summary of Changes from the Proposed Designation'').

Based on the elimination of the migratory pathway PCE, and the more systematic consideration of our prey PCE, we re-evaluated each area to determine if it contains the prey feature (including density) identified as essential to the conservation of the species. In our proposed rule, we made the determination that the prey PCE was present in every area. This determination was made based on information that leatherbacks forage periodically and opportunistically during migrations. However, during the proposed rule analysis we did not look further at the type of prey they forage on in those instances, and if that level of foraging is expected to support leatherback individual and population growth, reproduction, and development, as defined in our PCE. We found that the offshore areas 4, 5, 6, and 8 (in addition to nearshore areas 3 and 9) do not contain the prey PCE, and therefore do not meet the definition of critical habitat. Additional information on this analysis can be found in the final Biological Report and below in the section ''Summary of Changes from the Proposed Designation.''

In response to the comments suggesting that Area 5 should be designated based on its use as a secondary foraging area, as described above, we specifically looked at leatherback behavior and foraging within Area 5, and found that although some foraging activity has been documented in this area, this activity has been brief and inconsistent and the available evidence does not indicate this areas contains the prey PCE. Therefore, Area 5 does not meet the definition of critical habitat and will not be included in the final designation.

Comment 6: Several commenters suggested that the area proposed for designation is too large and should be reduced to include only the primary coastal foraging areas (Areas 1 and 6).

Response: In response to this and other comments, and as stated above, we re-evaluated our area boundaries and made several changes to better reflect the geographic and oceanographic features that contribute to use by leatherbacks, as well as leatherback presence and prey concentration in each area. Also, as mentioned above, we eliminated the proposed migratory pathway PCE, and therefore based our final designation on the prey PCE alone.

The resulting final designation is approximately 41,914 square miles, which is smaller than the proposed designation. The final designation focuses on the known and consistent coastal foraging areas that leatherbacks rely on after long migrations across the Pacific Ocean.

The decrease in size of the designated critical habitat is largely due to the offshore boundary change for Area 7. This change was initiated in response to commenters that questioned how boundaries were drawn and the overall size of Area 7. Area 7 was adjusted to reflect the oceanographic differences north and south of Point Conception, California. The Biological Report includes detailed discussion of this change. The final designation of Areas 1, 2, and 7, with adjustments to the area boundaries from the proposed rule, better represents the coastal foraging areas that are used by leatherback sea turtles and that contain the prey PCE.

Comment 7: The Ocean Conservancy and several other commenters questioned the exclusion of Area 3, and provided information that stated Area 3 is necessary as critical habitat as it encompasses the area between to the proposed Areas 1 and 2, and is part of the California Current System. Commenters also noted that it is possible that leatherbacks may shift their distribution and make greater use of Area 3 for foraging due to the El Niño Southern Oscillation events and global warming. The commenters also noted that Cape Blanco, within Area 3 is a major upwelling center, and is described as an area of persistent jellyfish abundance north and south of Cape Blanco. Other commenters suggested that the designation of Area 3 would allow for a contiguous band of critical habitat along the coast, and would ensure that there was not any gap in coverage for current coastal foraging areas.

Response: In response to comments, we re-evaluated the features found in Area 3 and determined that the boundary between Area 3 and Area 2 should be moved south to Cape Blanco, Oregon, as this area appears to be a more appropriate transition zone based on oceanographic features and data on leatherback presence. However, Area 3, the area between Cape Blanco, Oregon, and Point Arena, California, is characterized by cold, newly up-welled water. These waters provide nutrient input for phytoplankton production and subsequent energy transfer to higher trophic levels further south and offshore. However, these same waters are typically avoided by leatherbacks (Benson *et al.,* 2011). Although moon jellies can be abundant in this region, aggregations of sea nettles, the preferred prey of leatherbacks and prey of higher caloric value, are less common. For example, Graham (1993, 1994 in Suchman and Brodeur (2005)) hypothesized that brown sea nettles, the preferred prey of leatherbacks, remain in areas where a warm, low-chlorophyll shadow of water persists shoreward of the upwelling front such as in Monterey Bay. Such features are not known to regularly occur along such parts of the Oregon coastline. Furthermore, although leatherbacks are able to tolerate cold waters through a physiological mechanism that allow them to elevate body temperature through increased metabolic activity, occupying colder waters is expected to have energetic costs for leatherbacks when prey are less abundant or contain fewer calories per individual jellyfish species (i.e., the calories expended to maintain body temperature in cold waters may not be offset by consumption of low calorie moon jellies versus the higher calorie sea nettles). Our review of leatherback turtle telemetry data and multiple aerial surveys indicates that leatherbacks forage in warmer upwelled-modified waters where sea nettles are abundant and excessive energy is not lost trying to regulate body temperature (Benson *et al.,* 2011). Available data suggest that the waters north of Cape Blanco (now within Area 2) and the waters south of Point Arena (within Area 1) are used regularly for foraging. In contrast, the area between Cape Blanco and Point Arena (Area 3), is generally avoided by leatherbacks and does not provide ideal habitat for the production of their preferred prey species (i.e., sea nettles).

As such, we have determined that Area 3 does not contain the prey PCE. Therefore, this area is not eligible for designation as critical habitat.

Comment 8: Several commenters stated that there was no biological reason to expand critical habitat south of Point Sur, California since the available biological data indicate that leatherbacks rarely occupy that area, and this will result in a much greater critical habitat area than necessary.

Response: We agree with the commenters that data indicate that leatherbacks are more likely to occur in higher densities north of Point Sur, California than in areas to the south. However, leatherbacks have been tracked in the waters south of Point Sur (Benson *et al.* 2011); therefore, it is considered an occupied area and should therefore be considered as potential critical habitat.

As noted above, and in response to this and other comments, we re-evaluated the southern portion of Area 7, and determined that the waters south of Point Arguello, California are substantially different than the waters to the north; thus, we identified the waters south of Point Arguello to be a new area, Area 9. NMFS then evaluated Area 9 for its usage by leatherback sea turtles and for the presence of the prey PCE. It was found that Area 9 does not contain the prey PCE, as detailed below in the section ''Summary of Changes from the Proposed Designation,'' and thus does not meet the definition of critical habitat.

Comments on Tribal Lands

Comment 9: The Makah and Quileute tribes in Northwest Washington expressed concerns about the manner in which NMFS engaged them through the critical habitat designation process prior to the proposed rule. Each tribe objected to the proposed designation of critical habitat in marine areas identified as tribal usual and accustomed fishing grounds and requested that NMFS provide them an opportunity for government-to-government consultation to discuss the implications of the designation. The Quileute tribe also raised concerns about our consideration of areas beyond those addressed in the petition as well as the limited information supporting our proposed rule. Additionally, the National Ocean Service (NOS) and the Pacific Fisheries Management Council (PFMC) raised similar concerns and requested that NMFS clarify the impacts of this critical habitat designation on the Northwest tribes.

Response: As described in the proposed rule and documentation supporting this final rule, we acknowledge that the best available information on habitat use by leatherback turtles in the northeast Pacific Ocean is limited. We reviewed maps indicating that some Indian lands along the Washington coast likely overlap with areas under consideration as critical habitat for leatherback turtles. These overlapping areas consist of a narrow intertidal zone associated with several coastal Indian reservations, from the line of mean lower low water (an average of lower low water heights observed over a given period) to the extent of tribal land demarcated by the line of extreme low water (the lowest water height recorded for a given section of shoreline). In consideration of Executive Order 13175 ''Consultation and Coordination with Indian Tribal Governments'' and the 1997 Secretarial Order, ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities and the Endangered Species Act,'' we

contacted senior tribal staff early in the process of preparing our proposed rule and discussed with them the nature of the designation. To further coordinate with tribal governments, we discussed leatherback critical habitat during a regular annual meeting with the Northwest Indian Fisheries Commission and member tribes in August 2008. Between the time of our proposed rule and this final rule we made numerous additional attempts to arrange meetings between the NMFS Northwest Region's Deputy Regional Administrator and members of all the coastal tribes in the U.S. northwest. Although we met with the tribes, the leatherback critical habitat topic was removed from the meeting agendas because the tribes identified other fishery management issues as having a higher priority. We were able to have a government-to-government meeting with the Makah tribe on June 9, 2011, to discuss the designation and the tribe's concerns with a senior NMFS administrator and lead agency staff working on the critical habitat designation.

Between the proposed and final rule, we re-assessed several spatial and biological elements of the proposed critical habitat designation and determined that the line of extreme low water more accurately depicted the shoreward extent of areas occupied by leatherback turtles (i.e., they are foraging in these waters and not accessing the beaches). Given this boundary change, there is no longer an overlap between designated areas and areas that meet the definition of Indian lands.

NMFS acknowledges the presence of tribal usual and accustomed fishing grounds within Area 2. We considered the tribal concerns and concluded that the benefits of excluding these particular usual and accustomed fishing areas do not outweigh the benefits of designating these areas as critical habitat for leatherback turtles. The tribes have not identified any treaty-related activities in their usual and accustomed fishing areas that are likely to affect jellyfish and therefore likely to be affected by a critical habitat designation. Moreover, usual and accustomed fishing areas, while vitally important to the exercise of treaty-secured fishing rights, are not reserved by the United States for the exclusive use of a tribe, nor are they subject to the sovereign authority of a tribal government, as is the case with Indian lands. For these reasons, we conclude there are no impacts from this critical habitat designation on treaty-secured fishing rights, and little impact to tribal sovereignty and self-governance.

During the government-to-government consultation, the Makah tribe expressed concern for their ability to engage in cooperative projects, such as future alternative energy development, within their usual and accustomed fishing grounds, if designated as critical habitat. Through that discussion we informed the Makah tribe that the designation of critical habitat will not preclude such projects from moving forward; however, any projects that are federally funded or authorized and that may impact leatherback sea turtles or the PCE will be required to undergo an ESA section 7 consultation to evaluate the impact of the project on listed species and designated critical habitat.

We acknowledge that the Makah Indian Tribe disagrees with our assessment and is concerned about potential impacts to the tribe's fishing rights. We will continue to coordinate with the tribe as we implement our responsibilities under section 7 with respect to leatherback turtles and address any conflicts, if they arise, in a government-to-government consultation.

Comments on Exclusions for National Security

Comment 10: The Department of Defense (DOD) commented that the proposed critical habitat area would overlap with sea space used by the Navy at the Point Mugu Sea Range, the Northwest Training Range Complex, and the Naval Undersea Warfare Center Keyport Range Complex. The Navy identified national security impacts if critical habitat were to be designated for the areas identified above, as critical habitat may restrict or prohibit implementation of required training and result in impacts to the Navy's readiness and ability to perform its mission. Therefore, the Navy requested that NMFS exclude these areas through the 4(b)(2) analyses. Additionally, The Oregon Military Department also identified areas offshore of Camp Rilea and recommended that NMFS not designate those waters as critical habitat.

Response: In response to the Navy's comments, multiple informal discussions occurred between NMFS and Department of Defense (DOD). During this time frame NMFS revised its critical habitat designation to include only one PCE, the prey PCE. As required by section 4(b)(8) of the ESA, we briefly evaluate and describe in this final rule to the maximum extent practicable, those activities that might occur within the areas designated and that may destroy or adversely modify critical habitat designated or be affected by such designation. We conclude that the Navy's present training activities are not the types of activities that may adversely modify critical habitat designated for the leatherback, specifically the prey PCE, or likely to be affected by the designation. As a result, we conclude that the present Navy training activities are not likely to be affected by this designation of critical habitat. Because designation is not likely to affect Navy activities, we conclude that the designation would have no appreciable impact on national security. Through our ESA section 4(b)(2) analysis, we determined that the benefits to national security of exclusion do not outweigh the benefits of designation. Therefore, Navy training ranges and the waters referenced by the Oregon Military Department will not be excluded for this designation.

Comment 11: We received comments that indicated that there are numerous military and government installations located within the proposed critical habitat. The commenter further stated that three military installations within the proposed designation are, or have recently, been subject to Integrated Natural Resource Management Plans, or INRMPs, including Vandenberg Air Force Base, Presidio of Monterey, and the Naval Post-Graduate School. Overall, the commenter expressed concern that critical habitat would negatively impact military and law enforcement actions along the U.S. West Coast.

Response: The commenter is correct in that there are existing INRMPs for military installations within the areas under consideration as critical habitat. However, under the ESA we must be able to conclude that a particular INRMP provides a benefit to the species at issue, and only then can a particular site associated with the INRMP be considered ineligible for designation. We reviewed the existing INRMPs but have determined that none contain sufficient information on direct and indirect effects on leatherback sea turtles, their prey, or the areas occupied to conclude that the INRMP would provide a benefit to the species. Therefore, we considered the areas associated with these INRMPs to be eligible for consideration as leatherback critical habitat.

Comments on Primary Constituent Elements

Comment 12: Several commenters indicated that NMFS should designate as critical habitat the passage corridors that leatherback turtles use to gain access to jellyfish concentrations in nearshore waters. Other commenters

stated that NMFS did not accurately evaluate the migratory pathway PCE of each area, as they were given the same score when rated for their passage conservation value.

Response: As noted above, in response to numerous comments regarding migratory corridors, we re-evaluated the migratory pathway PCE. In our proposed rule, we recognized that leatherback turtles must migrate through the offshore areas to access foraging areas in the nearshore environment; however, we acknowledged that it is difficult to define specific migratory corridor conditions. At this time, we cannot identify any known and consistent geographically defined migratory corridors or discrete areas that would consistently contain the features that define a migratory corridor for leatherbacks off the U.S. West Coast, and we have therefore eliminated the migratory pathway PCE from this critical habitat designation.

Both NMFS and the USFWS have identified some form of passage or migration corridors as PCEs in other critical habitat designations, but the species and the habitat involved differ significantly from leatherback sea turtles. For example, ''migratory corridor'' was identified as a PCE in NMFS' final critical habitat designation for the threatened southern distinct population segment (DPS) of North American green sturgeon. Through tagging studies and fisheries bycatch information, researchers found that green sturgeon are primarily associated with bottom habitats in the ocean and travel along the coast in a migration corridor that is defined by bathymetry (specifically, a 60 fathom contour) (74 FR 52300; October 9, 2009). Unlike green sturgeon, leatherback sea turtles are not well associated with bottom habitat or bathymetry, travel thousands of miles, and occupy the entire U.S. EEZ.

The final critical habitat designation for the DPS of Southern Resident killer whales (SRKW) identified ''passage conditions to allow for migration, resting, and foraging'' as a PCE (71 FR 229; November 29, 2006). For the SRKW, one specific area primarily defined by the passage feature was the Strait of Juan de Fuca, a relatively narrow marine corridor, through which all members of this DPS of killer whales must pass on their migrations between open ocean and coastal waters and inland waters and in which all of the members of this DPS forage in the late spring through the fall. Unlike this DPS of killer whales, leatherback sea turtles are able to use vast areas within the open ocean for migration.

In addition, the characteristics that cause leatherbacks to use an area for passage (i.e., the specific biological or physical features of habitat) are largely unknown. At this time, NMFS cannot identify any known and consistent geographically-defined migratory corridors for leatherbacks off the U.S. West Coast.

Without specific physical or biological features predictably occurring within a defined geographic area to define a passage corridor, such as depth, or even a specific location where many individuals are likely to pass through to access foraging areas, NMFS concludes that our previously defined passage PCE does not meet the statutory criteria in the ESA section 3(5)(A)(i) as implemented by our regulatory guidance for determining a PCE (50 CFR 424.12(b)).

Comment 13: Several commenters recommended that NMFS should identify water quality as a PCE, with specific concerns regarding the impact of non-point source pollution, storm water runoff, agricultural land runoff, plastic debris, trash, and heavy metals on leatherbacks and their prey. The Center for Biological Diversity (CBD) and Defenders of Wildlife expressed particular concern about the potential impacts of ocean acidification on leatherbacks, and cited a number of possible impacts ranging from changes in prey physiology to food web changes that might affect prey availability for leatherbacks.

Alternatively, other commenters suggested that water quality should not be identified as a PCE, as there is little or no information on the effects of water quality on sea turtles.

Response: In response to both perspectives, we re-evaluated whether to identify water quality as a separate PCE. At the proposed rule stage we reviewed available literature and previous agency determinations regarding water quality, and as a result did not identify water quality as a separate PCE. In our proposed rule we specifically requested comments and available data on this topic. In response to comments, we reviewed literature for new information, and we again conclude that we currently lack information to determine the relative impact and importance of water quality directly on the health of leatherback sea turtles. Thus, we do not identify water quality as an independent and separate PCE in this final designation. As more research is completed, and we learn more of the biological and ecological requirements of leatherbacks off the U.S. West Coast and how water quality and specific toxins and contaminants impact leatherbacks, we may determine that water quality should be a PCE. In our proposed rule we specified that the quality of the prey PCE is essential to the conservation of leatherback turtles and that this factor may depend on water quality. Adverse modification of leatherback critical habitat would result from actions that affect prey populations to the extent that they cannot provide for the conservation needs of leatherbacks.

To ensure that our interpretation of water quality as a PCE was appropriate, we reviewed all recent NMFS critical habitat designations. Of note, the critical habitat designations for two marine mammals, the Cook Inlet beluga whale and the SRKW distinct population segment, include water quality as a feature essential to the conservation of the species. Both of these marine mammals have relatively small populations that forage on a seasonal basis in core areas, such as narrow inlets or inland waters adjacent to urban areas with large human populations or industrialization. Cook Inlet belugas are not known to migrate, and little is known of the offshore movements of SRKWs following their summer/fall residency in ''core'' inland areas. Research has shown that killer whales accumulate high concentrations of contaminants, including PCBs, DDT, heavy metals and flame retardants, which may induce immune suppression or reproductive impairment and this may be having population level effects and impeding their recovery. NMFS determined that water ''free of toxins'' was essential to the conservation of the Cook Inlet beluga and ''water quality to support growth and development'' was essential to the conservation of the SRKWs given these species' limited range during all or parts of the year.

