

false killer whale because its reach is limited, changes made to the longline fisheries managed under the MSFCMA have not proven adequate to prevent the hooking or entanglement of insular false killer whales, and it has not been successful in preventing the depletion of bigeye tuna, yellowfin tuna, and mahi mahi, primary prey for the insular stock of false killer whales.

In discussing the risks to small populations, NRDC notes that small populations are particularly vulnerable to extinction due to demographic and environmental stochasticity, the risks of local catastrophes, slower rates of adaptation, deleterious effects of inbreeding, and “mutational meltdown” (genetic load that arises from expression of harmful alleles). NRDC emphasizes the Allee effect, also known as depensation, as causing a decline in per capita reproduction at low population densities.

Finally, NRDC discusses the potential cumulative and synergistic impacts on the population, noting that some of these threats may have significant sublethal effects (e.g., contamination with persistent organochlorine pollutants), they may also contribute cumulatively towards reduced survival and reproductive rates (e.g., decline in reproductive rate from toxic contamination combined with the Allee effect) in false killer whales.

#### Petition Finding

We have reviewed the petition, the literature cited in the petition, and other literature and information readily available in our files. Based on our review, we find that the petition satisfies the requirements of 50 CFR 424.14(b)(2) because it: (i) clearly indicates the administrative measure recommended and gives the scientific and any common name of the species involved; (ii) contains a detailed narrative justification for the recommended measure, describing, based on available information, past and present numbers and distribution of the species involved and any threats faced by the species; (iii) provides information regarding the status of the species over all or a significant portion of its range; and (iv) is accompanied by the appropriate supporting documentation in the form of citations to journals that are readily accessible. This information would lead a reasonable person to believe that the measure proposed in the petition may be warranted. Therefore, we have determined that the petition, the literature cited in the petition, and other literature and information readily available in our files indicate that the petitioned action may be warranted.

#### Request for Information

As a result of the finding, we will commence a status review of Hawaiian false killer whales to determine: (1) if the insular population of Hawaiian false killer whales is a DPS under the ESA; and, if so (2) the risk of extinction to this DPS. Based on the results of the status review, we will then determine whether listing the insular population of Hawaiian false killer whales under the ESA is warranted. We intend that any final action resulting from this status review be as accurate and as effective as possible. Therefore, we are opening a 30-day public comment period to solicit suggestions and information from the public, government agencies, the scientific community, industry, and any other interested parties on the status of the insular population of Hawaiian false killer whales. Specifically, we solicit information on the following areas:

- (1) Taxonomy, abundance, reproductive success, age structure, distribution, habitat selection, food habits, population density and trends, and habitat trends;
- (2) Effects of other potential threat factors, including climate change, ocean acidification, acoustic impacts, and persistent organic pollutants;
- (3) Interactions with fisheries, including longline, unregulated nearshore, and shortline fisheries;
- (4) Unconfirmed interactions from local fishermen; and
- (5) Effects of management on the insular population of Hawaiian false killer whales.

We request that all data and information be accompanied by supporting documentation such as maps, bibliographic references, or reprints of pertinent publications. Please send any comments to the ADDRESSES listed above. We will base our findings on a review of best available scientific and commercial information available, including all information received during the public comment period.

**Authority:** The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: December 29, 2009.

**John Oliver,**

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

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#### DEPARTMENT OF COMMERCE

##### National Oceanic and Atmospheric Administration

##### 50 CFR Part 226

[Docket No. 0808061067-91396-01]

RIN 0648-AX06

#### Endangered and Threatened Species: Proposed 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:** Proposed rule; request for comments.

**SUMMARY:** We, the National Marine Fisheries Service (NMFS), propose revising the current critical habitat for the leatherback sea turtle (*Dermochelys coriacea*) by designating additional areas within the Pacific Ocean. Specific areas proposed for designation include two adjacent marine areas totaling approximately 46,100 square miles (119,400 square km) stretching along the California coast from Point Arena to Point Vicente; and one 24,500 square mile (63,455 square km) marine area stretching from Cape Flattery, Washington to the Umpqua River (Winchester Bay), Oregon east of a line approximating the 2,000 meter depth contour. The areas proposed for designation comprise approximately 70,600 square miles (182,854 square km) of marine habitat. Other Pacific waters within the U.S. Exclusive Economic Zone (EEZ) were evaluated based on the geographical area occupied by the species, but it was decided to exclude those areas from the critical habitat designation because the potential costs outweighed the benefits of critical habitat designation and exclusion would not result in the extinction of the species. We are soliciting comments from the public on all aspects of the proposal, including information on the economic, national security, and other relevant impacts. We will consider additional information received prior to making a final designation.

**DATES:** Comments and information regarding this proposed rule must be received by March 8, 2010.

**ADDRESSES:** You may submit comments, identified by RIN 0648-AX06, addressed to: David Cottingham, Chief, Marine Mammal and Sea Turtle Conservation Division, by any of the following methods:

- **Electronic Submissions:** Submit all electronic comments via the Federal eRulemaking Portal <http://www.regulations.gov>.

- **Facsimile (fax):** 301-713-4060, Attn: David Cottingham.

- **Mail:** Chief, Marine Mammal and Sea Turtle Conservation Division, NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910.

**Instructions:** No comments will be posted for public viewing until after the comment period has closed. All comments received are a part of the public record and will generally be posted to <http://www.regulations.gov> without change. NMFS may elect not to post comments that contain obscene or threatening content. All Personal Identifying Information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

NMFS will accept anonymous comments (enter N/A in the required fields, if you wish to remain anonymous). You may submit attachments to electronic comments in Microsoft Word, Excel, WordPerfect, or Adobe PDF file formats only. The proposed rule, list of references and supporting documents, including the biological report, economic report, IRFA analysis, and 4(b)(2) report, are also available electronically at <http://www.nmfs.noaa.gov/pr/species/turtles/leatherback.htm#documents>.

**FOR FURTHER INFORMATION CONTACT:** Sara McNulty, NMFS, Office of Protected Resources, 301-713-2322; Elizabeth Petras, NMFS Southwest Region, 562-980-3238; Steve Stone, NMFS Northwest Region, 503-231-2317.

#### **SUPPLEMENTARY INFORMATION:**

##### **Background**

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). The 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, Oceana, and Turtle Island Restoration Network (“Petitioners”) to revise the leatherback critical habitat designation. The Petitioners sought to revise the designation to include the area currently managed under the authority of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act to reduce leatherback interactions in the California/Oregon drift gillnet fishery targeting swordfish and thresher sharks. This area encompasses roughly 200,000 square miles (321,870 square km) of the U.S. EEZ from 45° N. latitude about 100 miles (160 km) south of the Washington/Oregon border southward to Point Sur, California and along a diagonal line due west of Point Conception, California, and west to 129° W. longitude. Under the current regulations implementing the Highly Migratory Species Fishery Management Plan, the use of large mesh drift gillnet gear is prohibited in this area from August 15th through November 15th (50 CFR 660.713).

On December 28, 2007, we announced our 90-day finding that the petition provided substantial scientific information indicating that the petitioned action may be warranted (72 FR 73745). We did not meet the statutory deadline of October 2, 2008 for deciding whether to proceed with a proposed designation and the Petitioners filed a lawsuit seeking to compel that decision. Per the settlement agreement, we agreed to submit this finding to the **Federal Register** by December 4, 2009. We were then granted an extension to submit this finding by December 31, 2009.

When initially evaluating the petition to designate critical habitat off the U.S. West Coast, we reviewed a variety of data sources to identify specific areas within and adjacent to the petitioned area that might warrant consideration as critical habitat. Due to the extensive movements of leatherback sea turtles throughout the U.S. West Coast within the U.S. EEZ, we determined that areas adjacent to the petitioned area should also be considered. Additionally, the petitioned area included waters outside the U.S. EEZ, however, 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. Therefore, this CH analysis

evaluated approximately 292,600 square miles (757,833 square km) of Pacific waters within the U.S. West Coast EEZ.

We considered various alternatives to the critical habitat designation for the leatherback sea turtle. The alternative of 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. The alternative of designating all potential critical habitat areas (*i.e.*, no areas excluded) also was considered and rejected because, for a number of areas, the economic benefits of exclusion outweighed the benefits of inclusion, and we determined that exclusion of these areas would not significantly impede conservation or result in extinction of the species. The total estimated annualized economic impact associated with the designation of all potential critical habitat areas would be \$3.8 million to \$25.5 million (discounted at 7 percent) or \$3.5 million to \$25 million (discounted at 3 percent). An alternative to designating critical habitat within all of the areas considered for designation is the designation of critical habitat within a subset of those areas. 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. NMFS has the discretion to exclude an area from designation as critical habitat if the benefits of exclusion (*i.e.*, the impacts that would be avoided if an area were excluded from the designation) outweigh the benefits of designation (*i.e.*, the conservation benefits if an area were designated), so long as exclusion of the area will not result in extinction of the species. Exclusion under section 4(b)(2) of the ESA of one or more of the particular areas considered for designation would reduce the total impacts of designation. The determination of which particular areas and how many to exclude depends on NMFS’ ESA 4(b)(2) analysis, which is conducted for each area and described in detail in the 4(b)(2) report. Under the preferred alternative, we propose to exclude 5 out of 8 areas considered. The total estimated economic impact associated with this proposed rule is \$3.1 million to \$20.4 million (discounted at 7 percent) or \$2.8 million to \$20 million (discounted at 3 percent).