In contrast to SRKWs, leatherbacks are wide ranging, and the population as a whole does not depend on one or more ''core'' areas to access their prey. In addition, leatherbacks do not use inland waterways, where land-based and nearshore sources of pollution may present a greater threat to their recovery.

In response to specific concerns regarding ocean acidification, we acknowledge that there is growing concern that rising concentrations of atmospheric carbon dioxide will change the ocean's carbonate chemistry system (e.g., acidification/declining pH), and that those changes are expected to affect various biological and geochemical processes in the marine environment (Kleypas *et al.* 2006, Fabry *et al.* 2008). However, relating those changes to impacts on leatherback turtles and their prey remains speculative. For example,

Attrill *et al.* (2007) recently analyzed data from the North Sea and noted increased jellyfish occurrence in years where the water was more acidic. They suggested that increasing acidity may be detrimental to calcareous, skeleton-forming plankton and thus allow proliferation of jellyfish/gelatinous organisms into those niches. On the other hand, Richardson and Gibson (2008) reviewed this work and analyzed a larger geographic area, but they found no significant relationships between jellyfish abundance and acidic conditions in any of the regions investigated. These authors concluded that it would be tenuous to assign a specific role to pH in structuring zooplankton communities, and also noted that it is possible that more acidic conditions could have negative effects on jellyfish. However, even those effects are speculative: Recent work by Winans and Purcell (2010) concluded that moon jelly polyps are quite tolerant of acidic conditions; surviving and reproducing asexually even at the lowest tested pH. Given these recent reviews and studies, it is not clear what if any impacts ocean acidification may have on jellyfish, and there is much less information available on the potential impacts of ocean acidification directly on leatherback sea turtles. Therefore, it would be equally speculative to suggest that we can presently identify tangible management considerations to address ocean acidification's influence on leatherback turtles or their prey.

Comments on the Economic Analysis

Comment 14: One commenter questioned NMFS' use of the ''cost-effectiveness'' analysis. The commenter cited two sources (Loomis 2006 and Kroeger 2004) to help NMFS use a common metric to be able to estimate economic benefits rather than conservation benefits. Additionally, the commenter stated that for leatherback turtles the conservation benefits are no more difficult to measure than costs. The commenter suggested a specific methodology in papers by Loomis (2006) and Kroeger (2004), which would be applicable to valuing the benefits of designating critical habitat for leatherbacks. The commenter also noted that the approach used in the proposed rule compared apples and oranges within the context of economic costs and conservation benefits.

Response: As discussed in Section 1.2.1 of the economic analysis report, we used a form of cost-effectiveness analysis, which develops an ordinal measure of the benefits of critical habitat designation. Since it is difficult to monetize or quantify benefits of critical habitat designation, expert judgment is used to classify habitat areas based on their estimated relative value to the conservation of the species. For example, habitat areas can be rated as having a high, medium, or low biological value. A qualitative ordinal ranking, which can be done with available information, may better reflect the state of the science for the geographic scale considered here rather than a quantitative measure which depends on several assumptions. The ESA section 4(b)(2) analysis discusses the cost comparison process when evaluating whether to exclude areas from the designation.

We question the claim that the benefits of a critical habitat designation for leatherback turtles are no more difficult to measure than costs, and that the methodology in the referenced papers by Loomis (2006) and Kroeger (2004) would be applicable to valuing the benefits of designating critical habitat for leatherbacks. The referenced papers both rely on a benefits transfer approach to obtain a monetary value of policy measures. Kroeger (2004) provides a list of conditions that must be met in order for the benefits transfer methodology to be valid.

Benefit transfer methodology is used in Loomis (2006) to measure the value of increasing the number of sea otters in a clearly defined geographic range of the California Coast, and in Kroeger (2004), to measure the value of improved lynx conservation and conservation of natural landscapes. In both cases, the type and magnitude of the expected policy impacts are simple to describe with respect to the nature of the impacts, the geographic region where they would be realized, and the population which would be directly affected. By contrast, the anticipated type and magnitude of expected policy impacts due to critical habitat designation for leatherbacks are far less certain.

The vast uncertainty regarding the scope of a potential conservation benefit from this designation calls into question whether the policy context can be defined to a level of precision that meets Kroeger's (2004) qualifications.

By contrast, potential costs of regulatory measures are relatively easier to assess, due to the existence of financial data for entities impacted by previous critical habitat designations. There are numerous precedents for using cost effectiveness analysis or similar approaches, including economic analysis to measure regulatory impacts of critical habitat designation for salmon and steelhead, and for green sturgeon.

We further note that the criticism of the use of an ''apples and oranges'' comparison of economic costs of designation with the biological benefits of designation ignores a similar problem with the benefits transfer approach utilized in the Loomis (2006) and Kroeger (2004) studies. The benefits transfer methodology relies on benefit estimates from stated preference valuation studies, which assign a monetary value to a policy change using data from a survey that asks respondents to make an ''apples and oranges'' comparison between a hypothetical monetary cost of the policy change (their ''willingness to pay'') and the biological benefits the policy is supposed to create. It is unclear that asking untrained survey participants to report the subjective monetary cost they would be willing to bear in exchange for complicated and uncertain biological benefits will automatically result in a better policy assessment than relying on trained experts to subjectively compare biological benefits to monetary cost estimates.

Comment 15: One commenter questioned the framework and assumptions for the analysis of the range in total administrative consultation costs. Specifically, the costs are based on national data as opposed to data based solely on U.S. West Coast marine-related species. The commenter also stated that there was no explanation provided in order to justify the assumptions given for each category of costs.

Response: We do not have sufficient data for administrative costs specific to the U.S. West Coast to support statistically meaningful statements. We therefore used the best available data, which was based on a national level sample.

Section 1.3.2 of the economic analysis discusses the assumptions made with regard to administrative costs of ESA section 7 consultations. For example, costs associated with re-initiation of consultation, which would occur solely because of the critical habitat designation, are assumed to be attributed wholly to the critical habitat designation, and further assumed to be approximately half the cost of the original consultation that considered only jeopardy to the ESA listed species. We feel this is a valid assumption because re-initiations are less time-consuming, since the groundwork for the project has already been considered in terms of its impact on the species. We feel this is also a valid assumption due to the efficiencies in conducting an ESA section 7 consultation on both jeopardy to the species and adverse modification

to critical habitat at the same time (e.g., in staff time saved for project review and report writing). Because leatherback sea turtles are already listed as endangered, the critical habitat designation adds only incremental administrative costs when considering adverse modification in consultations that are already required under the ESA for the species.

Comment 16: One commenter questioned how the ''additional indirect impacts'' were calculated and stated that the property value impacts in the draft economic analysis were incorrectly measured and overstated. The commenter also stated that there will not be an impact on individual land owners since the property value is marine-based and that research indicates that property values actually increase as a result of critical habitat designation.

Response: While the designated critical habitat is located in the marine environment, some of the activities analyzed in the economic analysis are land-based (such as National Pollution Discharge Elimination System (NPDES) permitted facilities, agricultural pesticides, power plants, and desalination plants). It is the perceived limitations and restrictions of the land-based economic activities that are assumed to reduce the market value of property adjacent to critical habitat in comparison to property that is not adjacent to critical habitat. Further research has described a positive impact on property values due to residential and commercial development. Our economic analysis does not include either the potential reduced or increased market value of property in our estimation of the total economic impact of this critical habitat designation. Therefore, we have not revised our cost estimates in response to this comment.

Comment 17: One commenter disagreed with the draft economic analysis' method for assessing incremental impacts. One comment states that NMFS' consideration of all potential project modifications that may be required under section 7 of the ESA, regardless of whether those changes may also be required under the jeopardy provision, appears to be contrary to the reasoning of the *N.M. Cattle Growers Association* v. *U.S. Fish and Wildlife Service,* 248 F.3d 1277, 1283 (10th Cir. 2001), *Ariz. Cattle Growers Association* v. *Kempthorne,* 534 F. Supp. 2d 1013 (D. Ariz. 2008) and *Cape Hatteras Access Pres. Alliance* v. *U.S. Department of the Interior,* 344 F. Supp. 2d 108 (D.D.C. 2004) court decisions that the effects of listing and the jeopardy provision should not be considered as part of the impacts of a designation in the ESA 4(b)(2) analysis for a critical habitat designation. Another comment noted that the draft economic analysis did not adequately describe the methodology of how the incremental scores were developed and therefore appeared to result in arbitrary conclusions. Specifically, the economic analysis needed more explanation regarding the percentages attributed to the incremental scoring.

Response: As outlined in Section 1.3 of the economic report, the analysis does not attribute all potential project modifications required under section 7 to the critical habitat designation. Rather, it compares the state of the world with and without the designation of critical habitat for leatherbacks. This approach has been reviewed and determined legally valid by the courts (see *Arizona Cattle Growers* v. *Salazar,* 606F. 3d 1160 (9th Cir. 2010)). The ''without critical habitat'' scenario represents the baseline for the analysis, considering habitat protections already afforded leatherbacks under its Federal listing or under other Federal, State, and local regulations, including those afforded leatherbacks due to other listed species, such as green sturgeon, West Coast salmon and steelhead, delta smelt, and marine mammal species. The ''with critical habitat'' scenario attempts to describe the incremental impacts associated specifically with leatherback critical habitat designation. NMFS has put forth its best effort to consider the incremental cost of this critical habitat designation as compared to the world without this critical habitat designation. Although some level of protection would already be expected to exist under the listing of leatherbacks, we were unable to completely separate those costs. Section 1.4.4 of the economic analysis report discusses how incremental scores were developed. In response to this comment, we added information to this section to further clarify how the incremental scores were derived for each activity in each area.

To assign incremental scores, we first systematically reviewed existing laws and regulations, overlap with previously designated critical habitat and other relevant information for each activity in each of the three specific areas of the leatherback critical habitat. The output of this analysis resulted in qualitative ratings (high, medium, low) for each of the seven economic activities in each area. This process and results are discussed in our economic report. Based on these ratings, we then relied on the best professional judgment of the CHRT, to calculate the probability that leatherback critical habitat would be the primary driver of project modifications identified for each economic activity in each area. This probability is dependent upon a number of factors, including the details of current and potential projects and conservation efforts and the number of sensitive species present. By excluding impacts for which leatherback critical habitat is not a key reason for a conservation effort, this analysis focuses the quantification of impacts on those associated specifically with leatherback habitat conservation. Because the probability that any given conservation effort is being driven by leatherback conservation as opposed to other laws or regulations is uncertain, the economic analysis report presents a sensitivity analysis for these assumptions. Appendix C of the economic analysis describes alternative results assuming the extreme case that leatherbacks are always a primary driver of the conservation efforts (e.g., that 100 percent of the time fish screens are installed, it is primarily due to leatherback conservation needs).

Comment 18: One commenter states the 7 percent discount rate assumed in measuring costs is unreasonable and instead should utilize a ''social'' discount rate of 2–3 percent.

Response: In applying discount rate, we relied on guidance issued by the Office of Management and Budget (OMB) in Circular A–94, which states that a 7 percent discount rate should be used as a base-case for regulatory analysis to approximate the marginal pre-tax rate of return on an average investment in the private sector in recent years (before 1992). We also followed OMB Circular A–4, which indicates that estimates using a 3 percent discount rate should also be provided for regulatory analyses. Thus, our analysis provides present discounted values using discount rates of 3 and 7 percent. Given the present low interest rate environment, we consider the present values discounted at 3 percent to better reflect current economic conditions.

Comment 19: One commenter questioned NMFS' description of how various economic activities would impact the PCEs. Furthermore, the commenter stated that NMFS' estimation of the likelihood that such activities would require potential project modifications was also very weak.

Response: Due to a limited consultation history associated with many of the activities described, the CHRT was not able to estimate the likelihood of modifications to economic activities as a result of this critical habitat revision. Section 1.4.4 clarifies

how the uncertainty in identifying: (1) Which particular projects will in fact take place in critical habitat areas; and (2) which projects action agencies may consider to potentially result in the adverse modification or destruction of designated critical habitat for leatherbacks, leads to the assumption that all projects will go forward and all projects will require modification. Thus, the analysis is conservative, i.e., more likely to overestimate impacts to critical habitat rather than underestimate them.

Comment 20: One commenter stated that the assumption made that all NPDES capital costs are incurred in first year is not correct.

Response: Section 2.1.3 of the economic analysis provides a revised discussion of how the cost estimates for major NPDES-permitted facilities were developed. Note that capital costs originally presented were presented in value form, thus no additional discounting was needed. Costs are now presented in annual terms; however, note that the per-facility-cost remains the same.

Comment 21: One commenter disagreed with the draft economic report's method for assessing agricultural pesticide application. The commenter stated the draft economic report analyzed impacts from agricultural pesticide application on the leatherback prey and not to the leatherbacks themselves. Also, the commenter disagreed with the assumption that similar restrictions would be imposed on pesticide use to protect turtle habitat as are imposed to protect salmon habitat. Lastly, the commenter disagrees with the assumption that all crops will be lost as a result of restrictions on pesticide application.

Response: In estimating the economic impact of designating critical habitat, we must estimate the incremental costs associated with the designation and thus consider activities that may impact the essential features of the critical habitat. Impacts of an activity on leatherbacks themselves are not appropriate for us to consider when estimating the cost of designating this critical habitat. In this case we have identified the leatherback's prey, jellyfish, as the essential feature of the habitat. Therefore, our economic report considers how each activity may impact the quality, quantity, and density of prey. The project modifications and the methodology used in the leatherback critical habitat economic analysis were similar to that used in the salmon/steelhead and green sturgeon critical habitat analyses to calculate costs (i.e., foregone value from crop sales). However, in light of this comment, we reviewed this analysis and considered the series of Biological Opinions that have been issued by NMFS on various pesticides.

Reasonable and prudent alternatives of recent Biological Opinions that considered the effects of pesticides on listed salmonids indicate that total crop loss is not a realistic outcome. We also considered the recent economic analysis conducted in support of the critical habitat designation for black abalone along U.S. West coast areas (76 FR 66806; October 27, 2011). This analysis acknowledged that concentrations and effects of pesticide ingredients in marine waters are unknown. Based on this information, we cannot assume total crop loss is a reasonable outcome of any project modification due to leatherback critical habitat. There is currently insufficient data to determine what, if any, project modification would be required. Therefore, we have revised our economic analysis to include a qualitative discussion of potential impacts of pesticides and have removed the estimated costs associated with this activity.

Comment 22: One commenter states the total costs of power plants in Area 7 are not estimated correctly. The commenter refers NMFS to other sources that provide costs of retrofitting power plant facilities.

Response: In response to this comment, we reevaluated information regarding the impact of power plants on the leatherback critical habitat and concluded that the impact to the leatherback prey from thermal effluent is so uncertain that it is not reasonable to attribute the project modifications suggested in the Tetra Tech (2008) and Enercon (2009) documents and their associated costs to the designation of leatherback critical habitat. The costs found in these documents are associated with drastic transformations of the facilities that are not expected to be imposed on the plants as a result of an ESA section 7 consultation on leatherback critical habitat. With no other potential costs to use in our analysis, we determined that a qualitative approach would be the best way to address power plants.

Comment 23: One commenter states that while the Diablo Canyon Nuclear Power Plant's (DCNPP's) NPDES permit allows the use the auxiliary salt water biofouling control system and the ''firewall,'' the DCNPP does not in fact utilize it. The comment also noted that while freshwater is occasionally added to the discharge, freshwater has never been used as an anti-biofouling technique.

Response: While the DCNPP does not currently utilize the auxiliary salt water biofouling control system and the ''firewall,'' the fact remains that it is still in place and thus it could potentially be used at some point in the future. NMFS will work with the operators of the DCPP and the Federal permitting agency to aid in assessing impacts and to determine whether to re-initiate consultation on its NPDES permit due to adverse modification to critical habitat.

Comment 24: One commenter states that the desalination plant at the DCPP should not require project modifications to protect leatherback critical habitat, since impingement and entrainment are low at the DCPP. The commenter also states that the amount of water that flows through the DCPP desalination intake pump is insignificant.

Response: NMFS will work with the operators of the DCNPP as they assess whether re-initiation of consultation is necessary.

Comment 25: One commenter questions the use of costs for desalination plant impacts, due to their uncertainty.

Response: We acknowledge that there is uncertainty; however, we relied on the best available data in order to develop an estimated cost. We provide further discussion of the assumptions made in the economic report.

Comment 26: One commenter questions the draft economic analysis' use of the potential cost estimate of future tidal and wave energy projects; specifically, where identified facilities overlap with green sturgeon critical habitat.

Response: Although there are no tidal and wave energy projects currently in the specific areas identified, the economic analysis attempts to measure the scope of the potential impacts over a 20-year time frame. This involves predicting the occurrence and impacts of future projects.

All of the projects listed are in some sort of proposed stage and have not actually been built yet. It is uncertain which projects will actually be built and the number of future projects that may be proposed. The projects identified in the economic analysis are our best approximation of the number of tidal and wave energy projects that will exist in the applicable time period, based on available information. The economic report describes the methods we used to develop our estimates.

Comment 27: One comment provided additional information on the location of tidal and wave energy projects. The comment specifically describes one additional alternative energy project

permit that had been issued since the proposed rule was published.

Response: The economic analysis now includes an up-to-date list of projects, including the one described by the commenter.

Comment 28: Several comments state that wind energy should be considered for its impacts to both prey and passage PCEs because it ''may'' require special management consideration or protections. One commenter questions NMFS' treatment of wind energy in relation to other activities that were discussed qualitatively. Another commenter provides additional information on the location of two proposed wind energy projects.

Response: As described elsewhere in this notice, we have eliminated the passage PCE and thus the response to this comment will only pertain to the prey PCE. After reviewing the information on the two proposed wind energy projects, NMFS has concluded that there is a project, the Principal Power Offshore Wind Project, which is currently being proposed in Oceanside and Netarts, OR (Area 2). The second proposed wind energy project identified by the commenter, the Grays Harbor Ocean Energy and Coastal Protection project, missed the submittal of the Notice of Intent, and the Federal Energy Regulatory Commission (FERC) cancelled the preliminary permit in September 2010.

Section 2.6 of the Economic Report provides a revised discussion. The ''Tidal and Wave Energy'' activity is now known as ''Tidal, Wave, and Wind Energy.'' Leatherback sea turtles primarily use the west coast neritic waters for foraging, with the greatest density of turtles off the California coast within the 200 m isobath. Therefore, some overlap may be expected between the prey PCE and potential coastal wind energy projects.

Comment 29: One commenter suggests that assignment of the economic thresholds be given more explanation in the economic analysis.

Response: In the proposed rule, we compared the economic costs and conservation benefit of 8 areas, and we determined that 4 thresholds (high, medium, low and ultra low) would be necessary to adequately compare costs and benefits of these areas. The economic thresholds were determined by looking at a combination of values for each area, both total revenue for the activities identified in the proposed rule, as well as the costs we associated with the designation of critical habitat in each area. The high threshold was determined based on the revenue of each area, and we calculated the total revenue for each activity by area. The area with the highest revenue was Area 7; therefore, we took 3% of the total revenue for this area, which was between $20 million and $30 million. We then listed the high threshold at $20 million, assuming that any costs greater than 3% of total revenue would potentially be considered high economic costs to the industry. The other thresholds were determined based on area costs for this critical habitat designation.

The economic thresholds were re-evaluated during the final rule development and it was determined that the thresholds were appropriate for use in this final rule. Please see the section below, ''Exclusion of Particular Areas Based on Economic Impacts,'' for additional information.

Comment 30: Some commenters stated that they were unclear regarding the comparative analysis, specifically in the offshore areas where the relative value of migratory passage PCE is high and the economic costs are low.

Response: As noted earlier in this final rule, NMFS has eliminated the migratory pathway PCE, and has determined that the offshore areas do not meet the definition of critical habitat when evaluated for the presence of the prey PCE. Therefore, economic costs for the offshore areas are not evaluated in this final designation.

Comments on Activities That May Require Modification Through a Section 7 Consultation

Fishing and Fishing Gear

Comment 31: Oregon Governor Kulongoski commented that, in December 2009, the Oregon Fish and Wildlife Commission terminated a program that allowed use of large mesh drift gillnet gear targeting swordfish in Oregon waters. There had been no drift gillnet fishing under the permit program since 2004.

Response: This has been noted. NMFS appreciates the information.

Comment 32: The National Park Service commented that NMFS should consider the interaction between leatherback sea turtles and crab pots in the region of Point Reyes.

Response: The impact of crab pots on leatherbacks constitutes a direct take of turtles. Most pot fisheries along the U.S. West Coast are state fisheries and therefore a direct Federal nexus requiring an ESA section 7 consultation on the jeopardy standard is not present. If state pot fisheries are known to interact with leatherback turtles via entanglement, the states should apply for an ESA section 10(a)(1)(B) incidental take permit. The take of leatherback sea turtles without exemption provided by an Incidental Take Statement developed through formal section 7 consultation for a Federal action or authorization under a section 10(a)(1)(B) Incidental Take Permit for a non-Federal action constitutes an unauthorized take under section 9 of the ESA.

Comment 33: Several commenters, including the California Coastal Commission, Defenders of Wildlife, CBD, and several other organizations, commented that the regulation of the fishing industry is an activity that affects the proposed PCE passage. These and other commenters also urged NMFS to consider prohibiting use of drift gillnets or longlines within designated critical habitat for the protection of the species. Commenters stated that the use of fishing gear within critical habitat would greatly restrict migration and adversely modify the habitat.

Response: We acknowledge that fishing gear has the potential to capture, entangle and kill leatherback sea turtles. Federal fisheries that operate within U.S. waters, where leatherbacks are known to occur, are subject to ESA section 7 consultation for their direct and indirect impacts to the species. As mentioned above, the take of leatherback sea turtles by a Federal or state fishery without an Incidental Take Statement through formal section 7 consultation or a section 10(a)(1)(B) permit, respectively, constitutes an unauthorized take under section 9 of the ESA. NMFS has placed observers on Federal and state gillnet fisheries in order to monitor bycatch of sea turtles, marine mammals and other species. The take of turtles in longline fisheries (e.g., entanglement or hooking) occurs in fisheries that target highly migratory species (e.g., tuna, sharks, and swordfish). The use of longline gear to target highly migratory species is not allowed within the U.S. West Coast EEZ under the existing west coast fisheries management plans, therefore concern over possible interactions with this gear are unwarranted. There is limited use of bottom set longline gear to target ground fish. However, this gear is not the same type as is used for highly migratory species. The gear is set with only two vertical lines, and hooks are not suspended in the water column but rather rest on the bottom of the water so the bait is not an attractant to leatherbacks or other turtles. As such, the risk of entanglement is much lower than in other longline fisheries, and NMFS knows of no interactions between bottom-set longline gear and leatherback sea turtles.

As a result of this critical habitat designation, all Federal activities that occur within areas designated as leatherback critical habitat and that may impact the prey PCE will require consultation under ESA section 7. A critical habitat designation is not intended to determine which activities can and should occur within the designated area; rather, it provides a protective measure requiring consultation with NMFS to determine the impact to the habitat and any modifications of specific activities to avoid the adverse modification or destruction of critical habitat.

Further, as stated in response to comments above, and fully detailed in the section, ''Summary of Changes from the Proposed Rule,'' NMFS has eliminated the migratory pathway PCE from this critical habitat designation and analysis. We received no information during public comment that fisheries may affect leatherback prey. Therefore, we conclude that Federal fisheries will not have an impact on the leatherback prey PCE, and we have not considered the impact of fisheries on leatherback critical habitat in this final rule.

Comment 34: Several commenters, including the Pacific Fishery Management Council, West Coast Seafood Processors Association, and Alliance of Communities for Sustainable Fisheries, and the California Wetfish Producers Association (CWPA), commented that existing regulations are adequately protective of leatherback turtles in California, Oregon, and Washington waters. Fishermen and their organizations commented that fishing is not an activity that NMFS should include in the list of activities that affect the proposed PCEs, for the following reasons: (1) Fisheries have no impact on jellyfish or oceanographic conditions that may impact foraging habitat; and (2) fisheries do not impact migratory pathways, as the fishing industry has already worked to protect leatherbacks through modifications to the fisheries as a result of the ESA Section 7 process.

Response: We agree that existing regulations on the Federal fisheries provide protections to leatherback sea turtles in the U.S. West Coast EEZ. NMFS further agrees that while sea turtles may be directly affected through interactions with gear, we have no information to indicate that fisheries are likely to adversely impact the prey PCE. As explained in the economic report, we could find no evidence of impact from fisheries on leatherback prey; there are no jellyfish fisheries, and jellyfish are not a substantial bycatch species in existing fisheries. Additionally, as stated above, we have eliminated the migratory pathway PCE from this analysis. Therefore, we will not be discussing impacts to leatherback migration from fisheries.

Shipping Traffic and Oil Spills

Comment 35: Several commenters, including Defenders of Wildlife and CBD, stated that the proposed designation should include consideration of potential impacts to the shipping industry through the designation of critical habitat, as it is an activity that diminishes the quality of leatherback turtle habitat. Another commenter stated that NMFS failed to consider the U.S. Department of Transportation's plans to expand America's marine highway, and the commenter stated that this designation may hinder shipping to and from the U.S. West Coast.

Response: We agree that ship strikes result in sea turtle mortality. However, as mentioned previously, we have eliminated the migratory pathway PCE; therefore, this critical habitat designation will not further evaluate the impact of shipping on sea turtle migration. We could not determine any means by which shipping would affect the prey PCE. As such, and given the elimination of the PCE passage, we did not further investigate the impacts of the shipping industry on leatherback critical habitat.

As additional information related to these comments, NMFS is engaged in the development of traffic separation schemes (TSS), which are voluntary shipping lanes. The TSS are developed by the United States Coast Guard (USCG), and thus represents a Federal action that may be subject to evaluation under section 7 of the ESA. NMFS has worked closely with the USCG on the development of their port access route studies for the Long Beach and Los Angeles area and the San Francisco area to provide technical assistance on the presence and abundance of various protected species, including leatherback sea turtles. The USCG has been advised of their responsibilities as a Federal agency taking an action that may affect species listed on the ESA and designated critical habitat. Thus, when and if the USCG proposes changes to the existing TSS, we anticipate that NMFS will conduct an ESA section 7 consultation.

With regard to the comment on America's marine highways, as a Federal agency, the Department of Transportation is already required to initiate consultation with NMFS if its actions, such as increasing shipping traffic, may impact listed species and designated critical habitat, such as leatherback sea turtles.

Question 36: Several commenters, including the Minerals Management Service (now referred to as BOEM, Bureau of Ocean Energy Management), commented on the discussion in the proposed rule regarding the response to oil spills, such as the use of dispersants, booms, or skimmers, and the potential for these activities to affect leatherback turtles and their habitat. Commenters, including the NOS, also questioned the evaluation of oil spills and oil spill response, and the costs associated with such response.

Response: In response to the comments specifically addressing oil spill response and the way this activity type was evaluated in the draft economic report and the proposed rule, we expanded our research on this subject and met with the USCG to better understand the costs associated with oil spill response and the potential impacts on both leatherback sea turtles and their prey species. We also focused effort on determining the differences between oil spill responses in nearshore areas versus the offshore areas. As noted previously, we have determined that offshore areas do not contain the prey PCE as we have defined it. However, we did spend time trying to understand the likelihood of response in offshore and nearshore areas in order to address these questions. The results of that research are provided below.

Oil spill response is guided by Area Contingency Plans (ACPs) and Regional Contingency Plans (RCPs), developed by the USCG in coordination with state and Federal partners, and usually focuses on nearshore waters and coastlines. While the plans may have some strategies for response in open ocean areas, specifically in situations where there is a threat to land and sensitive shoreline resources, there are no existing protocols for offshore oil spill response, and the decision on how and whether to respond is left to the Federal On Scene Coordinator.

There are many factors that influence the decision to respond to an oil spill, including the feasibility and efficacy of responding to a spill, particularly in offshore areas where weather, ocean conditions, and other factors can significantly restrict response options which the USCG must consider. A number of options are considered by the USCG regarding the type of response, but the most common method for controlling and eliminating surface oil wherever it is found is via the use of oil skimming vessels (referred to as mechanical recovery). In rare cases where the seas are relatively flat, in-situ

burning may be employed. The operational effectiveness of both mechanical recovery and in-situ burning operations dramatically decreases with sea states above a 2-foot chop or 5- to 6-foot swell. Sea states off the U.S. West Coast, particularly in the offshore areas, often preclude the use of mechanical recovery techniques, thus the use of chemical dispersants is usually the preferred option in offshore waters. In general, the use of dispersants may temporarily increase the risk to the plankton community in the upper several meters of the water column but this risk is likely to be short-term and geographically limited (California Dispersant Plan, 2008). The impact of dispersants and dispersed oil on jellyfish is not well known, but putting oil into the water column via dispersants may actually be more detrimental to jellyfish than not applying dispersants; therefore a response in offshore waters may not necessarily benefit critical habitat for leatherbacks. In fact, the best approach in terms of impacts to prey PCE may be to not respond to the spill and instead rely on natural means such as evaporation to remove the oil and keep it out of the water column.

As mentioned previously, we have eliminated the migratory pathway PCE, and have determined that the offshore areas do not contain the prey PCE, as defined in this final rule. Therefore, the offshore areas are not eligible for designation as critical habitat. As such, this final designation only evaluates oil spill response and its potential impact on our prey PCE in Areas 1, 2, and 7. Since these areas are in the nearshore environment, it is likely that USCG will respond to a spill that occurs in these areas. In our proposed rule, we made the assumption that if critical habitat were designated, then the USCG may be more likely to launch a response to clean up the oil using chemical dispersants or other response techniques, and we developed associated costs for response based on this assumption. However, after additional research on oil spill response, we have determined that making this assumption does not necessarily reflect what is likely to occur in the event of an oil spill in Areas 1, 2 and 7. That is, the existence of leatherback critical habitat is likely to play a small part in the decision making on whether to respond and how to respond. Each spill is unique, and response is determined based on many complex factors, such as the type of oil, sea state, availability of mechanical or chemical materials, and risk to resources, particularly shoreline resources. Along the U.S. West Coast, NMFS is becoming more actively engaged in oil spill response planning and is reviewing ACPs and RCPs and providing information on protected species, including leatherbacks. Oil spill response is not like other Federal activities considered in this final rule. The ESA section 7 consultation occurs after the Federal activity (spill response) has occurred, through emergency consultation procedures, so there is limited opportunity to change activities during a response if a finding of jeopardy or adverse modification/destruction is made. NMFS' engagement at the ACP and RCP level is likely the optimal means of raising awareness of leatherback critical habitat and working within the spill response community to make changes to response protocols to protect critical habitat. At this time, we do not know what types of activities we would request that USCG modify to protect critical habitat during an oil spill response; therefore, we are unable to assign a dollar value to this activity.

In the proposed rule and draft economic report, the costs associated with spill response were based upon a model developed and published by Etkin (1999). The costs associated with spill clean-up using the model were quite low, less than $100,000. Since publication of the proposed rule, and as discussed above, we thoroughly evaluated several different options for oil spill costs, but there is no way to reliably predict what incremental effect, if any, critical habitat for leatherbacks would have on these costs. Accordingly, this rule includes no quantitative estimates of the incremental costs of critical habitat designation for leatherbacks on the cost of oil spill response.

Comment 37: Representative Woolsey noted that Area 3 is currently being considered by the Department of Interior for an oil lease, and requested that this be considered as an activity that may require modification through a section 7 consultation.

Response: We acknowledge that we did not directly consider oil leasing in our proposed designation, and intended to include this proposed leasing action in our final designation. However, we have since determined that Area 3, the location for the potential leasing is not eligible for designation as critical habitat as it does not contain the prey PCE. Therefore, further analysis of potential oil leasing in this area is not necessary.

With regard to existing oil platforms, we included the consideration of oil spills and leaks associated with existing platforms in our analysis of oil spill response.

Comment 38: Commenters expressed uncertainty about the occurrence of point source pollutants and pesticides residue in marine waters, and recommended that we consider the potential high risk of a shipping-related oil spill in the final designation.

Response: As described above, we have further explored the potential for oil spills in the marine environment. Please see our response to Comment 37.

Comment 39: Commenters specifically mentioned that NMFS failed to consider activities such as fishing and shipping traffic in areas 4 and 5 when excluding these areas from designation based on oil spill costs alone. Commenters suggested that offshore areas, specifically Areas 6 and 8, scored high on passage PCE but the overall conservation score decreased because of a low score for the prey PCE, then were eliminated because of economic costs. Commenters stated ''it is difficult to see NMFS's rationale for excluding these areas in the proposed rule.''

Response: As mentioned previously, we have eliminated the migratory pathway PCE, and we re-evaluated Areas 4, 5, 6 and 8, as well as our new Area 9, to determine if they contain the prey PCE. We found that Areas 4, 5, 6, 8, and 9 do not contain the prey PCE and therefore do not meet the definition of critical habitat and are not eligible for designation as critical habitat. Therefore, the ESA section 4(b)(2) analysis has been modified accordingly and now focuses on Areas 1, 2, and 7. Please see responses above for more specific information on shipping and fishing and impacts on prey PCE.

Comment 40: The U.S. West Coast National Marine Sanctuaries office noted that the entrance to the Strait of Juan de Fuca is an area of concern for oil spills due to vessel traffic and urged NMFS to consider this in final analysis.

Response: The southern portion of the entrance to the Strait of Juan de Fuca is included in Area 2. As noted above, we have re-evaluated the assumptions made in the proposed rule about oil spill response costs and we have considered the potential for oil spills to occur in this area. As described above, we have looked at the potential for oil spills to occur in coastal areas and determined that we can not quantify the costs of changes that would be made as we do not, at this time, know the types of changes that may be necessary to protect critical habitat during an oil spill response. We therefore provide only qualitative analysis of the changes. Please see our response to Comment 37.

Sanctuaries and Marine Reserves

Comment 41: The National Park Service, California Coastal Commission, the CWPA, and California Department of Fish and Wildlife urged NMFS to recognize protections provided to leatherback sea turtles and their habitats through existing networks of marine protected areas along the California, Oregon, and Washington coasts. Established Marine Protected Areas should be considered in economic analysis.

Response: Through the California Marine Life Protection Act, Marine Protected Areas (MPAs) in California state waters are primarily chosen to be formed due to the known or potential impact of overharvesting fish and to protect fish habitat to allow stocks to grow. As a result of these comments, we further considered the beneficial impacts of existing MPAs within the three specific areas, through the process of developing incremental scores and, if warranted, adjusted them accordingly.

Comment 42: The National Ocean Service commented that the addition of critical habitat for leatherbacks along the west coast is complementary, not duplicative of the authorities of the National Marine Sanctuary Act.

Response: NMFS agrees, and this clarification has been made in the final rule.

Comment 43: Some commenters noted that NMFS should acknowledge that the primary neritic foraging areas along the central California coast are already encompassed through the existence of marine reserves.

Response: NMFS agrees, and this acknowledgement has been made in the final rule.

Comment 44: CWPA commented that there was little or no input from NOAA's Sustainable Fisheries Division (SFD) and no consideration of state-implemented species and habitat protections, specifically California's Marine Life Protection Act, which provides protection for high biodiversity areas along the California coast.

Response: NMFS' SFD works closely with the Pacific Fishery Management Council. Members of the CHRT attended a Council meeting and gave several presentations on proposed leatherback critical habitat designation to the full Council, Management Teams and Advisory Subpanels and the Science and Statistical Committee, many of whose members include staff from the SFD. In addition, SFD staff attended the leatherback critical habitat public hearing held in Carlsbad, California in February, 2010 to hear public comments.

Existing protections at the Federal, State, and local level were incorporated into the analysis via the incremental scores developed for economic analysis.

Comment 45: Several commenters, including CWPA, indicate that California has implemented marine protected areas precisely in upwelling and retention areas where leatherback sea turtles are found. They also questioned why additional protection (i.e., critical habitat designation) of these same areas is necessary.