We believe that the exclusion of these areas would not significantly impede conservation or result in the extinction of the leatherback sea turtle. We selected this alternative because it would result in a critical habitat designation that provides for the conservation of the species while reducing the economic impacts on entities. This alternative also meets ESA and joint NMFS and USFWS regulations concerning critical habitat.

#### 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 chelonid 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 (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 enable leatherbacks to extend their geographic range farther than other species of sea turtles.

The leatherback life cycle is broken into several stages: (1) Egg/hatchling; (2) post-hatchling; (3) juvenile; (4) sub-adult; and (5) adult. There is still uncertainty regarding the age at first reproduction. The most recent study, based on skeletochronological data from scleral ossicles, suggests that leatherbacks in the western North Atlantic may not reach maturity until 29 years of age (Avens *et al.*, 2009), which is longer than earlier estimates (Pritchard and Trebbau, 1984: 2–3 years; Rhodin, 1985: 3–6 years; Zug and Parham, 1996: 13–14 years for females; Dutton *et al.*, 2005: 12–14 years for leatherbacks nesting in the U.S. Virgin Islands). The average size of reproductively active females is generally 150–162 cm CCL for Atlantic, western Pacific, and Indian Ocean

populations, and 140–150 cm CCL for eastern Pacific populations (Hirth *et al.*, 1993; Starbird and Suarez, 1994; Benson *et al.*, 2007a; Benson *et al.*, 2007d). However, females as small as 105–125 cm CCL have been observed nesting at various sites (Stewart *et al.*, 2007). Rhodin *et al.* (1996) speculated that extreme rapid growth may be possible in leatherbacks due to a mechanism that allows fast penetration of vascular canals into the fast growing cartilaginous matrix of their bones. Whether the vascularized cartilage in leatherbacks serves to facilitate rapid growth, or some other physiological function, has not yet been determined.

Female leatherbacks typically nest on sandy, tropical beaches at intervals of 2 to 4 years (McDonald and Dutton, 1996; Garcia and Sarti, 2000; Spotila *et al.*, 2000). Females lay clutches of approximately 100 eggs several times during a nesting season, typically at 8–12 day intervals. Female leatherbacks appear to exhibit more variable nesting site fidelity than cheloniids and may nest at more than one beach in a single season (Eckert *et al.*, 1989a; Keinath and Musick, 1993; Steyermark *et al.*, 1996; Dutton *et al.*, 2005). This nesting behavior has been observed in the western Pacific Ocean; one female nesting on Jamursba-Medi, Indonesia was observed nesting approximately 30 km east on Werman, Indonesia a few weeks later (S. Benson, NMFS, April 2006, pers. comm.).

A comparison of sex ratios between Atlantic and some Pacific nesting populations suggests that Pacific populations may be more female biased (Binckley *et al.*, 1998) than Atlantic populations (Godfrey *et al.*, 1996; Turtle Expert Working Group, 2007). However, caution is necessary when making basin-wide comparisons because only one study was conducted in the Pacific (Binckley *et al.*, 1998) and sex ratios may vary by beach or even clutch. Chevalier *et al.* (1999) compared temperature-dependent sex determination patterns between the Atlantic (French Guiana) and the Pacific (Playa Grande, Costa Rica) and found that the range of temperatures producing both sexes was significantly narrower for the Atlantic population.

Reliable estimates of survival and mortality at different life history stages are not easily obtained. The annual mortality for leatherbacks that nested at Playa Grande, Costa Rica, was estimated to be 34.6 percent in 1993–1994 and 34.0 percent in 1994–1995 (Spotila *et al.*, 2000). Leatherbacks nesting in French Guiana and St. Croix had estimated annual survival rates of 91 percent (Rivalan *et al.*, 2005b) and 89

percent (Dutton *et al.*, 2005) respectively. For the St. Croix population, the average annual juvenile survival rate was estimated to be approximately 63 percent, and the total survival rate from hatchling to first year of reproduction for a female was estimated to be between 0.4 and 2 percent, given an assumed age at first reproduction between 9 and 13 years (Eguchi *et al.*, 2006). Spotila *et al.* (1996) estimated first year survival rates for leatherbacks at 6.25 percent. Individual female leatherbacks have been observed to reproduce as long as 25 years (Hughes, 1996; D. Dutton, Ocean Planet Research, Inc., August 2009, pers. comm.). The data suggest that leatherbacks follow a life history strategy similar to many other long-lived species that delay age of maturity, have low and variable survival in the egg and juvenile stages, and have relatively high and constant annual survival in the subadult and adult life stages (Spotila *et al.*, 1996; 2000; Crouse, 1999; Heppell *et al.*, 1999; 2003; Chaloupka, 2002).

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 ( $\leq 1,000$  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 (Ferraro *et al.*, 2004; Hays *et al.*, 2004; James *et al.*, 2005; Eckert, 2006; Eckert *et al.*, 2006; Benson *et al.*, 2007a). In a single year, a leatherback may swim more than 10,000 kilometers (Eckert, 2006; Eckert *et al.*, 2006). Leatherbacks

nesting in Central America and Mexico migrate thousands of miles into tropical and temperate waters of the South Pacific (Eckert and Sarti, 1997). After nesting, females from Jamursba-Medi, Indonesia, make long-distance migrations across the equator either to the eastern North Pacific, westward to the Sulawesi and Sulu and South China Seas, or northward to the Sea of Japan (Benson *et al.*, 2007a). One turtle tagged after nesting in July at Jamursba-Medi arrived in waters off Oregon in August (Benson *et al.*, 2007a) coincident with seasonal maxima aggregations of jellyfish (Shenker, 1984; Suchman and Brodeur, 2005). Other studies similarly indicate that leatherbacks arrive 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). Largely pelagic, leatherbacks forage widely in temperate waters and exploit convergence zones and upwelling areas in the open ocean along continental margins and in archipelagic waters (Morreale *et al.*, 1994; Eckert, 1998; 1999).

### Critical Habitat

Section 4(b)(2) of the ESA requires NMFS to designate critical habitat for threatened and endangered species “on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat.” This section also grants the Secretary of Commerce (Secretary) discretion to exclude any area from critical habitat if he determines “the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat.” The Secretary’s discretion is limited, as he may not exclude areas that “will result in the extinction of the species.”

The ESA defines critical habitat under section 3(5)(A) as: “(i) The specific areas within the geographical area occupied by the species, at the time it is listed \* \* \*, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed \* \* \* upon a determination by the

Secretary that such areas are essential for the conservation of the species.”

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

### Methods and Criteria Used To Identify Critical Habitat

In the following sections, we describe the relevant definitions and requirements in the ESA, our implementing regulations, and the key information and criteria used to prepare this proposed critical habitat designation. In accordance with section 4(b)(2) of the ESA and our implementing regulations (50 CFR 423.12(a)), this proposed rule is based on the best scientific information available.

To assist with the revision of leatherback critical habitat, we convened a critical habitat review team (CHRT) consisting of biologists from NMFS Headquarters, the Southwest and Northwest Regional Offices, and the Southwest and Northwest Fisheries Science Centers. 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, 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’s 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.” The regulations also require agencies to “focus on the principle biological or physical constituent elements” (hereafter referred to as “Primary Constituent Elements” or PCEs) within the specific areas considered for designation, which may include, but are not limited to, the following: spawning sites, feeding sites, water quality or quantity, geological formation, and tide.

The northeastern Pacific Ocean is a highly variable environment where the habitat upon which leatherbacks and other marine species depend can change rapidly. Although some relatively permanent features are present, transient oceanographic features, such as eddies or fronts, are strong drivers of ecological interactions. The major current of the region is the southward-flowing California Current, which is the eastern boundary current within the North Pacific Ocean (Huyer, 1983; Hickey, 1979; 1998). The California Current is subject to significant variations in seasonal (Barber and Smith, 1981; Hutchings *et al.*, 1995; Castelao *et al.*, 2006), inter-annual (*e.g.* El Niño: Barber and Chavez, 1983), and decadal (*e.g.* Pacific Decadal Oscillation (PDO) cycles: McGowan *et al.*, 1998; 2003) time scales, adding variability to local productivity resulting from upwelling (Longhurst, 1996).