Response: MPAs that have been designated off the coast of California specify the restrictions placed on users of the areas that may pose a threat to particular species and/or their habitat. We are not aware of any restrictions that are included in such MPAs to protect and maintain the quality and density of leatherback prey, the PCE we have identified in revising leatherback habitat. The ESA requires that we evaluate critical habitat based on specific criteria, and the existence of other statutes or protected areas does not preclude the ability or our requirement to designate critical habitat. However, we acknowledge that existing protections are important and they are taken into consideration during the incremental scoring process as part of the existing baseline.

Comment 46: Some commenters noted that Monterey Bay and Gulf of Farallones are two important sites for leatherback foraging along the central California coast that are already encompassed in National Marine Sanctuaries and the State of California MPAs, and that therefore critical habitat in these areas is duplicative and unnecessary.

Response: Please see our previous responses to comments 41 and 45 regarding Marine Protected Areas.

Offshore Alternative Energy and Undersea Cables

Comment 47: The Defenders of Wildlife, CBD, and Pacific Gas & Electric commented on the potential effects of offshore tidal and wave energy and other alternative energy facilities on leatherback turtle habitat. In addition, BOEM questioned our analysis of how alternative energy structures would affect leatherback turtle migration corridors.

Response: The effects of wave energy and other alternative energy facilities on sea turtles or jellyfish is not fully understood, particularly because many facilities are still in the design phase, making it difficult to predict how an activity proposed in designated critical habitat might require changes to protect the leatherback prey PCE. It will be necessary for research in this area to produce data and analysis that can be used during ESA section 7 consultations. These consultations may include modifications to facilities to limit or avoid adverse modification or destruction of critical habitat. As discussed in other sections of this final rule, we have eliminated the migratory pathway condition PCE; therefore, we have not further discussed how permanent structures may impact leatherback migrations.

Comment 48: The North American Submarine Cable Association commented that the activities of their member companies have no effect on leatherback turtle prey and, accordingly, NMFS should state that ESA section 7 consultations on these activities will not be required after NMFS designates critical habitat. The Association questioned how projects may affect benthic stages of jellyfish, especially since we lack a thorough description of benthic habitat needed for jellyfish and/or a description of where this habitat exists off the U.S. West Coast.

Response: NMFS cannot say which activities would not require ESA section 7 consultation. It is the responsibility of the agency taking the action to determine if their actions impact listed species or designated critical habitat and therefore are subject the ESA section 7 consultation. We agree with the comment regarding the lack of information on the specific type and location of habitat important to the early polyp stages of jellyfish. It is reasonable to conclude that some activities that involve disturbing benthic substrates (like undersea cable installation/maintenance) could affect jellyfish particularly in the nearshore areas where polyp beds are expected to occur. However, given the current best available science, we are unable to describe such benthic habitat and where it may occur.

General Comments

Comment 49: Some commenters suggested that because the population trend for leatherback sea turtles in the Western Pacific is unknown, NMFS cannot say that excluding areas would not cause extinction.

Response: We acknowledge that the overall population trend of leatherback sea turtles in the Western Pacific is unknown. In our proposed rule, we determined that exclusion of specific areas based on economic costs would not impede conservation or result in the extinction of the species. This determination was based on the best data available regarding the potential conservation benefits of the proposed

designation in comparison to the current level of species protection in those areas. Following our review and consideration of public comments, we made several modifications to the proposed rule, which are detailed in ''Summary of Changes from the Proposed Designation.'' As a result of these changes, our analysis under section 4(b)(2) of the ESA was also revised. In this final rule, we do not exclude any areas meeting the definition of critical habitat.

Comment 50: Some commenters asserted that designating CH will promote data collection and analysis to aid in planning for ''resource uses'' in the areas and will become more important as the agency implements marine spatial planning.

Response: We agree and are already supporting research on the effects of contaminants on jellyfish as an indicator of health for leatherback sea turtles.

Comment 51: Some commenters contended that NMFS' assertion that only permanent or long-term structures should be considered for their potential to affect habitat and the passage PCE was arbitrary and capricious. They asserted that such a notion contradicts ESA requirements and marks an unreasoned departure from past critical habitat designations in marine waters, where fishing gear and other ''non-permanent'' structures are considered to have an effect on foraging or migration. They concluded that NMFS would be setting a harmful new precedent for excluding clear threats to critical habitat functions in future critical habitat designations.

Response: As described previously, we have removed the migratory pathway PCE conditions, and we have evaluated each area based on the prey PCE. Therefore, we will not further evaluate the type of structures that may impact passage. Please see our response to Comment 12 for additional information on this topic.

Comment 52: A commenter suggested that we use adaptive management in the final designation to ''deal with uncertain environmental variation.''

Response: ''Adaptive management'', or the iterative process of evaluating and modifying a management decision over time to optimize results and address uncertainties, is a useful tool for the conservation of endangered and threatened species and their habitat; however the ESA requires that we designate critical habitat through a regulatory process that requires us to make decisions based upon the best available information at the time. When or if new information becomes available, including the effects of environmental variation on current designated critical habitats, we will evaluate the information and determine if a revision to this critical habitat designation is necessary.

Summary of Changes From the Proposed Designation

Based on the comments received and our review of the proposed rule, we (1) eliminated ''migratory pathways'' as a PCE; (2) refined the description of the prey PCE specifically to clarify that density is an important element of the feature; (3) revised the boundaries of the areas in which the PCE may be found; and (4) re-evaluated each area for the presence of the PCE and determined which areas meet the definition of critical habitat and are thus eligible for designation. The following discussion describes in detail the rationale for these changes.

(1) Eliminated as a PCE ''migratory pathway conditions to allow for safe and timely passage and access to/from/within high use foraging areas.''

Several comments focused on migration routes as a PCE and our economic and biological analyses associated with that PCE. Such comments triggered our re-evaluation of this PCE. We reviewed available data and literature, evaluated public comments, and reevaluated the validity of the PCE based on applicable statutory and regulatory definitions and criteria. We explain our analysis in more detail below. In our proposed rule, we explained that while leatherbacks are known to migrate great distances on a seasonal basis across the Pacific Ocean to arrive at known foraging areas in the near-shore marine environment within the U.S. EEZ, the actual migratory routes to those areas are not well-known. We reviewed public comments to determine whether additional data were available to support our approach in the proposed rule. Our review of public comments and available data on leatherback turtle migration confirmed our general assumptions in the proposed rule regarding the seasonal migratory and forage behavior of leatherback sea turtles migrating long distances from nesting beaches and over-wintering areas in the western Pacific Ocean to arrive during the summer and fall off the U.S. West Coast to forage in areas of dense prey concentrations associated with the California Current Ecosystem. In other words, NMFS confirmed the existence of valid and useful data on the general migration of leatherbacks to and their occurrence in the geographic areas considered for designation as critical habitat. However, our review of public comments and the best available scientific data did not resolve the uncertainty regarding the occurrence and presence of any specific biological or physical features indicating that a given area constitutes a migratory pathway or provides defined migratory pathway conditions for leatherback sea turtles from offshore areas to near-shore high-use forage areas, movement within those areas, and transit among those areas.

In our proposed rule, we relied primarily on data indicating the presence of leatherbacks within the specified areas as a proxy for determining migratory pathway conditions (e.g., satellite telemetry, aerial surveys, nearshore ship-based research). While we recognized the importance of leatherback migration, we did not identify specific migratory pathway conditions, and acknowledged uncertainty regarding their occurrence and presence. Public comments and agency inquiry did not develop additional meaningful data to establish the occurrence or presence of such indicative conditions. Thus, while the general proxy approach was useful in identifying and framing the importance of leatherback seasonal migration to geographic areas off the U.S. West Coast, without further specific data regarding biological or physical features influencing migration to, from and among forage areas, it did not allow us to identify specific migratory conditions in any area under consideration. Rather, this approach indicated that the entire U.S. EEZ could be considered as a migratory corridor.

A PCE is a biological or physical feature essential to the conservation of the species for which special management consideration or protection might be required. These features must be reasonably specific and identifiable in order to be protected. Our analysis of migratory pathway conditions did not produce a reasonable description of the physical and biological feature itself, allow a reasonable demonstration of how the feature is essential to conservation of the leatherback sea turtle, provide an effective basis for identifying ''specific areas'' on which the feature is found, or inform our identification of the types of activities that might presently or prospectively pose a threat to the feature such that special management consideration or protections might be necessary. In addition, it presents the possibility of resulting in an over-designation of critical habitat. Accordingly, the migratory pathway conditions do not

meet the requirements of the ESA, and we decided to remove it as a PCE.

Both NMFS and the USFWS have identified passage as a PCE in other critical habitat designations; however, the species and habitats involved differed significantly from leatherback sea turtles. In those instances, passage was more narrowly defined, and it was essential that the species have access to passage through a discrete and identifiable section of habitat. Please see our responses to Comments 12 and 13 for additional information.

We considered the impact of removing migratory pathway conditions as a PCE and the possible effects on conservation of leatherbacks. If there were threats to leatherback passage through the open ocean, and there were a federal nexus to those threats, they could potentially be mitigated through a section 7 consultation on the species. For example, some commenters cited ship strikes and fishing gear entanglement as a threat to passage. These threats do not alter habitat features as defined in this rule; however, because they pose a direct threat to the species, these threats can be addressed through a jeopardy analysis. We also note that in the proposed rule we had concluded, after conducting a 4(b)(2) analysis for each area, that offshore areas containing the migratory pathway conditions PCE, but low or medium ratings for the prey PCE due to low levels of quality prey, should be excluded from the designation (i.e., Areas 4, 5, 6, and 8). While the migratory pathway PCE would have been found in Areas 1, 2 and 7, we only identified a single activity type, construction of long-term or permanent structures (e.g., alternative energy projects), that might trigger section 7 consultation and project modifications to protect the passage feature. Section 7 consultation would likely still be required for such activities to consider effects to the species under the jeopardy standard as well as adverse modification of the prey PCE.

At this time, and in light of the data and analysis described above, the migratory pathway conditions PCE, as defined in the proposed rule, lacks the required defined physical and biological features and specific passage locations, and we cannot demonstrate that this feature is ''essential to conservation of the species.'' Nor can we determine whether and where such pathway conditions might reasonably be ''known'' to occur within the nine specific areas evaluated for designation. Based on this re-evaluation, we conclude that this feature fails to meet the regulatory guidance for determining a PCE and cannot serve to qualify geographic areas as critical habitat under the ESA, section 3(5)(A)(i).

(2) Refinement of the prey PCE. We have added the term density to our definition of the prey PCE to reaffirm the importance of this quality to the feature. In our proposed rule, we associated the prey PCE with each area given the general co-occurrence of leatherbacks with prey species and the corresponding likelihood of foraging activity. At the same time we recognized that certain areas, particularly the near-shore areas, are more heavily used for foraging and are of greater conservation value to the species. As we discussed in the proposed rule, prey is a feature off the U.S. West Coast that is essential to the conservation of leatherback sea turtles. In our proposed rule, we recognized that all areas containing the prey PCE were not equal in terms of the quantity and type of prey available and in their value for conservation of the species. We also provided data and analysis indicating that the areas where dense aggregations of prey occurred were the most important forage habitats for the species. We acknowledged a significant distinction between the conservation value of nearshore areas and offshore areas in relation to this feature, noting that some areas were of marginal conservation value due to the absence of prey in sufficient density to make forage energetically efficient for migrating turtles (e.g., Areas 4, 5, 6, 8 and 9). Specific nearshore areas were shown to have significant conservation value as they displayed a high density of prey species and corresponding patterns of regular leatherback use for sustained forage (e.g., Areas 1, 2 and 7). At the same time, we proposed finding that the prey PCE was present in all eight areas evaluated for designation. The proposed rule did so, without reflecting sufficiently the importance of density of prey species as a characteristic of the PCE due to differences in dense aggregations of prey species and predicted use by leatherbacks for sustained foraging.

During public hearings on the proposed critical habitat, we received questions about the amount or density of prey species necessary for an area to be considered critical habitat. We also received written public comments suggesting that any area in which scyphomedusae may be found in the U.S. West Coast EEZ should be designated as critical habitat.

In evaluating these comments and reviewing data related to the occurrence of prey species in specific areas and leatherback use of such areas for foraging, we have decided in the final rule to specifically include ''density'' in the prey PCE, thus reaffirming its biological significance as an element of the habitat feature considered essential to conservation of leatherbacks. This refinement is consistent with the available literature, including recent work by Benson *et al.* (2011) and Benson *et al.* (2007) that highlights the importance of prey aggregations to foraging leatherbacks.

We further revised the eight areas evaluated for designation to ensure those areas took into account density in evaluating the prey PCE. While we cannot quantitatively describe the density of prey (e.g., number of jellyfish per square mile) necessary to support the energetic needs of leatherbacks that travel across the Pacific Ocean to forage off the U.S. West Coast, based on the available information, we know that not all areas in which jellyfish may be found provide sufficient condition, distribution, diversity, abundance and density to support leatherback individual and population growth, reproduction, and development. Please see (4) below for additional information on how the prey PCE was evaluated in each area.

(3) Adjustment to area boundaries and the addition of Area 9.

In our proposed rule, we identified the overall area occupied by the species. This did not change in the final rule. The proposed rule then identified eight specific areas within the U.S. West Coast EEZ, the limit of our regulatory authority for designating critical habitat, for evaluation to determine whether they qualified as critical habitat. We evaluated each of these areas to determine whether they contained a PCE, in which case the area would qualify as critical habitat. In our proposed rule, we explained that the boundaries for these areas were based on a best estimate of where leatherback sea turtles transition from migrating to foraging, and where there are changes in the composition or abundance of prey species. The boundaries were intended to reflect substantial data demonstrating leatherback presence in marine waters as well as oceanographic, hydrological and physical features that impact the location of prey.

During the public comment period, we received comments that questioned our rationale for drawing the original area boundaries. In response to these comments, we reviewed the literature and data available on leatherback foraging and movements, as well as new information on leatherback movements, to determine if the boundaries were drawn appropriately. After reviewing relevant oceanographic processes and

physical features, we made three changes to the area boundaries to better reflect documented breaks in coastal ocean biological and physical properties. Our approach in drawing these boundaries did not depart from the stated objective in the proposed rule. Rather, it reflected what we believe to be a more accurate depiction of the oceanographic, hydrological and physical features impacting the location of prey and likely use by leatherbacks.

Boundary changes include the following: (1) We moved the offshore boundary of Area 7 east to the 3,000 meter isobath to better reflect where foraging is known to occur off the coast of central and southern California, and to better distinguish between nearshore and offshore habitat. Additionally, in an effort to be consistent with other area boundaries marked by geographic features, the offshore boundary of Area 7 has been moved east to the 3,000 m isobath. This boundary change resulted in a decreased overall size of Area 7 from 46,100 sq. mi to 13,102 sq. mi. (2) We moved the boundary between Areas 2 and 3 from the Umpqua River south to Cape Blanco. Cape Blanco is a well-documented ''break'' in coastal ocean physical and biological properties due to differences in primary bottom types and current patterns that influence the dispersal and retention of larval fishes and invertebrates (Barth *et al.,* 2000; McGowan *et al.,* 1999; Peterson and Keister, 2002); therefore, it was determined to be an appropriate oceanographic boundary to distinguish between these two areas. This boundary change resulted in the increased overall size of Area 2 from 24,500 sq. mi. to 25,004 sq. mi. (3) We created a new Area 9 from the southern portion of the proposed Areas 7 and 8. Due to differences in the geography, oceanography, and usage by leatherbacks between the northern and southern portions of our proposed Areas 7 and 8, the creation of Area 9 allowed us to look at areas with more uniform value in terms of leatherback habitat.

The following paragraphs describe each final area (shown in Figure 1) and summarize the data used to determine each area occupied by leatherbacks:

Area 1: Neritic waters between Point Arena and Point Sur, California extending offshore to the 200 meter isobath. The specific boundaries are the area bounded by Point Sur (36° 18′22″ N./121° 54′9″ W.), then north along the shoreline following the line of mean lower low water to Point Arena, California (38° 57′14″ N./123° 44′26″ W.), then west to 38° 57′14″ N./123° 56′44″ W., then south along the 200 meter isobath to 36° 18′46″ N./122° 4′43″ W., then east to the point of origin at Point Sur. As described in our final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. This area is a principal California foraging area (Benson *et al.* 2007b), characterized by high densities of primary prey species, brown sea nettle (*C. fuscescens*), particularly within upwelling shadows and retention areas (Graham 1994).

Area 2: Nearshore waters between Cape Flattery, Washington, and Cape Blanco, Oregon extending offshore to the 2000 meter isobath. The specific boundaries are the area bounded by Cape Blanco (42° 50′4″ N./124° 33′44″ W.) north along the shoreline following the line of mean lower low water to Cape Flattery, Washington (48° 23′10″ N./124° 43′32″ W.), then north to the U.S./Canada boundary at 48° 29′38″ N./124° 43′32″ W., then west and south along the line of the U.S. EEZ to 47° 57′38″ N./126° 22′54″ W., then south along a line approximating the 2,000 meter isobath that passes through points at 47° 39′55″ N./126° 13′28″ W., 45° 20′16″ N./125° 21′ W. to 42° 49′59″ N./125° 8′ 10″ W., then east to the point of origin at Cape Blanco. As described in our final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. This area is the principal Oregon/Washington foraging area and includes important habitat associated with the Columbia River Plume, and Heceta Bank, Oregon. Great densities of primary prey species, brown sea nettle (*C. fuscescens*), occur seasonally north of Cape Blanco (Suchman and Brodeur 2005; Reese 2005; Shenker 1984). Jellyfish densities south of Cape Blanco appear to be dominated by moon jellies (*Aurelia labiata*) and egg yolk jellies (*Phacellophora camtschatica;* Suchman and Brodeur 2005; Reese 2005). Cape Blanco is a well-documented ''break'' in coastal ocean physical and biological properties due to differences in primary bottom types and current patterns that influence the dispersal and retention of larval fishes and invertebrates (Barth *et al.,* 2000; McGowan *et al.,* 1999; Peterson and Keister, 2002).