Wind-driven coastal upwelling drives primary productivity within waters off the U.S. West Coast. As nutrient-rich water comes to the surface, phytoplankton blooms occur and are transported offshore. Productivity dissipates as upwelled waters move offshore (away from regions of upwelling) and phytoplankton deplete available nutrients (Thomas and Strub, 2001). Episodic intrusions of offshore, nutrient depleted water and offshore movement of nutrient-rich water occur throughout the year. The characteristics of coastal upwelling vary over the extent of the California Current, with upwelling north of Cape Blanco (~42.8° N.) confined to a narrower band than upwelling farther south (Huyer, 1983;

Brodeur *et al.*, 2004). Seasonally, upwelling begins earlier and lasts longer in the southern California Current. The peak time of sea turtle sightings (July-September) in neritic waters corresponds to the period when intermittent relaxation of upwelling causes sea surface temperatures to increase to their warmest annual levels. During these relaxation events, there is less mixing of nutrient rich upwelled waters and greater retention of these waters near the coast.

Eddy and frontal features are also critical elements of regional productivity. The interaction of the California Current and topographic features, such as banks, canyons, and other submerged features, as well as shoreline features, such as Cape Blanco, result in the formation of eddies, jets, and squirts (Barth *et al.*, 2000). The most prominent regional eddy is the Juan de Fuca Eddy, which develops offshore of northern Washington at the mouth of the Strait of Juan de Fuca as a result of wind-driven current interaction with the continental slope (Hickey and Banas, 2003). The eddy is persistent from the spring through the fall and delivers nutrient-rich waters to the surface (Freeland and Denman, 1982; Hickey and Banas, 2003). Where eddy features interact with coastal waters, oceanic fronts are often found. Off Oregon and Washington, these frontal features tend to reoccur in the same places, such as near Cape Blanco in Oregon or off Vancouver Island and the coast of Washington (Freeland and Denman, 1982).

Leatherbacks are often described as a pelagic species; however, it is becoming increasingly evident that they aggregate in productive coastal areas to forage on preferred jellyfish prey (scyphomedusae) (Houghton *et al.*, 2006; Benson *et al.*, 2007b; Witt *et al.*, 2007). While their range spans the entire Pacific, occupation of the California Current is highly seasonal. Most of our current knowledge of leatherback turtle use of the California Current comes from recent and ongoing telemetry studies, aerial surveys, and ship-based research conducted primarily in the nearshore areas off central California. The telemetry work has documented trans-Pacific migrations between the western tropical Pacific and the California Current; however, it is difficult to define specific migratory corridors.

There is likely an important temporal component to the arrival and departure of leatherbacks to and from key nearshore foraging areas. Current research has shown that leatherbacks clearly target the dense aggregations of brown sea nettle (*Chrysaora fuscescens*)

that occur near the central California coast and north through Washington during summer and fall (Peterson *et al.*, 2006; Harvey *et al.*, 2006; Benson *et al.*, 2006; 2008). Leatherbacks have also been observed foraging on other scyphomedusae in this area, particularly moon jellies (*Aurelia labiata*) (Eisenberg and Frazier, 1983; S. Benson, NMFS, September 2007, pers. comm.). The CHRT hypothesized that leatherbacks are primarily transiting through offshore areas to get to these dense nearshore aggregations of scyphomedusae, and that the boundary between primary coastal foraging habitat and the offshore areas may vary seasonally and inter-annually with changing oceanographic conditions. In some years, the primary foraging habitat may be poor, or oceanographic features may deter migration into the nearshore habitat (Benson *et al.*, 2007c), resulting in a more diffuse or offshore leatherback distribution.

Although jellyfish blooms are seasonally and regionally predictable, their fine-scale local distribution is patchy and dependent upon oceanographic conditions. Some descriptive studies have been conducted on the distribution of scyphomedusae along the west coast of North America; however, much more information is needed to characterize the temporal variability from seasonal patterns to long-term climate-linked variations. Moreover, it is ultimately the benthic polyp stages that contribute to seasonal and annual population variation of the adult medusae, and little information exists on their populations in open coastal systems, including the California Current upwelling system (W.M. Graham, University of South Alabama, September 2009, pers. comm.). Graham *et al.* (2001) found that jellyfish tend to collect along boundaries: mesoscale oceanic fronts, local circulation patterns, thermoclines, haloclines, etc., and that scyphomedusae (specifically *C. fuscescens*) are closely linked to the physical structure of the water column and the dynamics of upwelling-related circulations. An important example is the Columbia River plume which can act to aggregate and retain jellyfish in the northern California Current (Shenker, 1984). These hydrographic features can be persistent or recurrent (seasonally) in space and time (Castelao *et al.*, 2006).

Prey concentrating forces may also be fixed in space and time associated with geomorphologic features (*e.g.* headlands, capes, seamounts, and canyons). Upwelling shadows (*e.g.* north Monterey Bay) are areas of sustained high productivity (Graham

and Largier, 1997) and these areas are favorable for leatherback prey (Graham, 1994; Benson *et al.*, 2007b). Features such as the Monterey Bay upwelling shadow often persist longer than other coastal fronts of similar length scale (Graham, 1993). *C. fuscescens* are highly abundant north of Cape Blanco off the Oregon Coast (Suchman and Brodeur, 2005; Reese, 2005) where leatherback occurrence has been documented from sighting records and telemetry studies (Bowlby, 1994; Benson *et al.*, 2007a; 2007c). Reese (2005) found that *A. labiata* was frequently abundant south of Cape Blanco, off the coast of Crescent City, CA (~42° N). Reese (2005) also described areas of persistent jellyfish abundance north and south of Cape Blanco and farther north along the Oregon coast inshore of Heceta Bank (~44° N), all inshore of the 100m isobath line. The abundance of jellyfish close to shore may be enhanced by their need for substrate during the benthic stage of their lifecycle (Suchman and Brodeur, 2005). Jellyfish are largest and most abundant in coastal waters of California, Oregon, and Washington during late summer-early fall months (Shenker, 1984; Suchman and Brodeur, 2005; Graham, 2009), which overlaps with the time when turtles are most frequently sighted near Monterey Bay (Starbird, 1993; Benson *et al.*, 2007b) and in Oregon and Washington waters (Bowlby, 1994).

There is evidence that prey-concentrating hydrographic features can be influenced by El Niño and other climate forcing. Survey data has shown a poleward and offshore re-distribution of *C. fuscescens* during El Niño events (Lenarz *et al.*, 1995). However, it is likely that the reliable availability of prey associated with fixed or recurrent physical features is the reason for the leatherbacks trans-Pacific migration from Western Pacific nesting beaches and their presence in neritic west coast waters during summer and fall.

Jellyfish, and to a lesser extent tunicates (pyrosomas and salps), have a low nutritive value per unit biomass, although the nutritional value of the entire organism can be quite high in the case of large scyphomedusae (Doyle *et al.*, 2007). Davenport and Balazs (1991) debated the hypothesis that the source of nutrients for leatherbacks may be from the stomach contents of the prey, rather than from the medusae and tunicates themselves. Leatherbacks consuming *C. fuscescens* might also ingest additional prey items found in the stomach contents of this jellyfish (Suchman *et al.*, 2008). Regardless, leatherbacks must eat a massive amount of jellyfish per day, approximately 20–

30 percent of their body weight compared to cheloniids, which eat approximately 2–3 percent of their body weight (Davenport and Balazs, 1991). It has been estimated that an adult leatherback would need to eat about 50 large jellyfish (equivalent to approximately 200 liters) per day to maintain its nutritional needs (Bjorndal, 1997). Leatherbacks have been observed at or near the surface consuming *C. fuscescens* within upwelling shadows or oceanographic retention areas within neritic waters off central California (Benson *et al.*, 2003; 2007b); however, satellite-linked time-depth recorders suggest foraging can also occur at deeper offshore waters of the U.S. West Coast (S. Benson, NMFS, February 2006, pers. comm.). Leatherbacks likely select *C. fuscescens* as prey over other scyphomedusae species in neritic central California waters because *C. fuscescens* is larger and more nutritionally beneficial than other available scyphomedusae species (Graham, 2009). The CHRT considered areas as primary foraging habitat if they contain great densities of *C. fuscescens*; secondary foraging habitat if they contain *A. labiata* and some scattered *C. fuscescens*; and tertiary foraging habitat if they contain only scattered *A. labiata*.

Although leatherbacks are capable of deep diving (Lutcavage and Lutz, 1997; Hays *et al.*, 2004), the majority of their time is spent at or near the surface. Depth profiles developed for four leatherbacks tagged and tracked from Monterey Bay in 2000 and 2001 (using satellite-linked dive recorders) showed that most dives were to depths of less than 100 meters and leatherbacks spent most of their time shallower than 80 meters. Dutton (NMFS, January 2004, pers. comm.) estimated that leatherbacks spend 75–90 percent of their time at depths of less than 80 meters based on preliminary data analysis. Within neritic central California waters, leatherbacks spend approximately 50 percent of their time at or within one meter of the surface while foraging and over 75 percent of their time within the upper five meters of the water column (Benson *et al.*, 2007b). Leatherback turtles also appear to spend almost the entire dive time traveling to and from maximum depth, suggesting that efficient transit of the water column is of paramount importance (Eckert *et al.*, 1989b). Leatherbacks have been observed periodically resting on the surface, presumably to replenish oxygen stores after repeated dives (Harvey *et al.*, 2006; Benson *et al.*, 2007b).

#### Primary Constituent Elements (PCEs)

Based on the aforementioned information, the CHRT identified two PCEs essential for the conservation of leatherbacks in marine waters off the U.S. West Coast: (1) Occurrence of prey species, primarily scyphomedusae of the order Semaestomeae (*Chrysaora*, *Aurelia*, *Phacellophora*, and *Cyanea*) of sufficient condition, distribution, diversity, and abundance to support individual as well as population growth, reproduction, and development; (2) Migratory pathway conditions to allow for safe and timely passage and access to/from/within high use foraging areas.

When evaluating the second identified PCE, migratory pathway conditions or passage, the CHRT considered the type of activities that could affect or impede the passage of a leatherback turtle. After reviewing several potential types of impediments, the CHRT determined that only permanent or long-term structures that alter the habitat would be considered as having potential effects on passage. Given this determination, the CHRT did not consider fishing gear or vessel traffic as potential threats to passage.

The CHRT considered a third PCE—water quality to support normal growth, development, viability, and health. This PCE would encompass bioaccumulation of contaminants and pollutants in prey and subsequent accumulation in leatherbacks as well as direct ingestion and contact with contaminants and pollutants. The CHRT eliminated this option because knowledge on how water quality affects scyphomedusae was lacking, and, where data were available, the CHRT believed prey condition, distribution, diversity, and abundance would encompass water quality considerations regarding bioaccumulation. The CHRT also felt that direct ingestion and contact with contaminants and pollutants would be encompassed in a direct effects analysis for the listed species. We encourage public comment on the exclusion of water quality as a PCE (see ADDRESSES).

#### Geographical Area Occupied and Specific Areas

One of the first steps in the critical habitat revision process was to define the geographical area occupied by the species at the time of listing. As described above, leatherbacks are distributed circumglobally throughout the oceans of the world, and along the U.S. West Coast (including the petitioned area) within the U.S. EEZ. The CHRT reviewed a variety of data sources to identify specific areas within and adjacent to the petitioned area that

contain one or more PCE requiring special management considerations or protection. 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.

The CHRT recognized that leatherback habitat use appears to vary seasonally and spatially. The boundaries chosen to define each specific area represent the CHRT's best estimate of where these turtles transition from foraging to migrating or where prey composition or abundances change. Most leatherback sightings occur in marine waters within the neritic zone. The species may pursue prey as far as the extent of mean lower low water (S. Benson, NMFS, September 2000, unpublished) so the CHRT considered this as the shoreward extent of distribution in those specific areas with documented nearshore distribution.

The following paragraphs describe each specific area (shown on Figure 1) and summarize the data used to determine that each area is occupied by leatherbacks:

**Area 1:** Nearshore area from Point Arena (peninsula where the Point Arena Lighthouse is located) to Point Sur California and 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°18'22" N./122°4'13" W. then east to the point of origin at Point Sur. Leatherback presence is based on aerial surveys, shipboard sightings, and telemetry studies. This area is a principal California foraging area (Benson *et al.*, 2007b) with high densities of primary prey species *C. fuscescens* occurring here seasonally from April to November (Graham, 1994).

**Area 2:** Nearshore area from Cape Flattery, Washington, to Umpqua River (Winchester Bay), Oregon and offshore to a line approximating the 2000 meter isobath. The specific boundaries are the area bounded by Winchester Bay, Oregon (at the tip of the south jetty) 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 43°40'8" N./125°17' W. then east to the point of origin at Winchester Bay. Leatherback presence is based on aerial surveys, shipboard surveys, fishery interaction data, and telemetry studies. This area is the principal Oregon/Washington foraging area and includes important habitat associated with Heceta Bank, Oregon. The greatest densities of a primary prey species *C. fuscescens* occur north of Cape Blanco, Oregon and in shallow inner shelf waters (Suchman and Brodeur, 2005).

**Area 3:** Nearshore area south of Area 2 from Umpqua River (Winchester Bay), Oregon, to Point Arena, California, shoreward of a line approximating the 2000 meter isobath. This line runs from 43°40' N./125°17' W. through 43°24'10" N./125°16' W., 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., to 38°57'14" N./123°56'44" W. then east to Point Arena. Leatherback

presence is based on aerial survey data. This area includes major upwelling centers between Cape Blanco, Oregon and Cape Mendocino, California and is characterized by cold sea surface temperatures (<13° C) and great densities of the prey species *A. labiata*. Although leatherback use is limited, this area could experience greater use during warm water episodes such as an El Nino event.

**Area 4:** Offshore area west and adjacent to Area 2 (see above). Includes waters west to a line from 47°57'38" N./126°22'54" W. southwest to 43°40'8" N./129°1'30" W. Leatherback presence is based on aerial surveys. This area is used primarily as a region of passage to/from Areas 2 and 5 (see below) although prey species are present and it is used as a secondary foraging area. This area contains large numbers of *A. labiata* and some *C. fuscescens*, with greater densities of *C. fuscescens* found east of Area 4 in Area 2.

**Area 5:** Offshore area south and adjacent to Area 4 and west and adjacent to the northern portion of Area 3 (see above). This area includes all waters north of a line consistent with the California/Oregon border and west to the boundary of the U.S. EEZ. Leatherback presence is based on aerial surveys, telemetry studies, and fishery interaction data. This area includes prey species within primary offshore foraging habitat and passage to Areas 2, 3 and 4 (see above).

**Area 6:** Offshore area south and adjacent to Area 5 and west and adjacent to the southern portion of Area 3 (see above) offshore to a line connecting 42° N./129° W. and 38°57'14" N./126°22'55" W. Leatherback presence is based on aerial surveys, telemetry studies, and fishery interaction data. This area includes prey species within secondary foraging habitat west of Cape Mendocino and passage between Area 5 (see above) and Area 7 (see below).

**Area 7:** Nearshore area from Point Arena, California, to Point Vicente, California (35°44'30" N./118°24'44" W.),

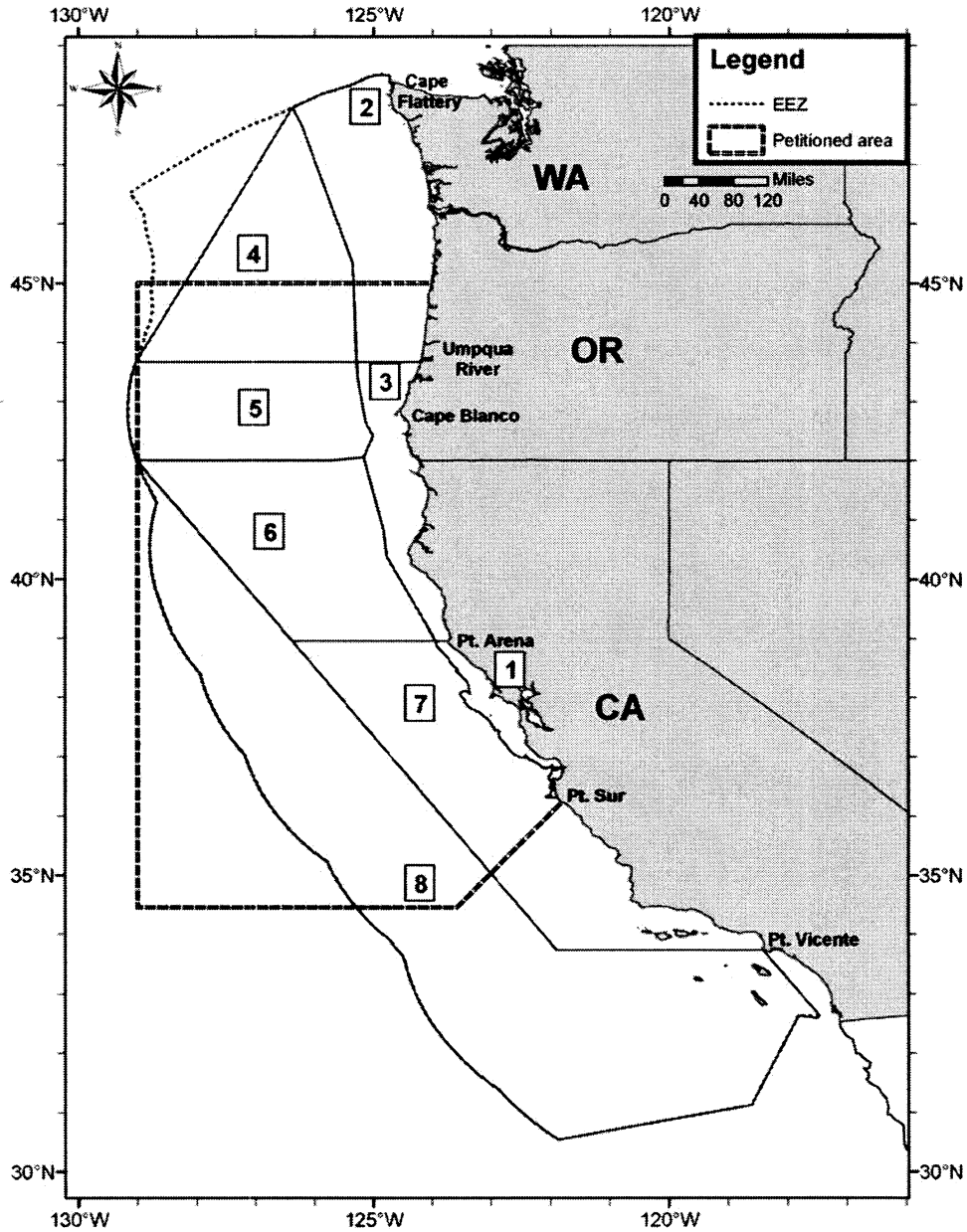
exclusive of Area 1 (see above) and offshore to a line connecting 38°57'14" N./126°22'55" W. and 33°44'30" N./121°53'41" W. This area includes waters surrounding the northern Santa Barbara Channel Islands (San Miguel, Santa Rosa, Santa Cruz, and Anacapa Islands). Leatherback presence is based on aerial surveys, telemetry studies, and fishery interaction data. This area includes prey species within secondary foraging areas characterized by ocean frontal zones west of the continental shelf that are occupied by aggregations of *A. labiata* and lower densities of *C. fuscescens*. The frontal zones are created by a series of quasi-permanent, retentive eddies or meanders, associated with offshore-flowing squirts and jets anchored at coastal promontories between Point Reyes and Point Sur, which create linkages between nearshore waters of Area 1 and offshore waters of the California Current. Telemetry data indicate that this area is commonly utilized by leatherbacks, particularly when jellyfish availability in Area 1 is poor. This area also provides passage to/from foraging habitat in Areas 1, 5, and 6 (see above), often through the northern Santa Barbara Channel Islands during the spring and early summer months.