Area 3: Nearshore waters between Cape Blanco, Oregon and Point Arena, California extending offshore to the 2000 meter isobath. This line runs from 42°49′59″ N./125°8′10″ W. through 42°39′3″ N./125°7′37″ W., 42°24′49″ N./125°0′13″ W., 42°3′17″ N./125°9′51″ W., 40°49′38″ N./124°49′29″ W., 40°23′33″ N./124°46′32″ W., 40°22′37″ N./154°44′19″ W., to 38°57′14″ N./124°11′50″ W., then east to Point Arena. As described in our final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. This area includes upwelling centers between Cape Blanco, Oregon and Point Arena, California and is characterized by cold sea surface temperatures (<13° C). High densities of jellyfish have been documented between Cape Blanco and the Oregon-California border; however, species composition is dominated by moon jellies (*A. labiata*) and egg yolk jellies (*Phacellophora camtschatica;* Suchman and Brodeur 2005; Reese 2005). Aerial surveys of leatherbacks and jellyfish prey indicate that moon jellies are also the dominant jelly species north of Point Arena, California.

Area 4: Offshore waters west and adjacent to Area 2. Includes waters west of the 2000 meter isobath line to the U.S. EEZ from 47°57′38″ N./126°22′54″ W. south to 43°44′59″ N./125°16′55″ W. As described in our final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. This area is used primarily as a region of passage to/from Area 2 (see above). No information is available regarding presence of jellyfish in this area; however, due to its distance from the coast and lack of persistent frontal habitat, prey species are likely limited to low densities of moon jellies (*A. labiata*) and salps.

Area 5: Offshore waters south and adjacent to Area 4, and north of a line consistent with the California/Oregon border. Includes all U.S. EEZ waters west of the 2000-meter isobath. As described in our final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. The eastern edge of this polygon is strongly influenced by an oceanographic front west of Cape Blanco, Oregon. The position and intensity of the front is variable, dependent on the strength of upwelling at Cape Blanco, and can be located within the extreme eastern edge of Area 5 during strong upwelling events. The front likely acts as an aggregation mechanism for zooplankton; however, no information is available about jellyfish densities. Given its distance offshore, jellyfish densities are likely variable and dominated by moon jellies that may be advected from nearby coastal waters (Suchman and Brodeur 2005; Reese 2005), therefore, importance as a foraging area to leatherbacks is secondary. This area is also a region of passage to/from Area 2 (see above).

Area 6: Offshore waters south and adjacent to Area 5, west and adjacent to the southern portion of Area 3 (see above) offshore to a line connecting N42.000/W129.000 and N38.95/

W126.382, with the eastern boundary beginning at the 2000 meter isobath (42°3′6″ N./125°9′53″ W.). As described in our final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. Offshore waters south of the Mendocino Escarpment are characterized by frontal habitat created by the Cape Mendocino upwelling center. Similar to Area 5, frontal intensity is variable and dependent on the strength of upwelling at Cape Mendocino (Castelao *et al.* 2006). No information is available about jellyfish densities in the Area 6, however, given its distance offshore, jellyfish densities are likely low, dominated by moon jellies, and of secondary importance to leatherbacks as a foraging area.

Area 7: Offshore waters between the 200–3000 meter isobaths from Point Arena to Point Sur, California and waters between the coastline and the 3000 meter isobath from Point Sur to Point Arguello, California. This area includes waters surrounding the northern Santa Barbara Channel Islands (San Miguel, Santa Rosa, Santa Cruz, and Anacapa Islands). As described in our final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. Offshore waters beyond the 200 meter isobath in this area are characterized by persistent ocean frontal habitat created by mesoscale retentive eddies and meanders associated with offshore-flowing squirts and jets anchored at coastal promontories between Point Arena and Point Sur, creating linkages between nearshore waters of Area 1 and offshore waters of the California Current. The recurrent oceanographic features at the edge of the continental shelf are occupied by aggregations of moon jellies (*A. labiata*) and lower densities of brown sea nettles (*C. fuscescens*). Telemetry data indicate that these offshore waters are commonly utilized by leatherbacks when jellyfish availability in Area 1 is poor, and as a region of passage to/from Area 1. Neritic waters between Point Sur and Point Arguello are also strongly influenced by coastal upwelling processes. Point Arguello is a well-documented ''break'' in coastal ocean physical and biological properties along the U.S. West Coast, separating newly upwelled waters of the central California coast from upwelled-modified and warm, lower salinity waters of the southern California Bight. The southern portion of the region includes Morro and Avila Bays, where large densities of brown sea nettles have been observed seasonally in fisheries monitoring surveys and trawl surveys.

Area 8: Offshore waters west and adjacent to Area 6, and west of the 3000 meter isobath adjacent to Areas 7, and 9 between Point Arena, California and the U.S. EEZ/Mexico maritime border. As described in our final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. Although eddies and meanders originating from coastal capes and headlands may be present in this region after particularly strong upwelling events, frontal features are not persistent or abundant and the region is primarily characterized by warm, low salinity offshore waters. Due to its distance from the coast and lack of persistent frontal habitat, prey species are likely limited to low densities of moon jellies (*A. labiata*) and salps. Area 8 is primarily a region of passage for leatherbacks to/from Area 7 (see above).

Area 9: Southern California Bight waters extending from the coast to the 3000 meter isobath between Point Arguello and Point Vicente, and from Point Vicente to N32.589/W117.463 extending to the 3000 meter isobath. As described in our Final Biological Report, leatherback presence is based on aerial surveys, telemetry studies, and fishery interactions. Upwelling originating from Point Conception creates offshore frontal near the northern Santa Barbara Channel Islands (San Miguel, Santa Rosa, Santa Cruz, and Anacapa) extending to San Nicolas Island; however, most of this region is characterized by warm, low salinity waters. Little information is available about the presence of jellies in the area; however, trawl samples performed by the California Cooperative Fisheries Investigations (CalCOFI) suggest that moon jellies are the dominant scyphomedusae; therefore, this area is of secondary importance to leatherbacks as a foraging area. Leatherbacks use this area primarily as a region of passage to Area 7, particularly during the spring and early summer months. This area was created in recognition of the southern California Bight biogeographic region (Parrish *et al.* 1981) that lies south of Point Arguello/Point Conception extending to the U.S./Mexico maritime border and west to the 3000 meter isobath.

Additionally, as mentioned in our response above, the shoreward extent of the areas was moved from the mean lower low water line to the extreme low water line. In our proposed rule, we identified the mean lower low water line as the shoreward boundary for this designation; however, leatherbacks are unlikely to pursue prey beyond the extent of extreme low water (S. Benson, NMFS, September 2000, unpublished data). In light of this information, we determined that extreme low water is a more appropriate boundary for the shoreward extent of this critical habitat.

As depicted in Figure 1, NMFS's adjustment of boundaries in the final rule do not either increase or decrease the total geographic area evaluated for potential designation as critical habitat identified in the proposed rule. Areas 1, 2 and 7 were identified for designation in the proposed rule. Areas 1, 2 and 7 are also included in the final designation though the boundaries for those areas have been adjusted as explained above. While the boundaries to Areas 1 and 2 remain largely unchanged from the proposed rule, the final rule's adjustment to the boundaries of Area 7 results in a substantial decrease in the spatial extent of the final designation when compared with the proposed rule.

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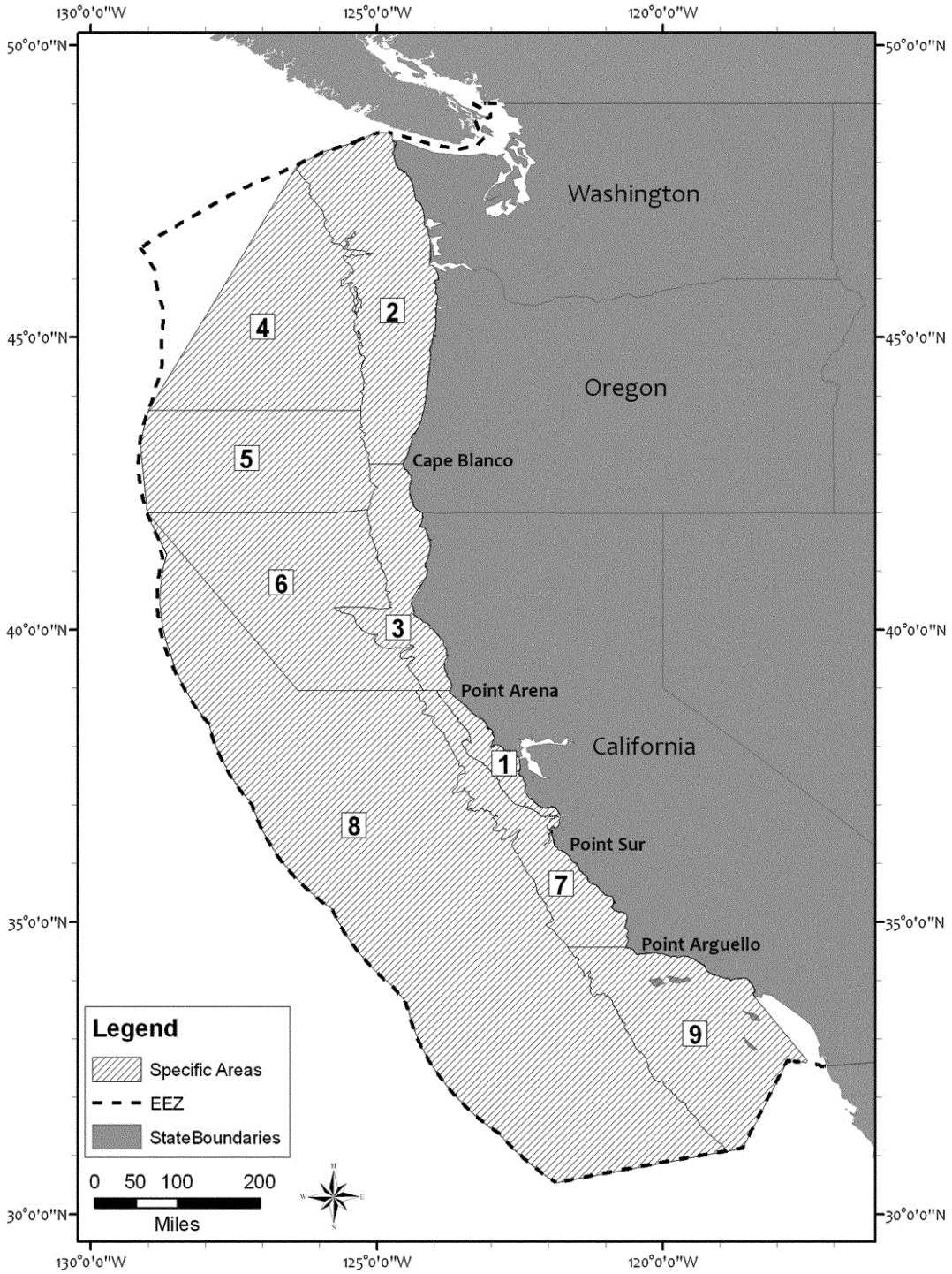
Figure 1. Geographical Areas Occupied by the species



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(4) Determining which areas meet the definition of critical habitat after the elimination of our migratory pathway PCE and using our refined prey PCE.

As described above, we eliminated our proposed migratory pathway PCE and therefore re-examined each of our areas to determine if the prey PCE, as refined in this final rule to include density, could be found within each of the nine areas. For each of the nine occupied areas, we evaluated the co-occurrence of leatherback turtles and their prey species based on the best available data. We specifically evaluated each area to predict whether and where the prey jellyfish could be consistently found in sufficient abundance, condition, distribution, diversity and density to provide for foraging that is

essential to the conservation of the species.

Coastal nutrient input, high productivity, and shallow waters (less than 1000 meters depth) are favorable for the life history of many species of scyphomedusae. The consistent availability of abundant prey in relatively small geographic areas associated with fixed or recurrent physical features influenced by coastal geomorphology is likely a key factor causing leatherbacks to travel to the U.S. West Coast to forage. In contrast to coastal areas, prey patches in open ocean regions are likely more dynamic, ephemeral, and unpredictable and do not have consistent conditions that produce the abundance and densities necessary for providing sufficient energy for foraging leatherbacks.

In addition, a telemetry and behavioral study has become available since the proposed rule was published (Benson *et al.* 2011). This study provides information and locations of high occurrences of leatherback foraging (described in the paper as area restricted search or ARS), and these foraging areas closely align with Areas 1, 2, and 7.

The proposed rule described the general co-occurrence of leatherback turtles and their prey species in areas offshore, including Areas 3, 4, 5, 6 and 8, as well as the southern and offshore portion of Area 7. Based on the available data, we could not identify or reasonably predict whether or where the refined PCE could be consistently found in sufficient abundance, condition, distribution, diversity and density to provide for foraging that is essential to the conservation of the species in areas 3, 4, 5, 6, 8 and 9, in a manner consistent with our definition and explanation of the prey PCE in this final rule. As such these areas do not meet the definition of critical habitat and therefore are not eligible for further consideration in this designation. Please see our more specific evaluation of each area below.

Area 1. The preferred prey of leatherback sea turtles, brown sea nettles (*C. fuscescens*), are found in abundance and high densities in this area particularly within upwelling shadows and retention areas. This area has been identified as the principal foraging area off the coast of California and contains features that produce abundant prey of sufficient condition, distribution, diversity and density to provide for foraging that is essential to the conservation of the species. Thus, this area meets the definition of critical habitat and is eligible for designation.

Area 2. The preferred prey of leatherback sea turtles, brown sea nettles (*C. fuscescens*), are found in abundance and high densities in this area. This area is the principal foraging area off of Oregon and Washington as great densities of brown sea nettles are found to seasonally associate with the Columbia River Plume and Heceta Bank in Oregon, north of Cape Blanco. Based upon the best available scientific information, these features produce prey of sufficient condition, distribution, diversity abundance and density to provide for foraging that is essential to the conservation of the species. Thus this area meets the definition of critical habitat and is eligible for designation.

Area 3. This area has features that produce an abundance of jellies, particularly during seasonal upwelling. However, south of Cape Blanco, Oregon to the Oregon-California border the area is dominated by moon jellies and egg yolk jellies. South of the Oregon-California border and north of Point Arena, moon jellies are the dominant species of jellies. These species are not the preferred prey for leatherbacks, although they may be consumed when brown sea nettles are not available. A recent publication analyzing movement of leatherbacks along the U.S. West Coast indicates that foraging behavior was not observed in Area 3 (Benson *et al.,* 2011). The water in this area (i.e., south of Cape Blanco, the boundary between Area 2 and Area 3) is colder than waters in adjacent Areas 1 and 7 to the south and Area 2 to the north (Huyer, 1983; Brodeur *et al.,* 2004). Cape Blanco is a coastal promontory that protrudes farther to the west than any other feature in the relatively straight coastline of the U.S. Northwest. The environmental variability associated with this feature suggests habitat partitioning between prey species. For example, Suchman and Brodeur (2005) found that brown sea nettles were more likely to be caught in waters north of Cape Blanco, while south of Cape Blanco, moon jellies were more prevalent. Thus, Area 3 may not be utilized by leatherbacks as a foraging region because it is energetically inefficient for leatherbacks to consume low caloric content prey (i.e., moon jellies) while maintaining their core body temperatures through swimming. Densities of brown sea nettles are likely insufficient to support regular foraging in the cold waters of Area 3. Based upon the best available scientific information, the oceanographic features of this area do not produce prey of sufficient condition, distribution, diversity, abundance and density to provide for foraging that is essential to the conservation of the species. Thus this area does not meet the definition of critical habitat.

Area 4. This area has been characterized as primarily a region of passage to/from Area 2; therefore, we evaluated it in terms of the prey PCE. Although there is limited information available regarding the presence of jellyfish in this area, the recent study by Benson *et al.* (2011) indicates that jellyfish feeding occurs in the area. Due to distance from the coast and lack of persistent frontal habitat, prey species are likely limited to low densities of moon jellies (*A. labiata*) and salps. Small densities of low caloric prey resources in Area 4 may be sufficient for counteracting calorie loss but are likely not necessary for leatherbacks to reach Area 2. Further, it is unlikely that the densities of brown sea nettles within Area 4 are sufficient to provide adequate energy for leatherback growth or reproduction. Based upon the best available scientific information, the oceanographic features of this area do not produce prey of sufficient condition, distribution, diversity, abundance and density to provide for foraging that is essential to the conservation of the species. Thus, this area does not meet the definition of critical habitat.

Area 5. This area was defined based on its use as passage for leatherbacks from far offshore waters to foraging sites in Area 2 and between Areas 1 and 2. The eastern edge of the area is influenced by an oceanographic front west of Cape Blanco, Oregon that is variable and dependent on the strength of upwelling at Cape Blanco. Although the front may act as an aggregation mechanism for zooplankton, no information is available on its impact on jellyfish densities or if it acts as a transport mechanism for jellyfish. Similar to other distant offshore areas, jelly densities are likely variable and dominated by moon jellies. Recent work by Benson *et al.* (2011) indicates that no foraging behavior was observed in Area 5 during their study period, 2000 through 2008. While prey may be present in Area 5, based upon the best available scientific information, we could not find areas that had prey of sufficient condition, distribution, diversity, abundance and density to provide for foraging that is essential to the conservation of the species. Thus, this area does not meet the definition of critical habitat.

Area 6. Similar to Area 5, frontal intensity is variable and dependent on the strength of upwelling at Cape Mendocino (Castelao *et al.* 2006). No information is available about jelly densities in the Area 6; however, given its distance offshore, jelly densities are

likely low, dominated by moon jellies. Recent work by Benson *et al.* (2011) showed that no leatherbacks foraged in Area 6 during their study period 2000 through 2008. While prey may be present in Area 6, based upon the best available scientific information, we could not find areas that have prey of sufficient condition, distribution, diversity, abundance and density to provide for foraging that is essential to the conservation of the species. Thus, this area does not meet the definition of critical habitat.