**Area 8:** Extreme offshore area west and adjacent to Areas 6 and 7 from the California/Oregon border then south of Area 7, including areas closer to the coast, along the U.S. EEZ to the U.S./Mexico border. The western and southern borders of Area 8 are the U.S. EEZ. This area includes waters surrounding the southern Santa Barbara Channel Islands (San Nicholas, Santa Barbara, Catalina, and San Clemente Islands). Leatherback presence is based on aerial surveys, telemetry studies, and fishery interaction data. This area includes prey species within tertiary foraging habitat characterized by warm, low salinity offshore waters and passage to/from foraging habitat in Areas 1, 5, 6, and 7 (see above).

**BILLING CODE 3510-22-P**



Figure 1. Specific Areas Considered and the Petitioned Area



BILLING CODE 3510-22-C

**Unoccupied Areas**

Section 3(5)(A)(ii) of the ESA authorizes designation of “specific areas outside the geographical areas occupied by the species at the time it is listed” if those areas are determined to be essential to the conservation of the species. Joint NMFS and USFWS regulations (50 CFR 424.12(e)) emphasize that the agency shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a

designation limited to its present range would be inadequate to ensure the conservation of the species. At the present time we have not identified additional specific areas outside the geographic area occupied by leatherbacks that may be essential for the conservation of the species.

**Special Management Considerations or Protections**

An occupied area may be designated as critical habitat if it contains physical and biological features 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.” The CHRT identified a number of activities that may threaten the identified PCEs, as impacts to the PCEs also impact the physical and biological features. The CHRT grouped these activities into eight



activity types: Pollution from point sources (e.g. National Pollution Discharge Elimination System (NPDES)); runoff from agricultural pesticide use; oil spills; power plants; aquaculture; desalination plants; tidal energy or wave energy projects; and liquid natural gas (LNG) projects. All of these activities have the potential to affect the PCEs by altering prey abundance, prey contamination levels, and free passage between and within specific areas (Table 1). Some of these activities may also have the potential to impact PCEs positively (e.g. infrastructure for aquaculture may provide substrate and habitat for the benthic polyp stages of medusae).

The CHRT initially considered impacts to PCE's from potential offshore wind energy projects, but due to lack of data and uncertainty regarding the potential for offshore wind energy projects off the U.S. West Coast, they did not have enough information to fully evaluate costs and effects of wind projects alongside the analysis on tidal energy and wave energy projects. Therefore, the CHRT recommended that we exclude wind energy from this analysis and solicit public comment on this issue (see ADDRESSES).

The CHRT also considered impacts to PCE's from commercial fishing

activities, but ultimately determined that commercial fisheries would not impact PCE's. When considering the prey PCE, the CHRT looked at potential fisheries that would target jellyfish, but no such fishery was anticipated, within the evaluated areas, in the foreseeable future. The bycatch of jellyfish in existing commercial fisheries was also considered, but it was determined that the level of bycatch was limited. When considering impacts to the passage PCE, the team considered whether fishing gear could be considered an impediment to the passage of leatherbacks to and from their foraging areas, and if the presence of that gear altered the habitat. It was determined that only permanent or long-term structures would be considered for their potential to affect habitat and the passage PCE. Additionally, the direct take of the species in fishing gear is more appropriately considered under the jeopardy standard in ESA section 7 consultations. Therefore, the CHRT recommended that we exclude commercial fishing activities from our analysis and solicit public comment on this issue (see ADDRESSES).

The CHRT also considered ocean acidification (and myriad contributing activities) as possibly affecting the prey PCE. The Class Scyphozoa, which

includes *C. fuscescens* and *A. labiata*, has calcium sulfate hemihydrate statoliths, which may be affected by acidification. Winans and Purcell (in review) found no pH effect on production of new medusae (ephyrae); statoliths were not decreased in number, but were smaller in low pH. Iglesias-Rodriguez *et al.* (2008) found increases in biogenic calcification in phytoplankton with increased CO<sub>2</sub> using methods they argued were more realistic than those used in previous studies that showed decreased calcification with increasing PCO<sub>2</sub>. Attrill *et al.* (2007) suggested that lower pH in parts of the North Sea opened an ecological niche leading to an increase in jellyfish abundance. Yet, Richardson and Gibbons (2008) repeated and expanded the work of Attrill *et al.* (2007) and found no correlation between ocean acidification and scyphomedusae abundance. Given equivocal or sparse data, the CHRT recommended that we exclude ocean acidification and the contributing activities from our analysis and solicit public comment on this issue (see ADDRESSES).

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

Specific area	Est. area (sq. mi)	PCE(s) present	Activities
Area 1	4,700 (12,173 sq. km)	Prey, Passage	Prey—point pollution, pesticides, oil spills, power plants, desalination plants, tidal wave/energy projects, aquaculture. Passage—oil spills, tidal wave/energy projects, aquaculture.
Area 2	24,500 (63,455 sq. km)	Prey, Passage	Prey—point pollution, pesticides, oil spills. Passage—oil spills.
Area 3	11,600 (30,044 sq. km)	Prey, Passage	Prey—point pollution, pesticides, oil spills, tidal wave/energy projects, LNG. Passage—oil spills, tidal wave/energy projects.
Area 4	30,000 (77,700 sq. km)	Prey, Passage	Prey—oil spills. Passage—oil spills.
Area 5	24,500 (63,455 sq. km)	Prey, Passage	Prey—oil spills. Passage—oil spills.
Area 6	34,200 (88,578 sq. km)	Prey, Passage	Prey—oil spills. Passage—oil spills.
Area 7	46,100 (119,398 sq. km)	Prey, Passage	Prey—point pollution, pesticides, oil spills, power plants, desalination plants, tidal wave/energy projects, LNG, aquaculture. Passage—oil spills, tidal wave/energy projects, aquaculture.
Area 8	117,000 (303,030 sq. km)	Prey, Passage	Prey—oil spills, LNG, aquaculture. Passage—oil spills, aquaculture.

**Military Areas Ineligible for Designation**

Recent amendments to the ESA preclude the Secretary from designating

military lands as critical habitat if those lands are subject to an Integrated Natural Resource Management Plan (INRMP) under the Sikes Act and the

Secretary certifies in writing that the plan benefits the listed species (Section 4(a)(3), Pub. L. 108–136). We are not aware of any INRMPs in the areas under

consideration for designation as critical habitat.

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

Section 4(b)(2) of the ESA requires us to use the best scientific information available in designating critical habitat. It also requires that before we designate any “particular areas,” we must consider the economic impacts, impacts on national security, and any other relevant impacts. The ESA does not define what “particular areas” 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. As there was no biological basis to further subdivide the eight “specific areas” identified within the occupied geographical area into smaller units, we treated these areas as the “particular areas” for our initial consideration of impacts of designation. Once impacts are determined, we decide whether to consider exercising discretion to exclude any areas. If we consider exercising such discretion, we are to weigh the benefits of excluding any particular area (avoiding the economic, national security or other costs) against the benefits of designating it (the conservation benefits to the species). If

we conclude that the benefits of exclusion in any particular area outweigh the benefits of designation, we have discretion to exclude areas, so long as exclusion will not result in extinction of the species. We determined to proceed with evaluating the benefits of designation.