Area 7. A quasi-stationary front occurs in this area near the 2000 m to 3000 m isobaths as warm offshore waters meet cooler coastal upwelled water. As upwelling winds relax, this front moves closer to the coast and likely aggregates sea nettles that have been advected from nearby coastal waters (Area 1). The neritic waters between Point Sur and Point Arguello are also strongly influenced by coastal upwelling processes that produce abundant and dense aggregations of leatherback prey. Telemetry data indicate that these offshore waters are utilized for foraging by leatherbacks (Benson *et al.* 2011), particularly if foraging opportunities in Area 1 are poor, as evidenced by leatherbacks spending more time engaged in ARS behavior in this area than in Areas 3, 4, 5,6, 8 or 9. Based upon the best available scientific information, the oceanographic features of this area produce prey of sufficient condition, distribution, diversity, abundance and density to provide for foraging that is essential to the conservation of the species. Thus, this area meets the definition of critical habitat.

Area 8. This area has been identified primarily as an area of passage for leatherbacks moving from distant offshore waters to nearshore foraging Areas 1 and 7. Unlike Area 7, frontal features are less abundant and more ephemeral in Area 8. The region is primarily characterized by warm, low salinity offshore waters. Due to the great distance from the coast, prey species are likely limited to low densities of moon jellies (*A. labiata*) and salps. Recent work by Benson *et al.* (2011) indicates that foraging behavior is rare and inconsistent in this area. Additional information from Benson (unpublished data, 2008) indicated that during a ship-based survey within these waters, an offshore front was observed over 100 miles from shore. Brown nettles were found in poor condition (small and dying) that were likely advected from coastal waters to the offshore front. Although leatherbacks could potentially attempt to feed in this area, the relatively low densities and poor condition of brown sea nettles in this area would likely not provide adequate energy for leatherback growth and reproduction. Based upon the best available scientific information, the oceanographic features of this area do not produce prey of sufficient condition, distribution, diversity, abundance and density to provide for foraging that is essential to the conservation of the species. Thus, this area does not meet the definition of critical habitat.

Area 9. This area was identified as primarily an area of passage in our proposed rule. Therefore, we re-evaluated it in terms of the prey PCE. Most of this area is characterized by warm, low salinity waters, although upwelling originating from Point Conception creates offshore fronts near the northern Santa Barbara Channel Islands and extending south to San Nicolas Island. Little information is available regarding the presence of jellyfish in the area; however, trawl samples suggest that moon jellies are the dominant scyphomedusae. A recent report on telemetry work on leatherbacks indicates some limited foraging behavior around the Channel Islands, and within the southern California Bight by a single individual during spring while moving toward Areas 1 and 7 (Benson *et al.* 2011). Area 9 was primarily used for passage to Areas 1 and 7 by turtles that entered the California Current during the spring. We have no information to indicate whether brown sea nettles are found in sufficient abundance or density to allow for efficient foraging by leatherbacks. Based upon the best available scientific information we could not conclude that this area contained the prey PCE. Thus, this area does not meet the definition of critical habitat.

Critical Habitat Identification and Designation

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.''

If 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 result in the adverse modification or destruction of that habitat. This requirement is in addition to the section 7 requirement that Federal agencies insure their actions do not jeopardize the continued existence of listed species.

In the following sections, we describe our methods for evaluating the areas considered for designation as critical habitat, our final determinations, and the final critical habitat designation. This description incorporates the changes described above in response to public comments and peer reviewer comments.

Methods and Criteria Used To Identify Critical Habitat

In accordance with section 4(b)(2) of the ESA and our implementing regulations (50 CFR 424.12(a)), this final rule is based on the best scientific information available regarding leatherback sea turtles' present and historical range, habitat and biology, as well as threats to its habitat.

To assist with the consideration of revising leatherback critical habitat, we convened a CHRT consisting of biologists and managers from NMFS Headquarters, the Southwest and Northwest Regional Offices, and the Southwest Fisheries Science Center. The CHRT members had experience and expertise on leatherback biology, distribution and abundance of the species along the U.S. West Coast as it relates to oceanography, ESA section 7 consultations and management, and/or the critical habitat designation process. The CHRT used the best available scientific data and their best professional judgment to: (1) Verify the geographical area occupied by the leatherbacks at the time of listing; (2) identify the physical and biological features essential to the conservation of the species that may require special management considerations or protection; (3) identify specific areas within the occupied area containing those essential physical and biological features; (4) evaluate the conservation value of each specific area; and (5) identify activities that may affect any designated critical habitat. The CHRT evaluation and conclusions are described in detail in the following sections.

Physical or Biological Features Essential for Conservation

Joint NMFS and 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 protection.'' 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.'' *Id.* The regulations also require agencies to ''focus on the principal biological or physical constituent elements'' (i.e., PCEs) within the specific areas considered for designation that are essential to conservation of the species. PCEs may include, but are not limited to, the following: spawning sites, feeding sites, water quality or quantity, geological formation, and tide.

Primary Constituent Elements

We have identified one PCE essential for the conservation of leatherbacks in marine waters off the U.S. West Coast: The occurrence of prey species, primarily scyphomedusae of the order Semaeostomeae (e.g., *Chrysaora, Aurelia, Phacellophora,* and *Cyanea*), of sufficient condition, distribution, diversity, abundance and density necessary to support individual as well as population growth, reproduction, and development of leatherbacks.

As described above in the section ''Summary of changes from the proposed designation,'' public comments led us to take a closer look at the prey PCE to better describe the characteristics that make the PCE essential to the conservation of leatherbacks. Leatherbacks have high caloric needs, and their preferred gelatinous prey have low nutritional value individually, but consumed in large amounts can satisfy the energetic needs of subadult and adult leatherback sea turtles. As noted in our proposed rule, leatherbacks must consume 20 to 30 percent of their body weight each day, or roughly 50 large jellyfish. Adult leatherbacks (250–450 kg) may consume 70–90 kg of jellyfish per day to meet their energetic needs (Wallace *et al.* 2006). Leatherback sea turtles may opportunistically feed in areas with low densities of jellyfish, but these patches of prey are not sufficient to support the energetic needs to promote individual and population growth, reproduction and development. Telemetry studies and aerial surveys by Benson *et al.* (2011 and 2007) confirm that leatherbacks are most often found foraging in retention areas that are created by points and headlands, and at dynamic mesoscale features including fronts, eddies, and regions of low eddy kinetic energy.

Therefore, we have refined our description of the leatherback prey PCE to specifically include density, along with sufficient condition, distribution, diversity, and abundance described in our proposed rule. Our approach is similar to the agency's designation of critical habitat for North Pacific right whales. Baleen whales and leatherback turtles both forage on relatively small prey. Baleen whales rely on dense aggregations of small fish and krill to satisfy their caloric needs, in the same way as leatherbacks rely on dense aggregations of jellyfish. For the North Pacific right whale critical habitat designation, we identified prey as the sole PCE. Although North Pacific right whales' preferred prey, copepods, are ubiquitous in the North Pacific, we identified the need for a certain density of prey, and located an area in the ocean where physical forcing mechanisms concentrate copepods in sufficient densities to allow for efficient feeding by whales (79 FR 19000, April 8, 2008).

Geographical Area Occupied and Specific Areas

One of the first steps in this critical habitat review process was to define the geographical area occupied by the species at the time of listing. As described above, leatherbacks are distributed throughout the oceans of the world including along the U.S. West Coast within the U.S. EEZ. The CHRT reviewed available data sources to identify locations within and adjacent to the petitioned area that contain the prey PCE. Information reviewed included: Turtle distribution data from nearshore aerial surveys (Peterson *et al.,* 2006; Benson *et al.,* 2006; 2007b; 2008; NMFS unpublished data); offshore ship sightings and fishery bycatch records (Bowlby, 1994; Starbird *et al.,* 1993; Bonnell and Ford, 2001; NMFS SWR Observer Program, unpublished data); satellite telemetry data (Benson *et al.,* 2007a; 2007c; 2008; 2009; NMFS unpublished data); distribution and abundance information on the preferred prey of leatherbacks (Peterson *et al.,* 2006; Harvey *et al.,* 2006; Benson *et al.,* 2006; 2008); bathymetry (Benson *et al.,* 2006; 2008); and regional oceanographic patterns along the U.S. West Coast (Parrish *et al.,* 1983; Shenker, 1984; Graham, 1994; Suchman and Brodeur, 2005; Benson *et al.,* 2007b).

Joint NMFS and FWS regulations provide that areas outside of U.S. jurisdiction not be designated as critical habitat (50 CR 424.12(h)), so any areas outside of the U.S. EEZ were excluded from our analysis. Thus, the occupied geographic area under consideration for this designation was limited to areas along the U.S. West Coast within the U.S. EEZ from the Washington/Canada border to the California/Mexico border.

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.'' In our proposed rule we stated that we did not identify any specific areas outside the geographic area occupied by leatherbacks that may be essential for the conservation of the species. We did not receive any public or peer review comments on this topic, therefore, no unoccupied areas will be included in this analysis.

Special Management Considerations or Protections

An occupied area may be designated as critical habitat only if it contains physical or biological features essential to the conservation of the species that ''may require special management considerations or protection.'' Joint NMFS and USFWS regulations (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.'' We have identified a number of activities that may threaten or adversely impact our identified PCE. In our proposed rule, we grouped these activities into eight activity types: Aquaculture, pollution from point sources (e.g., National Pollution Discharge Elimination System (NPDES)); runoff from agricultural pesticide use; oil spill response; power plants; desalination plants; tidal, wave, and wind energy projects; and liquefied natural gas (LNG) projects.

In our proposed rule, aquaculture was described as an activity that may adversely impact our migratory pathway PCE. With the removal of that PCE, aquaculture is no longer considered an activity that may impact this critical habitat designation. As such, the remaining seven activity types have been evaluated for their potential to impact the prey PCE by altering prey abundance or prey contamination levels with Areas 1, 2, and 7. Based on the present and potential impacts from these activities, we have determined that the prey feature may require special

management consideration or protection.

TABLE 1—SUMMARY OF OCCUPIED SPECIFIC AREAS, SURFACE AREA COVERED AND ACTIVITIES THAT MAY AFFECT THE PREY PCE IN EACH AREA SUCH THAT SPECIAL MANAGEMENT CONSIDERATIONS OR PROTECTION MAY BE REQUIRED

[Please see the economic report for additional details]

Specific area	Est. area (sq. mi)	Activities that may impact the PCE Prey
Area 1	3,807 (9,862 sq. km)	Point pollution (NPDES permitting), pesticide application, oil spill response, power plants, desalination plants, tidal and wave energy projects.
Area 2	25,004 (64,760 sq. km)	Point pollution (NPDES permitting), pesticide application, oil spill response, tidal, wave and wind energy projects, LNG.
Area 7	13,102 (33,936 sq. km)	Point pollution (NPDES permitting), pesticide application, oil spill response, power plants, desalination plants.

ESA Section 4(b)(2) Analysis

Section 4(b)(2) of the ESA requires the Secretary of Commerce (Secretary) to designate critical habitat based on the best scientific data available, after taking into consideration the economic impact, impacts on national security and any other relevant impact, of specifying any particular area as critical habitat. Section 4(b)(2) further states that the Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of designation, unless he determines that failure to designate will result in the extinction of the species.

The ESA does not define what ''particular area'' means in the context of section 4(b)(2), or the relationship of particular areas to ''specific areas'' that meet the statute's definition of critical habitat.

In previous sections of this final rule, we detailed the 9 occupied areas, within the geographic range of the species, that were initially evaluated for eligibility as critical habitat. Through that process, we determined that Areas 1, 2 and 7 are eligible for designation as critical habitat. As there was no biological basis to further subdivide these three ''specific areas'' into smaller units, we treated these areas as the ''particular areas'' for our initial consideration of the impacts of designation. The following sections detail the analysis that was done to consider economic and other impacts from this designation to determine if any particular areas should be excluded.

Benefits of Designation

As described above, section 4(b)(2) of the ESA requires that we balance the benefit of designation against the benefit of exclusion for each particular area. The primary benefit of a critical habitat designation is the protection afforded under section 7 of the ESA, which requires that all Federal agencies insure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of designated critical habitat. This is in addition to the requirement that all Federal agencies ensure that their actions are not likely to jeopardize the continued existence of any listed threatened or endangered species. The designation of critical habitat also provides other benefits, such as improving education and outreach by informing the public about areas and features important to species conservation. At this time, we lack information that would allow us to quantify or monetize the benefits of designating critical habitat for leatherback sea turtles and have instead relied on a qualitative review of the potential benefits.

In our proposed rule, we used the overall conservation value ratings that were developed for each area to represent the qualitative benefit of designation, and we requested public comments on methods for pursuing a quantitative analysis of the benefits of designation. Public comments suggested that there are examples of true cost and benefit analyses for other species, although the intrinsic value of a leatherback sea turtle and its habitat have not been quantified or given a specific monetary value. These comments prompted a review of the analysis done in the proposed rule to determine the overall benefit of designation.

The benefit of designation depends on several factors, including the conservation value of the area to the species, the seriousness of the threats to that conservation value, and the extent to which an ESA section 7 consultation or the educational aspects of designation will address those threats. We began this process by re-examining the conservation value of each specific area based upon the new area boundaries for Areas 2 and 7, as well as the elimination of the migratory pathway PCE. We reviewed the best available information to specifically evaluate each particular area in terms of density of prey, prey species composition, prey aggregating mechanisms within the area, and inter-annual variability (e.g., El Niño (Barber and Chavez, 1983), or Pacific Decadal Oscillation cycles (McGowan *et al.,* 1998; 2003)) to determine the conservation value of each area. Through this evaluation (see Table 2), we determined that all three areas have a high conservation value for leatherback turtles. We then evaluated the extent to which an ESA section 7 consultation and the educational aspects of designation will address threats to the PCE from the activity types identified as having the potential to impact critical habitat. Lastly, we incorporated available information on leatherback foraging use of each area to determine our final conservation benefit of designation score for each area. The following sections further detail this process.

Conservation Value

As mentioned above, to determine the conservation value of each area based on the prey PCE, we scored each area for its importance in four main prey categories: Density of prey; composition of prey species; aggregation mechanism present; and inter-annual variation. We also acknowledge that these categories should be weighted for their relative importance in creating optimal foraging habitat. Therefore, density of prey was weighted at 40 percent of the total area conservation score, while prey species composition, aggregation mechanism, and inter-annual variability were weighted at 25 percent, 25 percent, and 10 percent, respectively.

We first scored each area from 1 to 5 for each prey category, with 5 representing a very high conservation value. Then each score was weighted based on its particular category. For

example, in Area 1, prey concentration was given a score of 5, meaning that it has a very high concentration of prey. The prey concentration category is weighted at 40 percent importance overall, so the weighted score for prey concentration in Area 1 is 2. All weighted scores across categories were added to calculate a total weighted score for each area, as shown in Table 2. Finally, the conservation value was assigned to each area based on the total weighted score. Scores from 4.0 to 5.0 were given a high conservation value, scores from 3.0 to 3.9 were given a medium conservation value, and all scores of 2.9 or lower were given a low conservation value. All three of our particular areas scored a high conservation value, which is consistent with scientific literature and observations of a high level of leatherback foraging in these areas.

TABLE 2—THE SCORES FOR EACH AREA BASED ON THE FOUR PREY CATEGORIES, THE WEIGHTED ADJUSTMENT TO SCORES BASED ON THE OVERALL IMPORTANCE OF EACH PREY CATEGORY, AND THE CONSERVATION RATING

Area	Density of prey (0.4)	Prey species composition (0.25)	Aggregating mechanism (0.25)	Inter-annual variability (0.1)	Total weighted score	Conservation value
1	5 (2.0)	5 (1.25)	5 (1.25)	4 (0.4)	4.9	High.
2	4 (1.6)	5 (1.25)	4 (1)	4 (0.4)	4.25	High.
7	4 (1.6)	4 (1)	4 (1)	4 (0.4)	4	High.

ESA Section 7 Benefits

When considering the extent to which an ESA section 7 consultation will benefit the species in an area designated as critical habitat, we considered the importance of the area and the types of threats to the PCE that may be addressed through such consultation. Under ESA section 7, Federal agencies must insure that their actions will not result in destruction or adverse modification of critical habitat.

Educational Benefits

Educational benefits are included in this analysis to recognize that a critical habitat designation may provide educational benefits to leatherbacks, especially if it raises the awareness of Federal, state and local agencies that engage in or authorize activities that may affect the species or its habitat. Such awareness may lead to protective regulations or policies at the state or local levels that in turn help to educate the general public. After considering the types of activities that may affect leatherback habitat we believe that it is more likely that nearshore coastal areas would yield greater educational benefits than offshore areas simply due to their proximity and accessibility to the public.

U.S. West Coast states maintain jurisdiction offshore to 3 nm wherein occurs the vast majority of human activities in the marine environment (e.g., fishing, swimming, boating). All three states have agencies and entities that provide education and encourage public conservation of coastal resources, including marine species habitats. For example, the California Coastal Commission has active public education and outreach efforts focused on coastal beaches and waters, including an ''Adopt-a-Beach'' program and ''California Coastal Cleanup Day'' that annually draws tens of thousands of participants. The California Department of Fish and Game is actively involved in implementing the state's Marine Life Protection Act and the identification of Marine Protected Areas. Similar agencies, programs, and strategies exist in Washington and Oregon, including: the Washington Department of Ecology Coastal Zone Management Program; Oregon Division of State Lands Coastal Management Program; Oregon Coastal Zone Management Association; and the Oregon Nearshore Marine Resources Management Strategy (Oregon Department of Fish and Wildlife, 2006), which defines the ''nearshore ocean'' as the area from the coastal high tide line offshore to the 30-fathom (180 feet or 55 meter) depth contour (i.e., well within the Area 2 boundary). All of these agencies and entities produce and distribute numerous brochures, maps, and educational resources that emphasize actions to protect habitats in the nearshore coastal zone used by leatherbacks.

Leatherback Foraging Use

Leatherbacks in the Pacific expend tremendous time and energy migrating to and along the U.S. West Coast to forage on jellyfish. To gain insights into potential preferences, we reviewed the available data and literature to help quantify the use of each specific area for foraging. NOAA's Southwest Fisheries Science Center, (Benson *et al.* 2011), has been investigating leatherback use of the coastal waters of California, Oregon, and Washington. Satellite transmitters have been applied to leatherback sea turtles at western Pacific nesting beaches and at California foraging grounds. Benson *et al.* (2011), modeled the daily position estimates for tagged animals and then used movement data from each independent transmitter to infer if the turtle was engaged in ''Area Restricted Search'' (foraging) or ''Transit'' (directed travel between areas). This new research, in coordination with other data on foraging behavior, has provided additional information regarding the usage of each specific area and is summarized below.

Area 1: Satellite data indicate foraging behavior between Bodega Bay and northern Monterey Bay, and between Bodega Bay and Point Arena when warmer water extends northward from Point Reyes (usually during September). Data were used from individuals that were captured off the central California coast, and that returned the following year.

Area 2: Satellite data indicate foraging in shelf waters between the 200 m and 2000 m isobaths. These data come from four individuals that moved into this area one year after the transmitters were deployed at Jamursba-Medi (Papua Barat, Indonesia). While this is a small sample size, it reflects the best available data at this time.

Area 7: Satellite data indicate that foraging behavior occurred near the 2000 meter isobath, west of Monterey Bay and Big Sur, and west of Morro and Avila Bays. Foraging typically occurs in Area 7 during the spring and early summer, when neritic waters are cool. Turtles that foraged in this area eventually moved further east or north, into Area 1 during the late summer.

Benefit of Designation Summary

When evaluating the overall Benefit of Designation, we considered the three factors outlined above: Conservation Value, Foraging Behavior, and Section 7 and Educational Benefits. Each factor was scored as high, medium or low for each particular area. We than assigned a number to each score, with high = 3, medium = 2 and low = 1. Therefore each

area had a potential total Benefit of Designation between 3 and 9. A total score of 3 and 4 indicates a low Benefit of Designation, scores from 5 to 7 indicate a medium Benefit of Designation, and scores 8 and 9 indicate a high Benefit of Designation.

Areas 1, 2 and 7 all scored high (3) for each factor. These areas have a high conservation value, as determined in Table 2, they also have a high value for foraging, as documented in the literature, and due to their proximity to the coastline and the number of activity types that may impact the habitat, and they also have a high section 7 and educational benefit.

TABLE 3—BENEFIT OF DESIGNATION WAS DETERMINED BASED ON THE CONSERVATION VALUE OF EACH AREA, LEATHERBACK FORAGING BEHAVIOR, AND THE EXPECTED BENEFITS AFFORDED THROUGH THE DESIGNATION OF CRITICAL HABITAT FROM ESA SECTION 7 AND EDUCATIONAL PROGRAMS

Area	Conservation value	Foraging behavior	Section 7 and educational benefit	Benefit of designation
1	High (3)	High (3)	High (3)	9—High.
2	High (3)	High (3)	High (3)	9—High.
7	High (3)	High (3)	High (3)	9—High.

Economic Benefits of Excluding Particular Areas (Economic Impacts of Designation)

The economic report, supplemental to this final rule, details the specific costs and calculations used to determine the anticipated economic impacts or costs of the critical habitat designation, and therefore the economic benefit of excluding particular areas from designation. To determine the economic costs associated with the designation of each particular area, we first accounted for the baseline level of protection afforded to leatherbacks and their habitat. To determine the baseline we considered three major factors, (1) the overlap of previously designated critical habitat for other species within leatherback critical habitat, (2) the presence of other listed species and protected marine mammals within leatherback critical habitat, and (3) the Federal, State and local protections already in place to conserve and protect marine resources. Using these factors we assigned a qualitative rating of ''high'', ''medium'' or ''low'' to each activity type in each area. The activities in each of the three specific areas received either a ''high'' or ''medium'' rating. Further discussion of how these ratings were assigned is presented in section 1.4.3 of our economic report.

Once we determined the baseline protections for each activity in each specific area, we assigned incremental scores to each activity in each area to estimate the portion of costs expected to be attributed to this critical habitat designation. The incremental scores were assigned based on the qualitative estimates of the baseline protections rating of high, medium or low. In areas where baseline protections were considered to be high, the portion of any project modification costs attributable to leatherback critical habitat designation would be low and thus the assigned incremental score was low. In areas where lower baseline protections exist, it is expected that the majority of any project modification costs would be associated with the leatherback critical habitat designation; thus the assigned incremental score should be high. Given the uncertainty of project modifications and associated costs, we used a conservative approach that would potentially over rather than under-estimate costs associated with leatherback critical habitat. For activities and areas with more existing protections (e.g., areas with marine sanctuaries or designated critical habitat for other listed species) and thus a ''high'' level of baseline protection, we estimated that 30 percent of any project modification costs would be attributable to leatherback critical habitat. Thus an incremental score of 0.3 was applied to these activities. For activities that occur in areas with fewer existing protections (e.g., areas overlapping the range of other listed species but not their critical habitat), and rated as having a ''medium'' level of baseline protections, we assumed that 50 percent of costs would be attributable to designation of leatherback critical habitat, and assigned an incremental score of 0.5. Sections 1.4.3 and 1.4.4 of our economic report provide more detail on incremental scoring.

For each potentially affected economic activity, we estimated the number of potentially affected projects and identified project modifications that may be necessary to avoid destruction or adverse modification of specific areas considered for designation as leatherback critical habitat. Where possible we also estimated the costs of potential project modifications. The majority of activity costs were projected 20 years into the future and, where applicable, costs were adjusted for inflation to reflect $2009 values (with a 3 and 7 percent discount rates applied to future costs). We then calculated low and high cost scenarios based on spatial considerations for activities that occur on land (e.g., agriculture pesticide application). Where applicable, the high cost scenario estimated costs for activities within 5 miles of the coastline; the low cost scenario estimated costs for activities within 1 mile of the coastline (i.e., a smaller subset of potential activities). Projections of future activities were developed using geographic information systems and other published data on existing, pending, or future actions (e.g., FERC permit license data for LNG projects). Estimated costs were calculated for all activities except power plants, wind energy projects, and LNG facilities and oil spill response; for these we relied on a qualitative assessment. The mid-point value between the high and low cost scenarios was used as the estimated incremental cost for the designation of each area.

Exclusion of Particular Areas Based on Economic Impacts

The benefit of designation is not directly comparable to the economic benefit of excluding a particular area (i.e., avoiding economic costs). We had sufficient information to monetize the estimated economic benefits of exclusion, but were not able to monetize the conservation benefit of designation. To qualitatively scale the economic cost estimates in the same manner as the conservation benefit of designation, we created economic thresholds (see Table 4) and assigned each area an economic rating based on the mid-point of the estimated annualized costs.

TABLE 4—ECONOMIC THRESHOLDS AND CORRESPONDING ECONOMIC BENEFIT OF EXCLUSION

Threshold	Economic rating
$20,000,000 or more	High.
$700,000–$19,999,999	Medium.
$25,000–$699,999	Low.
$0–$24,999	Very Low.

As shown in Table 4 above, we did not change our economic thresholds from the analysis done in our proposed rule; however, the calculations behind these thresholds were re-evaluated to make sure they remained appropriate.

The high economic threshold was set at $20 million or more, based on an estimate of 3 percent of total revenue for activities associated with Area 2, the area with the highest estimated revenues and costs in this final designation. The economic threshold between medium and low economic costs was set at $700,000 based on the mid-point cost per area. A very low cost threshold was set at less than $25,000.

Each of the three areas evaluated were rated as having a medium economic impact (see Table 5). The dollar thresholds do not represent a judgment that areas with medium conservation value are worth no more than $19,999,999, or that areas with very low conservation value ratings are worth no more than $24,999. These thresholds represent the levels at which we believe the economic impact associated with a particular area would outweigh the conservation benefits of designating that area.

Our selection of dollar thresholds was intended to create an efficient process and not because of a judgment about absolute equivalence between a certain dollar amount and the benefit of designation. The statute directs us to balance dissimilar interests, and it emphasizes the discretionary nature of the weight to give any impact and the decision to exclude.

To weigh the benefits of designation against the benefits of exclusion, we compared the conservation benefit of designation against the economic benefit of exclusion. Areas were determined to be eligible for exclusion based on economic impacts using one simple decision rule: An area was eligible for exclusion based on economic impacts if the economic benefit of exclusion is greater than the conservation benefit of designation. The dollar thresholds and decision rule provided a relatively simple process for identifying specific areas warranting consideration for exclusion. Table 5 below provides information regarding each area's eligibility for exclusion based on our analysis.

As shown in Table 5, Areas 1, 2, and 7 are not eligible for exclusion based on economic benefits of exclusion, as these benefits do not directly outweigh the conservation benefit of designation. Areas 1, 2 and 7 all scored a high Benefit of Designation score. Area 1 scored a medium Economic Benefit of Exclusion, and Areas 2 and 7 scored a low Economic Benefit of Exclusion. Therefore for each of these areas the Benefit of Designation outweighs the Economic Benefit of Exclusion. NMFS has therefore determined that these 3 areas are not Eligible for exclusion based on economic impacts.

TABLE 5—COMPARISON OF THE ECONOMIC BENEFITS OF EXCLUSION AND THE CONSERVATION BENEFITS OF DESIGNATION, INDICATING WHICH AREAS ARE ELIGIBLE FOR EXCLUSION BASED ON ECONOMIC IMPACTS.

Areas	Mid-point of annualized cost	Economic benefit of exclusion	Conservation benefit of designation	Eligible for exclusion based on economic impacts?
1	$4,125,000	Medium	High	No.
2	238,000	Low	High	No.
7	276,000	Low	High	No.

Note: The cost estimates above do not include estimated costs for oil spill response, power plants, LNG or wind energy projects. See the economic report for more details.

Exclusions Based on Impacts on National Security

Section 4(b)(2) of the ESA directs the Secretary to consider possible impacts on national security when determining critical habitat. Discussions with the DOD indicated that there is an overlap between the areas originally proposed as critical habitat and areas off the Washington State and Southern California coasts where the U.S. Navy conducts training exercises. DOD proposed exclusion of the overlap areas from critical habitat designation based on national security. During this time frame NMFS revised its critical habitat designation to include only one Primary Constituent Element (PCE), the prey PCE. As required by section 4(b)(8) of the ESA, NMFS briefly evaluated and described in this final rule to the maximum extent practicable, those activities that might occur within the areas designated that may destroy or adversely modify critical habitat designated or be affected by such designation. NMFS concluded that the Navy's present training activities are not the types of activities which may adversely modify critical habitat designated for the leatherback, specifically the prey PCE, or likely to be affected by the designation. As a result, NMFS found that the present Navy training activities are not likely to be affected by this designation of critical habitat. Because designation is not likely to affect Navy activities, NMFS concluded that the designation of critical habitat will not cause an appreciable impact on national security, and therefore the benefits of exclusion do not outweigh the benefits of designation. No exclusion based on impacts to national security was warranted.

Exclusions Based on Other Relevant Impacts

As noted, we are required to consider other relevant impacts of designating a particular area as critical habitat before a final designation. In the proposed rule, we explained that impacts to tribes, particularly those related to tribal sovereignty over management of natural resources on tribal lands and maintenance of relationships for cooperative conservation of such resources, were relevant impacts for evaluation in the ESA 4(b)(2) analysis to determine whether tribal lands were eligible for exclusion. We considered the impacts to tribal lands and resources and the relationship between the agency and affected Tribes. Based on comments from and coordination and consultation with federally recognized indian tribes in response to the proposed rule, we re-evaluated the potential impacts to affected Tribes with a focus on tribal

lands and access to usual and accustomed areas for fishing in accordance with established treaty rights.

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 toward Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Pursuant to these authorities lands have been retained by Indian Tribes or have been set aside for tribal use. These lands are managed by Indian Tribes in accordance with tribal goals and objectives within the framework of applicable treaties and laws. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, outlines the responsibilities of the Federal Government in matters affecting tribal interests. Indian lands are those defined in the Secretarial Order ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act'' (June 5, 1997), including: (1) Lands held in trust by the United States for the benefit of any Indian tribe; (2) land held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians. When we consult with Tribes on matters affecting tribal interests including land and natural resources, we must do so on a government-to-government basis in recognition of the 1997 Secretarial Order.

As described in the proposed rule and documentation supporting this final rule, we acknowledge that the best available information on habitat use by leatherback turtles in the northeast Pacific Ocean is limited. As such we reviewed maps indicating that some Indian lands along the Washington coast likely overlap with areas under consideration as critical habitat for leatherback turtles. These overlapping areas consist of a narrow intertidal zone associated with several coastal Indian reservations, from the line of mean lower low water (the shoreward extent of the proposed critical habitat) to the extent of tribal land demarcated by the line of extreme low water. In consideration of Executive Order 13175 ''Consultation and Coordination with Indian Tribal Governments'' and the 1997 Secretarial Order, ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities and the Endangered Species Act,'' we made numerous additional attempts to meet with members of the Makah and Quileute tribes. A government-to-government meeting with the Makah tribe was held in June 2011 to discuss the designation.

Between the proposed and final rule, we re-assessed several spatial and biological elements of the proposed critical habitat designation and determined that the line of extreme low water more accurately depicts the shoreward extent of areas occupied by leatherback turtles (i.e., they are foraging in these waters and not accessing the beaches). Given this boundary change, there is no longer an overlap between designated areas and areas that meet the definition of Indian lands. Thus, the benefits of exclusion identified in the proposed rule related to avoidance of impacts to tribal lands and related tribal sovereignty and management of resources are substantially reduced or avoided altogether with the absence of tribal lands in the final designation.

NMFS acknowledges the presence of tribal usual and accustomed fishing grounds within Area 2. We considered the tribal concerns and concluded that the benefits of excluding these particular usual and accustomed fishing areas do not outweigh the benefits of designating these areas as critical habitat for leatherback turtles. The tribes have not identified any treaty-related activities in their usual and accustomed fishing areas that are likely to affect jellyfish and therefore likely to be affected by a critical habitat designation. Moreover, usual and accustomed fishing areas, while vitally important to the exercise of treaty-secured fishing rights, are not reserved by the United States for the exclusive use of a tribe, nor are they subject to the sovereign authority of a tribal government, as is the case with Indian lands.

As required by section 4(b)(8) of the ESA, NMFS briefly evaluated and described in this final rule, to the maximum extent practicable, those activities that might occur within the areas designated that may destroy or adversely modify critical habitat designated or be affected by such designation. NMFS concluded that the tribes' present fishing activities are not the types of activities that may adversely modify critical habitat designated for the leatherback, specifically the prey PCE, or likely to be affected by the designation.

For these reasons, we conclude there is no impact of a critical habitat designation to treaty-secured fishing rights, and little impact to tribal sovereignty and self-governance. Given the high conservation value of Area 2, we have determined that the benefits of excluding the area overlapping with usual and accustomed fishing grounds do not outweigh the benefits of including this area in the final designation. We are making no exclusions under 4(b)(2) based on other relevant impacts.

Critical Habitat Designation

Based on the information provided below, the public comments received and the further analysis that was done since the proposed rulemaking, we hereby designate as critical habitat for leatherbacks Areas 1, 2, and 7, which include approximately 41,913 square miles (108,558 square km) of marine habitat in California, Oregon, and Washington and offshore Federal waters. The designated critical habitat areas contain the physical or biological feature—prey species—essential to the conservation of the species that may require special management considerations or protection. We are not exercising our discretion to exclude any areas from this designation based on economic, national security or other relevant impacts.

Effects of Critical Habitat Designation

Section 7(a)(2) of the ESA requires Federal agencies 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 NMFS on any agency actions 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 would evaluate the agency action to determine whether the action may adversely affect listed species or critical habitat and issue our findings in a biological opinion or concurrence letter. 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 (defined in 50 CFR 402.02) are

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 (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 reinitiate 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 reinitiation of a consultation or conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat or adversely modify or destroy 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., an ESA section 10(a)(1)(B) permit from NMFS) or some other Federal action, including funding (e.g., Federal Highway Administration (FHA)). ESA section 7 consultation would not be required for Federal actions that do not affect listed species or critical habitat and for actions on non-federal and private lands that are not federally funded, authorized, or carried out.

Activities That May Be Affected

Section 4(b)(8) of the ESA requires, to the maximum extent practicable, in a final regulation to designate or revise critical habitat, an evaluation and brief description of those activities (whether public or private) that may destroy or adversely modify such habitat or that may be affected by such designation. A variety of activities may affect leatherback critical habitat and, when carried out, funded, or authorized by a Federal agency, will require an ESA section 7 consultation. These Federal actions and/or regulated activities (detailed in the economic report and in previous sections of this rule) include: regulation of point source pollution, particularly NPDES facilities and pesticide application (e.g., EPA); oil spill response (e.g., U.S. Coast Guard and EPA have response authorities); power plants (e.g., Nuclear Regulatory Commission (NRC) regulates commercial nuclear power); desalination plants (e.g., EPA regulates discharge/USCG and U.S. Army Corps of Engineers are involved with permitting or approving structures or placing fill that may affect navigation); tidal/wave/wind energy (e.g., FERC or BOEM permitting, licensing or leasing); and LNG projects (e.g., FERC or USCG permitting requirement). Private entities' implementation of activities related to the foregoing categories could be affected to the extent those activities rely on federal funding, permitting or other authorization. These activities would need to be evaluated with respect to their potential to destroy or adversely modify critical habitat. Formal consultation under section 7(a)(2) of the ESA could result in changes to the activities to minimize adverse impacts to critical habitat or avoid destruction or adverse modification of such habitat. We believe this final rule will provide Federal agencies, private entities, and the public with clear notification of critical habitat for leatherback sea turtles and the boundaries of such habitat. This designation will also allow Federal agencies and others to evaluate the potential effects of their activities on critical habitat to determine if an ESA section 7 consultation with NMFS is needed.