*Benefits of Designation*

The primary benefit of designation is the protection afforded under section 7 of the ESA, requiring all Federal agencies to ensure their actions are not likely to destroy or adversely modify 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 the species. The designation of critical habitat also provides other benefits such as improved education and outreach by informing the public about areas and features important to species conservation.

For the purposes of conducting the 4(b)(2) analysis, it was not possible to directly compare the benefits to the costs of designation. For a direct comparison, the benefits would need to be monetized, but we are unaware of available data that would allow us to monetize the benefits expected from

ESA section 7 consultations, education, and outreach for the considered areas. As an alternative approach, we used the overall conservation value ratings that were calculated for each area by the CHRT to represent the qualitative conservation benefit of designation.

In evaluating the conservation value of each specific area, the CHRT assessed how leatherbacks use each area, the frequency and duration of that use, and the quality and quantity of prey species within each area. After reviewing the best available information, the CHRT determined that the eight specific areas varied in terms of potential conservation value for leatherback turtles. The CHRT used professional judgment to assign a relative biological importance score of 1, 2, or 3 (3 representing the highest importance) to each area for each of our two identified PCEs. Scores were then summed and used to assign an overall conservation rating of “Very Low”, “Low”, “Medium”, or “High” for each specific area. Summed numeric equivalents for each conservation rating were: Very Low = 3 or less; Low = 4; Medium = 5; High = 6. The scoring criteria, parameter scores, and overall conservation rating for each specific area are summarized in Table 2.

**TABLE 2—SUMMARY OF PRESENCE (YES/NO) OF PRIMARY CONSTITUENT ELEMENTS AND THE RESULTANT CONSERVATION VALUE RATINGS FOR SPECIFIC AREAS OCCUPIED BY LEATHERBACK TURTLES**

Specific area	PCE Condition & Frequency				Overall conservation rating
	1 = Preferred prey rare or absent and passage conditions to/from/within high use foraging areas needed infrequently or inconsistently 2 = Preferred prey present but not consistently abundant or not well distributed and passage conditions to/from/within high use foraging areas are needed more frequently and consistently 3 = Preferred prey consistently abundant and well distributed and passage conditions to/from/within high use foraging areas needed frequently and consistently				
	Prey	Value	Passage	Value	Total
Area 1 .....	Yes .....	3	Yes .....	3	High.
Area 2 .....	Yes .....	3	Yes .....	3	High.
Area 3 .....	Yes .....	2	Yes .....	1	Very Low.
Area 4 .....	Yes .....	2	Yes .....	3	Medium.
Area 5 .....	Yes .....	2	Yes .....	3	Medium.
Area 6 .....	Yes .....	1	Yes .....	3	Low.
Area 7 .....	Yes .....	2	Yes .....	3	Medium.
Area 8 .....	Yes .....	1	Yes .....	3	Low.

*Economic Benefits of Exclusion*

To determine the economic benefits of excluding particular areas from designation, we estimated the potential cost of designation associated with each area. To do this we first accounted for the baseline level of protection afforded to leatherbacks based on existing Federal and state regulations. When calculating baseline cost estimates, the CHRT heavily relied on information

from the draft economic reports supporting critical habitat designations for the southern resident killer whale (Industrial Economics Incorporated, 2006), green sturgeon (Industrial Economics Incorporated, 2008), and the final economic report for salmon and steelhead (NMFS, 2005). The level of future activities was developed using GIS data and other published data on existing, pending, or future actions (e.g.

Federal Energy Regulatory Commission (FERC) permit license data for LNG projects).

In areas where listed species coexist with leatherbacks (particularly green sturgeon), a portion of affected future activities modifications (and associated costs) are expected to occur regardless of leatherback critical habitat designation. Thus, after estimating the number of projects that may potentially

require modifications, the CHRT applied an “incremental score” to more accurately represent the portion of the projects that would be affected solely by leatherback critical habitat designation. For activities that occur in areas with more existing protections (e.g. areas with Marine Sanctuaries or overlapping critical habitat with other listed species), the CHRT estimated that 30 percent of costs would be attributable to designated leatherback critical habitat. For activities that occur in areas with fewer existing protections (e.g. areas with other listed species), the CHRT estimated that 50 percent of costs would be attributable to designation of leatherback critical habitat (see economic report for more details).

Annual costs were estimated for each activity in each area and then modified by the incremental score percentage to determine the estimated costs for project modifications due to leatherback critical habitat designation. 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 7 percent discount rate applied to future costs). The CHRT calculated low and high cost scenarios based on spatial considerations for activities that occur on land (e.g. agriculture pesticide application) and the likelihood of modifications to existing activities. 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. Estimated costs were determined for all activities except LNG and aquaculture, therefore only a qualitative assessment was possible for these activities. The median value between the high and low cost scenarios was used as the estimated incremental cost for the designation of

each area (see economic report for more details).

*Exclusion of Particular Areas Based on Economic Impacts*

The conservation benefit to the species resulting from the designation of a particular area is not directly comparable to the economic benefit resulting from the exclusion of that particular area. As explained above, we had sufficient information to monetize the estimated economic benefits of exclusion, but were not able to monetize the conservation benefits of designation. To qualitatively scale the economic cost estimates in the same manner as the conservation value ratings, we created economic thresholds (see Table 3) and assigned each area an economic rating based on its median annualized cost.

TABLE 3—ECONOMIC THRESHOLDS AND CORRESPONDING ECONOMIC RATINGS

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 3 above, we set the high economic threshold at \$20 million or more in costs, based on an estimate of 3 percent of total revenue for activities associated with Area 7, the area with the highest estimated revenues and costs. The economic threshold between medium and low economic costs was set at \$700,000 based on the median value of cost per area. A very low estimated cost threshold was set at less than \$25,000, based on the presumed insignificant distributed burden this would place on affected activities. No areas currently

under review as potential leatherback critical habitat have either high or very low economic costs using this economic scale (see the economic and ESA section 4(b)(2) reports for more details).

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.

To weigh the benefits of designation against the benefits of exclusion, we compared the conservation value ratings against the economic ratings. Areas were determined to be eligible for exclusion based on economic impacts using three decision rules: (1) Areas with conservation value ratings of “high” or “medium” were eligible for exclusion only if they had an economic rating above the conservation rating, unless decision rule 3 applies; (2) Areas with conservation value ratings of “low” or “very low” were eligible for exclusion if they had an economic rating equal to or above the conservation value rating; and (3) Offshore areas with oil spills as the only activity that may affect PCEs are eligible for exclusion regardless of conservation value or economic ratings (see explanation below). We seek public comment on these decision rules (see ADDRESSES).

The dollar thresholds and decision rules provided a relatively simple process for identifying specific areas warranting consideration for exclusion. See Table 4 for a summary of the information used to determine which areas are eligible for exclusion based on economic impacts.

TABLE 4—MEDIAN ANNUAL COSTS AND RATINGS BY AREA

Areas	Median annualized cost	# Activities types that may affect PCEs	Economic rating	Conservation value rating	Eligible for exclusion based on economic impacts?
7 .....	* \$6,820,450	8	Medium .....	Medium .....	No.
1 .....	* 3,581,850	6	Medium .....	High .....	No.
3 .....	* 2,739,800	5	Medium .....	Very Low .....	Yes.
2 .....	* 1,345,950	3	Medium .....	High .....	No.
4 .....	46,650	**1	Low .....	Medium .....	Yes.
5 .....	46,650	**1	Low .....	Medium .....	Yes.
6 .....	46,650	**1	Low .....	Low .....	Yes.
8 .....	* 46,650	3	Low .....	Low .....	Yes.

\* Cost estimates for LNG and Aquaculture were not available so were not included in these estimates. See the economic report for more details.

\*\* Oil spill is only activity.

Based on this analysis, Areas 3, 4, 5, 6 and 8 were identified as eligible for

exclusion based on economic impacts. The Secretary may exclude any area

from critical habitat if he determines that the benefits of exclusion outweigh

the benefits of designating such an area as critical habitat, unless he determines that failure to designate will result in the extinction of the species concerned. Therefore, the CHRT considered whether the exclusion of Areas 3, 4, 5, 6, and 8 would result in the extinction of the endangered leatherback sea turtle.

The CHRT evaluated this question based on the information reviewed when addressing the conservation value ratings and activities that may impact PCEs, and determined that exclusion of Areas 3, 4, 5, 6, and 8 is not likely to cause the extinction of leatherbacks. The CHRT also evaluated whether excluding any of these areas would significantly impede the conservation of the species. After examining relevant scientific and commercial information, the CHRT determined that the exclusion of these areas would not significantly impede conservation. For Area 3 the CHRT based this determination in part on the area's limited overall prey abundance, distribution of preferred prey species, and use of the area by leatherbacks. For Areas 6 and 8 the CHRT based this determination on the fact that these areas have relatively few threats and offer only secondary and tertiary foraging habitat, respectively.