Information Quality Act and Peer Review

The data and analyses supporting this designation have undergone a pre-dissemination review and have been determined to be in compliance with applicable information quality guidelines implementing the Information Quality Act (IQA) (Section 515 of Public Law 106–554). In December 2004, the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review pursuant to the IQA. The Bulletin established minimum peer review standards, a transparent process for public disclosure of peer review planning, and opportunities for public participation with regard to certain types of information disseminated by the Federal Government. The peer review requirements of the OMB Bulletin apply to influential or highly influential scientific information disseminated on or after June 16, 2005. To satisfy our requirements under the OMB Bulletin, we obtained independent peer review of the Biological and Economic Reports that support the designation of critical habitat for the leatherback sea turtle and incorporated the peer review comments prior to and within this rulemaking.

Classification

Regulatory Planning and Review

The Office of Management and Budget (OMB) has determined that this final rule is significant under Executive Order 12866. An economic report and 4(b)(2) report have been prepared to support the exclusion process under section 4(b)(2) of the ESA and our consideration of alternatives to rulemaking.

National Environmental Policy Act

We have determined that an environmental analysis as provided for under the National Environmental Policy Act 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).

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

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). We have prepared a final regulatory flexibility analysis (FRFA). This document is available upon request (see **ADDRESSES**), via our Web site *http://www.nmfs.noaa.gov/pr/species/turtles/leatherback.htm#documents,* or via the Federal eRulemaking web site at *http://www.regulations.gov.* The results of the FRFA are summarized below. A description of the action, why it is being considered, and the objectives of and legal basis for this action are contained in the preamble of this rule.

The impacts to small businesses were assessed for the following six activities: NPDES activities; agriculture; oil spills; power plants; tidal, wave, and wind energy projects; and LNG projects. The impacts on small entities were not assessed for desalination plants facilities due to lack of information.

At the present time, little information exists regarding the cost structure and operational procedures and strategies in the sectors (noted above) that may be directly affected by the critical habitat designation. In addition, a great deal of uncertainty exists with regard to how potentially regulated entities will attempt to avoid the destruction or adverse modification of critical habitat. This is because relatively little data

exist on the effects to leatherback sea turtles and their prey from aspects of the activities identified. With these limitations in mind, we considered which of the potential economic impacts we analyzed might affect small entities. These estimates should not be considered exact estimates of the impacts of potential critical habitat to individual businesses.

Small entities are defined by the Small Business Administration size standards for each activity type. We identified a total of 3,385 entities as small businesses involved in the activities listed above that would most likely be affected by the critical habitat designation. The majority (≤ 97 percent) of these entities would be considered small entities. The estimated economic impacts on small entities vary depending on the activity type and location. The estimated annualized costs associated with ESA section 7 consultations incurred per small entity range from $0 to $25,350 per area-activity type combination, with the largest annualized impacts estimated for entities involved in tidal and wave energy projects ($0 to $25,350). These amounts are most likely overestimates, as they are based on assumptions that such actions may not be able to proceed if a consultation finds that the project adversely modified critical habitat.

As required by the RFA (as amended by the SBREFA), we considered various alternatives to the critical habitat designation for the leatherback. The first alternative, not designating critical habitat for leatherbacks, would impose no economic, national security, or other relevant impacts, but would not provide any conservation benefit to the species. This alternative was rejected because such an approach does not meet the legal requirements of the ESA and would not provide for the conservation of the species if such benefits could be gained through designation.

The second alternative, designating a subset of the areas eligible as critical habitat, was also rejected. The determination of which particular areas to exclude, if any, is subject to the Secretary's discretion after consideration of impacts of the designation in accordance with section 4(b)(2) of the ESA. After evaluating each of our particular areas through a ESA section 4(b)(2) analysis, it was determined that the economic benefits of exclusion did not outweigh the conservation benefit to the species of designation, therefore, we determined that no exclusions would be made.

The third alternative, our preferred alternative, of designating all potential critical habitat areas (i.e., no areas excluded) was considered and accepted. We accepted this alternative after conducting an ESA section 4(b)(2) analysis, and determining that the economic benefits of exclusion did not outweighed the conservation benefit to the species. We selected this third alternative because it would result in a critical habitat designation that provides for the conservation of the species, and meets ESA and joint NMFS and USFWS regulations concerning critical habitat at 50 CFR part 424.

Coastal Zone Management Act

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 requires that all Federal activities that affect land or water use or natural resources of the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. We have determined that this designation of critical habitat is consistent to the maximum extent practicable with the enforceable policies of approved Coastal Zone Management Programs of California, Oregon, and Washington. The determination was submitted for review by the responsible agencies in the aforementioned states, and no objections were received.

Federalism

Executive Order 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). We have determined that the designation of critical habitat for the leatherback sea turtle under the ESA does not have federalism implications. Consistent with the requirements of Executive Order 13132, recognizing the intent of the Administration and Congress to provide continuing and meaningful dialogue on issues of mutual state and Federal interest, and in keeping with Department of Commerce policies, the Assistant Secretary for Legislative and Intergovernmental Affairs has provided notice of this designation and requested comments from the appropriate officials in states where leatherback sea turtles occur.

Paperwork Reduction Act

This final rule does not contain a collection-of-information requirement for the purposes of the Paperwork Reduction Act.

Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act, we make the following findings: (a) The designation of critical habitat does not impose an ''enforceable duty'' on state, local, tribal governments or the private sector and therefore does not qualify as a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an ''enforceable duty'' upon non-federal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' Under the ESA, the only regulatory effect is that Federal agencies must ensure that their actions do not jeopardize the continued existence of the species or destroy or adversely modify critical habitat under section 7. While non-federal entities that receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid jeopardy and the destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; (b) We conclude that this final rule would not significantly or uniquely affect small governments because it is not likely to produce a Federal mandate of $100 million or greater in any year; that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. In addition, the designation of critical habitat imposes no obligations on local, state or tribal governments. Therefore, a Small Government Agency Plan is not required.

Takings

Under Executive Order 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, and regulations imposed on private property that substantially affect its value or use. In accordance with Executive Order 12630, the critical habitat designation does not pose significant takings implications. A takings implication assessment is not required here. This designation affects only Federal agency

actions (i.e., those actions authorized, funded, or carried out by Federal agencies). Therefore, the critical habitat designation does not affect landowner actions that do not require Federal funding or permits. Additionally, this final critical habitat designation does not preclude the development of Habitat Conservation Plans and issuance of incidental take permits for non-Federal actions.

Government to Government Relationships 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 toward 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. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, outlines the responsibilities of the Federal Government in matters affecting tribal interests. If NMFS issues a regulation with tribal implications (defined as having a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes) we must consult with those governments or the Federal Government must provide funds necessary to pay direct compliance costs incurred by tribal governments.

The critical habitat designation does not overlap with Indian lands (see Exclusions for Indian Lands section above). However, we acknowledge the presence of tribal usual and accustomed fishing grounds within Area 2. During both the public comment period and the government-to-government consultation process we heard the concerns of coastal tribes related to the overlap of critical habitat and the tribal usual and accustomed fishing areas. NMFS briefly evaluated and described in this final rule, to the maximum extent practicable, those activities that might occur within the areas designated that may destroy or adversely modify critical habitat designated or be affected by such designation. NMFS concluded that the tribes, present fishing activities are not the types of activities that may adversely modify critical habitat designated for the leatherback, specifically the prey PCE, or likely to be affected by the designation.

For these reasons, we considered the tribal concerns and concluded that the benefits of excluding these particular usual and accustomed fishing areas do not outweigh the benefits of designating these areas as critical habitat for leatherback turtles. The tribes have not identified any treaty-related activities in their usual and accustomed fishing areas that are likely to affect jellyfish and therefore likely to be affected by a critical habitat designation. Moreover, usual and accustomed fishing areas, while vitally important to the exercise of treaty-secured fishing rights, are not reserved by the United States for the exclusive use of a tribe, nor are they subject to the sovereign authority of a tribal government, as is the case with Indian lands. Additionally, other activities may occur within the tribal usual and accustomed fishing areas that may require a section 7 consultation for leatherback critical habitat; therefore, we conclude there is no impact of a critical habitat designation to treaty-secured fishing rights, and little impact to tribal sovereignty and self-governance.

We acknowledge that the Makah Indian Tribe disagrees with our assessment and is concerned about potential impacts to the Tribe's fishing rights. We will continue to coordinate with the Tribe as we implement our responsibilities under section 7 with respect to leatherback turtles, in the event a conflict does in fact arise between conservation of leatherback critical habitat and the exercise of tribal rights.

Energy Effects

Executive Order 13211 requires agencies to prepare a Statement of Energy Effects when undertaking a ''significant energy action.'' According to Executive Order 13211, ''significant energy action'' means any action by an agency that is expected to lead to the promulgation of a final rule or regulation that is a significant regulatory action under Executive Order 12866 and is likely to have a significant adverse effect on the supply, distribution, or use of energy. We have considered the potential impacts of this action on the supply, distribution, or use of energy (see economic report). Activities associated with the supply, distribution, or uses of energy that may be affected by the critical habitat designation include the operation of: (1) Power plants; (2) proposed and potential tidal, wave and wind energy projects; and (3) liquefied natural gas projects.

The final economic analysis identified seven power plants that may be affected by this critical habitat designation. Future management and required project modifications for leatherback critical habitat related to power plants under ESA section 7 consultation include: cooling of thermal effluent before release to the environment; treatment of any contaminated waste materials; and modifications associated with permits issued under NPDES. All of the power plants are located on the California coast and are subject to existing regulations through the NRC and California Energy Commission.

The economic analysis identified eleven tidal, wave, or wind energy projects that may be affected by this critical habitat designation. Nine of these energy projects have received preliminary permits from the FERC, one of the projects has a pending application and one of the projects is proposed. Given the necessary timeframes for project construction, it may be reasonable to assume that this set of projects will incur modification costs related to leatherback critical habitat within the next 20 years. However, it should also be noted that other new permit applications are likely to be filed in the future, and that rate of application may be increasing.

Given that these projects are in their preliminary stages, it is not clear what effects the projects will have on habitats and natural resources, nor what effects a critical habitat designation would have on these projects. The exact nature of habitat impacts is difficult to predict; however, possible impacts to features of the potential leatherback critical habitat include disturbance to prey species during their benthic polyp stage.

The economic analysis identified two LNG projects that may be affected by leatherback critical habitat. FERC regulates LNG projects, and there is one proposed LNG project and one potential LNG project within the analyzed areas. Like the alternative energy projects, there is a high degree of uncertainty regarding whether these proposed projects will be implemented. As a result, it is unclear at this time what effects a critical habitat designation would have on these proposed LNG projects. However, available information indicates that project modifications may include: biological monitoring; spatial restrictions on project installation; and specific measures to respond to catastrophes. We have determined that the energy effects of this rule are unlikely to exceed the energy impact thresholds identified in Executive Order

13211 and that this rulemaking is, therefore, not a significant energy action.

References Cited

A complete list of all references cited in this rule making can be found on our Web site at *http://www.nmfs.noaa.gov/pr/species/turtles/leatherback.htm#documents,* and is available upon request from the NMFS [see **ADDRESSES**].

List of Subjects in 50 CFR Part 226

Endangered and threatened species.

Dated: January 11, 2012.

Eric C. Schwaab,

Assistant Administrator for Fisheries, National Marine Fisheries Service.

For the reasons set out in the preamble, this final rule amends 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. Revise § 226.207, to read as follows:

§ 226.207 Critical habitat for leatherback turtles (*Dermochelys coriacea*).

Critical habitat is designated for leatherback turtles 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 map is provided for general guidance purposes only and not as a definitive source for determining critical habitat boundaries.

(a) The waters adjacent to Sandy Point, St. Croix, U.S. Virgin Islands, up to and inclusive of the waters from the hundred fathom curve shoreward to the level of mean high tide with boundaries at 17°42′12″ N. and 64°50′00″ W.

(b) All U.S. coastal marine waters within the areas in paragraphs (b)(1) and (2) of this section and as described in paragraphs (b)(3) and (4) of this section and depicted in paragraph (b)(5) of this section:

(1) California.

(i) The area bounded by Point Sur (36°18′22″ N./121°54′9″ W.) then north along the shoreline following the line of extreme low water to Point Arena, California (38°57′14″ N./123°44′26″ W.) then west to 38°57′14″ N./123°56′44″ W. then south along the 200 meter isobath to 36°18′46″ N./122°4′43″ W. then east to the point of origin at Point Sur.

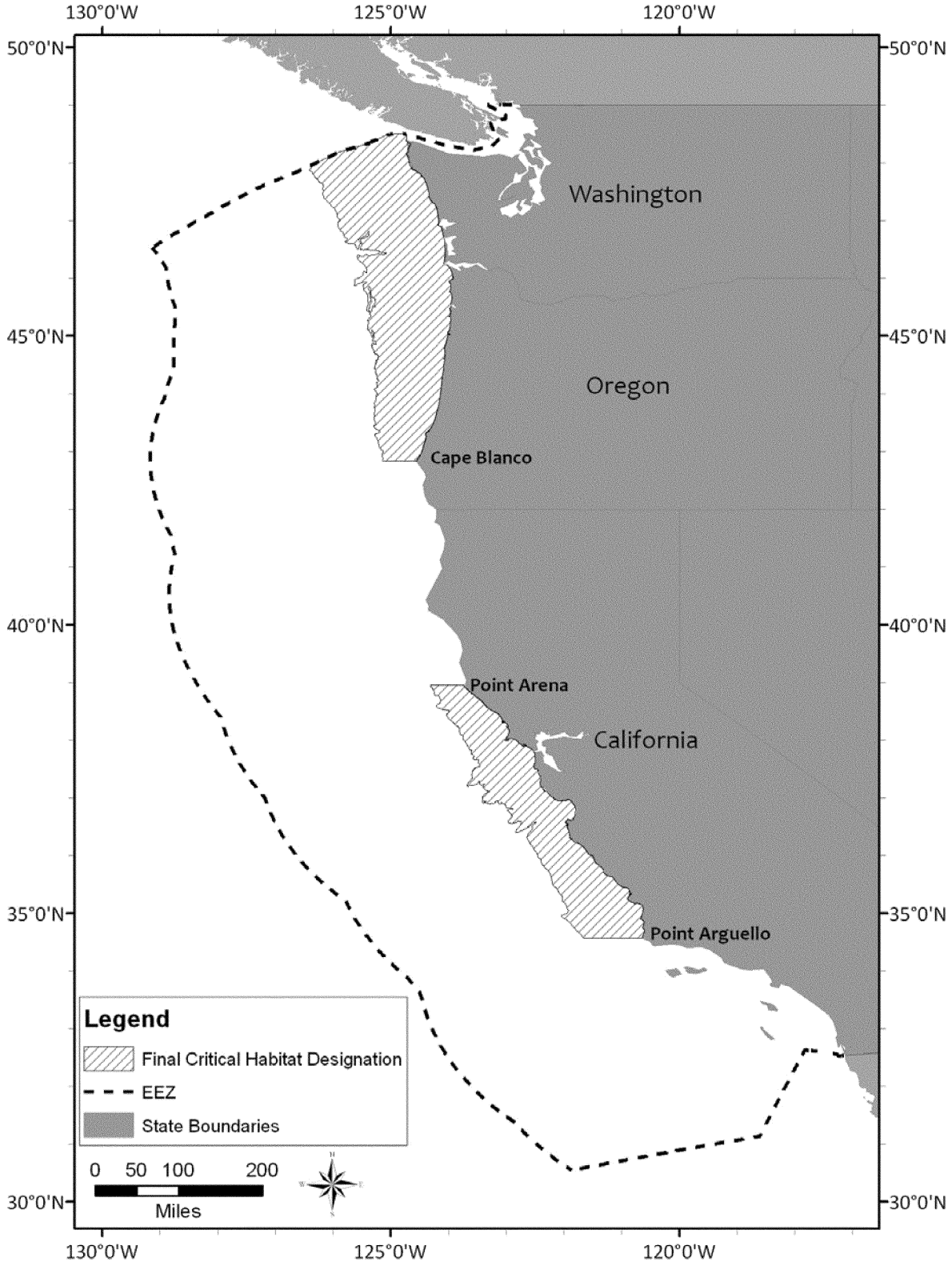
(ii) Nearshore area from Point Arena, California, to Point Arguello, California (34°34′33″ N./120°38′41″ W.), exclusive of Area 1 (see above) and offshore to a line connecting 38°57′14″ N./124°18′36″ W. and 34°34′32″ N./121°39′51″ W along the 3000 meter isobath.

(2) Oregon/Washington. The area bounded by Cape Blanco, Oregon (42°50′4″ N./124°33′44″ W.) north along the shoreline following the line of extreme low water to Cape Flattery, Washington (48°23′10″ N./124°43′32″ W.) then north to the U.S./Canada boundary at 48°29′38″ N./124°43′32″ W. then west and south along the line of the U.S. Exclusive Economic Zone to 47° 57′38″ N./126° 22′54″ W. then south along a line approximating the 2,000 meter isobath that passes through points at 47° 39′55″ N./126°13′28″ W., 45°20′16″ N./125°21′ W. to 42°49′59″ N./125°8′10″ W. then east to the point of origin at Cape Blanco.

(3) Critical habitat extends to a water depth of 80 meters from the ocean surface and is delineated along the shoreline at the line of extreme low water, except in the case of estuaries and bays where COLREGS lines (defined at 33 CFR part 80) shall be used as the shoreward boundary of critical habitat.

(4) Primary Constituent Elements. The primary constituent element essential for conservation of leatherback turtles is the occurrence of prey species, primarily scyphomedusae of the order Semaeostomeae (*Chrysaora, Aurelia, Phacellophora,* and *Cyanea*), of sufficient condition, distribution, diversity, abundance and density necessary to support individual as well as population growth, reproduction, and development of leatherbacks.

(5) A map of critical habitat for leatherback sea turtles follows.



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