Given their medium conservation value ratings, special attention was given to Areas 4 and 5 to ensure that exclusions would not significantly impede conservation. The CHRT found that although these areas received a medium conservation value rating, oil spills are the only identified activity that may affect PCEs. Based on NOAA's records since the late 1950s, there have been very few and relatively small oil spills documented in these two areas. In general, vessels transiting offshore are widely dispersed and less vulnerable to collisions with one another or with man-made or natural structures. In addition, there has been limited or no response to offshore oil spills when they have occurred off the U.S. West Coast. Therefore, the CHRT reasoned that exclusion of these areas would not impede conservation of leatherback sea turtles since there are few activities within Areas 4 and 5 likely to require special management afforded by critical habitat designation.

Based on the best scientific data currently available, we propose to exclude Areas 3, 4, 5, 6, and 8 from critical habitat designation because the benefits of exclusion outweigh the benefits of inclusion and exclusion will not impede conservation or result in the extinction of the species. We recognize that the lack of documented evidence of leatherbacks in some of these areas may be the result of inadequate monitoring

and encourage directed surveys in both offshore and nearshore areas to increase our knowledge of leatherback use of the waters of the U.S. West Coast. We will evaluate any new information in the final rule stage and encourage public comment on these proposed exclusions (*see ADDRESSES*).

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

The Secretary must consider possible impacts on national security when determining critical habitat. Discussions with the Department of Defense (DOD) indicate that there is overlap between the areas proposed here as critical habitat and areas off southern California and Washington where the U.S. Navy conducts training exercises. The Navy provided letters to NMFS detailing the operations areas that they believe should be excluded from critical habitat due to national security. We will continue working with the DOD to identify impacts to national security and to determine whether any military areas are eligible for exclusion from the proposed critical habitat designation. We encourage the public to see Appendix 1 of the 4(b)(2) report for additional information.

#### *Exclusions for Indian Lands*

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. 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.

We reviewed maps indicating that several areas along the Washington coast under consideration as critical habitat overlap with Indian lands. These overlapping areas consist of a narrow intertidal zone associated with Indian lands, from the line of mean lower low water to extreme low water, for the following federally recognized tribes (73 FR 18553, April 4, 2008): The Hoh, Makah, Quileute, and Quinault tribes.

To assess the exclusion of Indian lands under section 4(b)(2) of the ESA, we compared the benefits of designation to the benefits of exclusion. The benefits of exclusion include: (1) The furtherance of established national policies, our Federal trust obligations and our deference to the tribes in management of natural resources on their lands; (2) the maintenance of effective long-term working relationships to promote species conservation on an ecosystem-wide basis; (3) the allowance for continued meaningful collaboration and cooperation in scientific work to learn more about the conservation needs of the species on an ecosystem-wide basis; and (4) continued respect for tribal sovereignty over management of natural resources on Indian lands through established tribal natural resource programs. Given that the affected Indian lands represent a very small proportion of the total critical habitat area and, moreover, the high benefits of exclusion, we determined that the benefits of exclusion outweigh the benefits of designation. We also determined that these proposed exclusions will not result in extinction, or impede conservation, of leatherback turtles. Therefore, we propose the exclusion of the identified Indian lands from the proposed critical habitat designation for leatherback turtles. The 4(b)(2) report provides a more detailed description of our assessment and determination for Indian lands.

#### **Critical Habitat Designation**

We proposed to designate areas 1, 2, and 7, which includes approximately 70,600 square miles (182,854 square km) of marine habitat in California, Oregon, and Washington and offshore Federal waters. The proposed critical habitat areas contain the physical or biological features essential to the conservation of

the species that may require special management considerations or protection. We propose to exclude from designation areas 3, 4, 5, 6, and 8, for which the benefits of exclusion outweigh the benefits of designation. We conclude that the exclusion of these areas will not result in the extinction of the species, nor impede conservation of the species.

#### 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. Federal agencies are also required to confer with us regarding any actions likely to jeopardize a species proposed for listing under the ESA, or likely to destroy or adversely modify proposed critical habitat, pursuant to section 7(a)(4). A conference involves informal discussions in which we may recommend conservation measures to minimize or avoid adverse effects. The discussions and conservation recommendations are to be documented in a conference report provided to the Federal agency. If requested by the Federal agency, a formal conference report may be issued; including a biological opinion prepared according to 50 CFR 402.14. A formal conference report may be adopted as the biological opinion when the species is listed or critical habitat designated, if no significant new information or changes to the action alter the content of the opinion. 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 proposed 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 that we describe briefly and evaluate, in any proposed or final regulation to designate critical habitat, those activities that may destroy or adversely modify such habitat or that may be affected by such designation. A wide variety of activities may affect 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) include: regulation of point source pollution, particularly NPDES facilities and pesticide application (e.g. EPA); oil spills (e.g. U.S. Coast Guard (USCG) 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 (USACE) are involved with permitting or approving structures or placing fill that may affect navigation); tidal/wave energy (e.g. FERC permitting or licensing); LNG projects (e.g. FERC or USCG permitting requirement), and

aquaculture (e.g. USACE, EPA, or Minerals Management Service permitting requirements). We believe this proposed 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 ESA section 7 consultation with NMFS is needed. Questions regarding whether specific activities will constitute destruction or adverse modification of critical habitat should be directed to NMFS (see ADDRESSES).

#### Information Quality Act and Peer Review

The data and analyses supporting this proposed action 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 Pub. L. 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 scientific information that supports the proposal to designate critical habitat for the leatherback sea turtle and incorporated the peer review comments prior to dissemination of this proposed rulemaking.

#### Public Comments Solicited

We solicit comments or suggestions from the public, other concerned governments and agencies, the scientific community, industry, non-governmental organizations, or any other interested party concerning the proposed designation and exclusions, the biological report, the economic report, IRFA analysis, and the 4(b)(2) report. We are particularly interested in comments and information in the following areas: (1) Information describing the abundance, distribution, and habitat use of leatherback sea turtles in the eastern Pacific Ocean; (2)

Information on the identification, location, and the quality of physical or biological features and PCEs which may be essential to the conservation of the species, including whether water quality should be a PCE; (3) Information regarding potential benefits of designating any particular area of the proposed critical habitat, including information on the types of Federal actions that may affect the designated critical habitat, the physical and biological features, and/or the PCEs; (4) Information regarding potential impacts of designating any particular area, including the types of Federal actions that may trigger an ESA section 7 consultation and the possible modifications that may be required of those activities; (5) Information regarding the benefits of excluding a particular area of the proposed critical habitat; (6) Current or planned activities in the area proposed as critical habitat and costs of potential modifications to those activities due to critical habitat designation; (7) Any foreseeable economic, national security, or other relevant impact resulting from the proposed designation; (8) Information on water quality, ocean acidification and projected global climate change impacts in the proposed areas and their potential effects on the physical and biological features, and/or the PCEs; (9) Information regarding commercial fishing activities and their potential effects on the physical and biological features, and/or the PCEs; (10) Information on the potential for wind energy projects off the U.S. West Coast, including potential economic costs and effects on the physical and biological features, and/or the PCEs.

You may submit your comments and materials concerning this proposal by any one of several methods (*see ADDRESSES*). Copies of the proposed rule and supporting documentation, including the biological report, economic analysis, IRFA analysis, and the 4(b)(2) report, can be found on the NMFS Web site <http://www.nmfs.noaa.gov/pr/species/turtles/leatherback.htm#documents>. We will consider all comments pertaining to this designation received during the comment period in preparing the final rule. Accordingly, the final decision may differ from this proposal.

#### Public Hearings

Joint NMFS and USFWS regulations (50 CFR 424.16(c)(3)) state that the Secretary shall promptly hold at least one public hearing if any person requests one within 45 days of publication of a proposed regulation to list a species or to designate critical

habitat. Requests for public hearings must be made in writing (*see ADDRESSES*) by February 19, 2010. If a public hearing is requested, a notice detailing the specific hearing location and time will be published in the **Federal Register** at least 15 days before the hearing is to be held. Information on the specific hearing locations and times will be posted on our Web site at <http://www.nmfs.noaa.gov/pr/species/turtles/leatherback.htm#documents>. Such hearings provide the opportunity for interested individuals and parties to give comments, exchange information and opinions, and engage in a constructive dialogue concerning this proposed rule. We encourage the public's participation and involvement in ESA matters.

#### Classification

##### *Regulatory Planning and Review*

The Office of Management and Budget (OMB) has determined that this proposed 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.

##### *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 an initial regulatory flexibility analysis (IRFA). 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 IRFA 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 proposed rule.

At the present time, little information exists regarding the cost structure and operational procedures and strategies in the sectors that may be directly affected by the potential 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 (*i.e.*, water quality, water temperature, etc.). 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.

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

Small entities were defined by the Small Business Administration size standards for each activity type. The majority (> 97 percent) of entities affected within each specific area would be considered a small entity. A total of 3,458 small businesses involved in the activities listed above would most likely be affected by the proposed critical habitat designation. The estimated annualized costs associated with ESA section 7 consultations incurred per small entity range from \$0 to \$281,800, with the largest annualized impacts estimated for entities involved in agricultural pesticide application (\$5,500 to \$281,800) and tidal/wave energy projects (\$11,300 to \$236,600). These amounts are most likely overestimates, as they are based on assumptions that such actions may not be able to proceed if a consultation found that the project adversely modified critical habitat. The total estimated annualized cost of section 7 consultation incurred by small entities is estimated to be about \$930,000. The estimated economic impacts on small entities vary depending on the activity type and location.

As required by the RFA (as amended by the SBREFA), we considered various alternatives to the proposed critical habitat designation for the leatherback. We considered and rejected the alternative of not designating critical habitat for the leatherback because such

an approach does not meet the legal requirements of the ESA. Because the benefits of exclusion for particular areas appear to outweigh the benefits of designation, NMFS is proposing to exclude those areas from the designation; however, NMFS is seeking comments on the alternative of designating all potential critical habitat areas (*i.e.*, no areas excluded), and will evaluate comments received.

We have considered and evaluated each of these alternatives in the context of the ESA section 4(b)(2) process of weighing benefits of exclusion against benefits of designation, and we believe that the current proposal provides an appropriate balance between conservation needs and the associated economic and other relevant impacts. It is estimated that small entities will avoid \$578,300 in compliance costs, due to the proposed exclusions made in this designation. We seek information regarding the information in the economic analysis and the impacts to small entities (*see ADDRESSES*).

#### *Coastal Zone Management Act*

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 requires that all Federal activities that affect the land or water use or natural resource of the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. We have determined that this proposed 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 has been submitted for review by the responsible agencies in the aforementioned states.

#### *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 proposed rule to designate critical habitat for the leatherback sea turtle under the ESA is a policy that 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 will provide notice of the proposed action and request comments from the appropriate officials in states where leatherback sea turtles occur.

#### *Paperwork Reduction Act*

This proposed 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 who 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 do not believe that this proposed rule would 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 proposed critical habitat designation does not pose significant takings implications. A takings implication assessment is not required. This proposed 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. This designation would not increase or decrease the current restrictions on private property concerning take of leatherback sea turtles, nor do we expect the final critical habitat designation to impose substantial additional burdens on land use or substantially affect property values. Additionally, the final critical habitat designation does not preclude the development of Habitat Conservation Plans and issuance of incidental take permits for non-Federal actions. Owners of areas included within the proposed critical habitat designation would continue to have the opportunity to use their property in ways consistent with the survival of listed leatherback sea turtles.

#### *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 proposed critical habitat designation does not have tribal implications. The proposed critical habitat designation excludes tribal lands (see Exclusions for Indian Lands section above) and does not affect tribal trust resources or 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 use 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; (3) LNG projects.

The economic analysis identified seven power plants that may be affected by the potential 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 twelve tidal/wave energy projects that may be affected by the potential critical habitat designation. Eight of these energy projects have received preliminary permits from the FERC and four of the projects have pending applications. Given the necessary timeframes for project construction, it may be reasonable to assume that this set of projects will incur project 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. We seek comment on the likely number of projects within the timeframe of this analysis (see ADDRESSES). Relevant information received will inform our final analysis of energy effects.

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 obstruction of passage or migration and disturbance to prey species during their benthic, polyp stage. It is unknown whether the passage PCE could also be affected by the electromagnetic fields generated by these types of projects.

The economic analysis identified seven LNG projects that may be affected by potential leatherback critical habitat. FERC regulates LNG projects. There are three proposed LNG projects and four potential LNG projects 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, using available information, project modifications may include: biological monitoring; spatial restrictions on project installation; and specific measures to respond to catastrophes. We seek information on the nature and extent of likely modifications from LNG projects resulting from the designation of leatherback critical habitat (see ADDRESSES). Relevant information received will inform our final analysis.

We have determined that the energy effects of this proposed rule are unlikely to exceed the energy impact thresholds identified in Executive Order 13211 and that this proposed rulemaking is, therefore, not a significant energy action (see economic report).

#### **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: December 30, 2009.

**James W. Balsiger,**

*Acting Assistant Administrator for Fisheries, National Marine Fisheries Service.*

For the reasons set out in the preamble, we propose to amend 50 CFR part 226 to read as follows:

#### **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 maps are 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 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°18'22" N./122°4'13" W. then east to the point of origin at Point Sur.

(ii) Nearshore area from Point Arena, California, to Point Vicente, California (35°44'30" N./118°24'44" W.), exclusive of Area 1 (see above) and offshore to a line connecting 38°57'14" N./126°22'55" W. and 33°44'30" N./121°53'41" W.

(2) Oregon/Washington. The area bounded by Winchester Bay, Oregon (43°39'58" N./124°13'06" 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. 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 43°40'8" N./125°17' W. then east to the point of origin at Winchester Bay.

(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 mean lower 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 elements essential for conservation of leatherback turtles are:

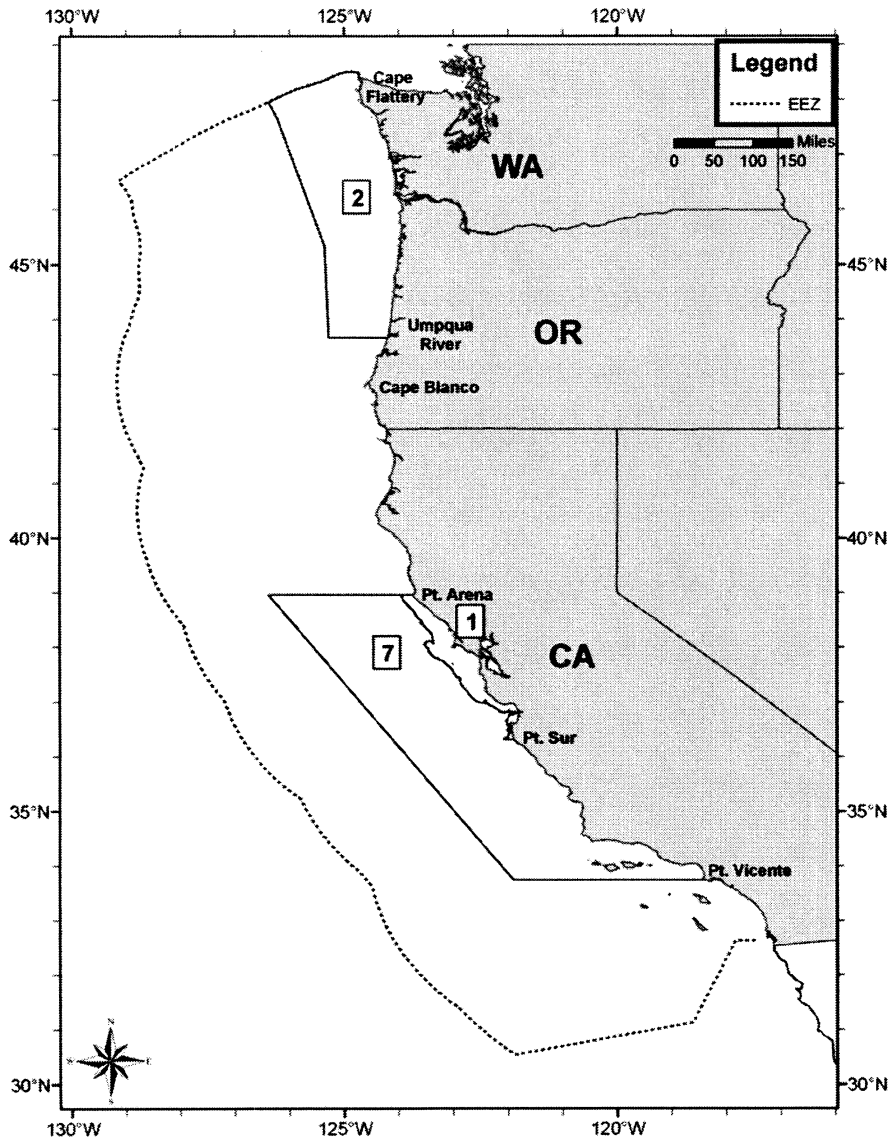
(i) Occurrence of prey species, primarily scyphomedusae of the order Semaestomeae (*Chrysaora*, *Aurelia*, *Phacellophora*, and *Cyanea*) of

sufficient condition, distribution, diversity, and abundance to support individual as well as population growth, reproduction, and development.

(ii) Migratory pathway conditions to allow for safe and timely passage and access to/from/within high use foraging areas.

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

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