DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 060228057–6057–01; I.D. 022206D]

RIN 0648–AU38

Endangered and Threatened Species; Designation of Critical Habitat for the Southern Resident Killer Whale

AGENCY: National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Commerce.

ACTION: Proposed rule; request for comment.

SUMMARY: We, the National Marine Fisheries Service (NMFS), propose to designate critical habitat for the Southern Resident killer whale (Orcinus orca) distinct population segment (DPS), which was recently listed as endangered under the Endangered Species Act (ESA). Three specific areas are proposed for designation: The Summer Core Area in Haro Strait and waters around the San Juan Islands; Puget Sound; and the Strait of Juan de Fuca, which comprise approximately 2,564 square miles (6,641 sq km) of marine habitat. We propose to exclude 18 military sites, comprising approximately 112 square miles (291 sq km), because of national security impacts.

We are soliciting comments from the public on all aspects of the proposal, including information on the economic, national security, and other relevant impacts of the proposed designation, as well as the benefits to Southern Resident killer whales from designation. A draft economic analysis, biological report, and Section 4(b)(2) report conducted in support of this proposal are also available for public review and comment.

DATES: Comments on this proposed rule must be received by close of business on August 14, 2006. Public meetings have been scheduled for July 12, 2006, 7–9 p.m., at the Seattle Aquarium, Seattle, WA and July 13, 2006, 7–9 p.m., at the Whale Museum, Friday Harbor, WA. Requests for additional public hearings must be made in writing by July 31, 2006.

ADDRESSES: Comments may be submitted by any of the following methods:

- E-mail: *orcahabitat.nwr@noaa.gov.* E-mail comments, with or without attachments, are limited to 5 megabytes.
- Federal eRulemaking Portal: *http://www.regulations.gov.* Follow the instructions at that site for submitting comments.
- Mail: Submit written comments and information to Chief, Protected Resources Division, 1201 NE Lloyd Blvd., Suite 1100, Portland, OR 97232–1274.

The proposed rule, maps, stock assessments, listing rule, biological and economic analyses, and other materials relating to this proposal can be found on our Web site at *http://www.nwr.noaa.gov/.*

FOR FURTHER INFORMATION CONTACT: Lynne Barre at (206) 526–4745, or Marta Nammack at (301) 713–1401.

SUPPLEMENTARY INFORMATION:

Background

Under the Endangered Species Act of 1973, as amended (ESA), we are responsible for determining whether certain species, subspecies, or distinct population segments (DPS) are threatened or endangered, and designating critical habitat for them (16 U.S.C. 1533). In November 2005, we listed the Southern Resident killer whale DPS as endangered under the ESA (70 FR 69903; November 18, 2005). At the time of listing, we also announced our intention to propose critical habitat for the Southern Resident killer whale.

Section 3 of the ESA defines critical habitat 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.'' Section 3 of the ESA (16 U.S.C. 1532(3)) also defines the terms ''conserve,'' ''conserving,'' and ''conservation'' to mean: ''to use, and the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.''

Section 4 of the ESA requires that, before designating critical habitat, we consider economic impacts, impacts on national security, and other relevant impacts of specifying any particular area as critical habitat. The Secretary may exclude any area from critical habitat if he determines that the benefits of exclusion outweigh the benefits of designation, unless excluding an area from critical habitat will result in the extinction of the species concerned. Once critical habitat is designated, section 7(a)(2) of the ESA requires that each Federal agency, in consultation with us and with our assistance, ensure that any action it authorizes, funds, or carries out is not likely to result in the destruction or adverse modification of critical habitat.

Killer Whale Natural History

Killer whales are the world's largest dolphin. The sexes show considerable size dimorphism, with males attaining maximum lengths and weights of 29.5 feet (9 m) and 12,275 pounds (5,568 kg), respectively, compared to 25.3 feet (7.7 m) and 8,400 pounds (3,810 kg) for females (Dahlheim and Heyning, 1999). Adult males develop larger pectoral flippers, dorsal fins, tail flukes, and girths than females (Clark and Odell, 1999). Maximum life span is estimated to be 80–90 years for females and 50–60 years for males (Olesiuk *et al.*, 1990). Animals are black dorsally and have a white ventral region extending from the chin and lower face to the belly and anal region. Each whale has a uniquely shaped and scarred dorsal fin and saddle patch, which permits animals to be individually recognized, as depicted in photo-identification catalogs, such as those compiled for the northeastern Pacific region (*e.g.*, Black *et al.*, 1997; Dahlheim, 1997; Dahlheim *et al.*, 1997; van Ginneken *et al.*, 1998; 2000; 2005; Matkin *et al.*, 1999; Ford and Ellis, 1999; Ford *et al.*, 2000).

Three distinct forms of killer whales, termed residents, transients, and offshores, are recognized in the northeastern Pacific Ocean. Although there is considerable overlap in their ranges, these forms display significant genetic differences due to a lack of reproductive interchange (Stevens *et al.*, 1989; Hoelzel and Dover, 1991; Hoelzel *et al.*, 1998; Barrett-Lennard, 2000; Barrett-Lennard and Ellis, 2001; Krahn *et al.*, 2004). There are also important differences in ecology, behavior, morphology, and acoustics among these three forms (Baird, 2000; Ford *et al.*, 2000).

Resident killer whales in U.S. waters are distributed from Alaska to California, with four distinct communities recognized: Southern, Northern, Southern Alaska, and Western Alaska (Krahn *et al.*, 2002; 2004). The Southern Resident DPS consists of three pods, identified as J, K, and L pods, that reside for part of the year in the inland waterways of Washington State and British Columbia (Strait of Georgia,

Strait of Juan de Fuca, and Puget Sound), principally during the late spring, summer, and fall (Ford *et al.*, 2000; Krahn *et al.*, 2002). Pods visit coastal sites off Washington and Vancouver Island (Ford *et al.*, 2000), but travel as far south as central California and as far north as the Queen Charlotte Islands. Offshore movements and distribution are largely unknown for the Southern Resident DPS.

Social organization in this region is based on maternal kinship. Most mating in the North Pacific is believed to occur from May to October (Nishiwaki, 1972; Olesiuk *et al.*, 1990; Matkin *et al.*, 1997). However, small numbers of conceptions apparently happen year-round, as evidenced by births of calves in all months. Calves remain close to their mothers during their first year of life, often swimming slightly behind and to the side of the mother's dorsal fin. Weaning age remains unknown, but nursing probably ends at 1 to 2 years of age (Haenel, 1986; Kastelein *et al.*, 2003). Mothers and offspring maintain highly stable social bonds throughout their lives, and this natal relationship is the basis for the matrilineal social structure (Bigg *et al.*, 1990; Baird, 2000; Ford *et al.*, 2000). A matriline is usually composed of a female, her sons and daughters, and offspring of her daughters, and contains up to 17 individuals spanning up to five generations. Members maintain extremely strong bonds, and individuals seldom separate from the group for more than a few hours.

Although there is considerable overlap in the geographic ranges of Southern and Northern Resident killer whales, pods from the two communities have not been observed to intermix (Ford *et al.*, 2000). Genetic analyses using nuclear (microsatellite) and mitochondrial DNA indicate that the two communities are most likely reproductively isolated from each other (Hoelzel *et al.*, 1998; Barrett-Lennard, 2000; Barrett-Lennard and Ellis, 2001). Recent paternity analyses using microsatellite DNA indicate that resident males nearly always mate with females outside of their own pods, thereby reducing the risks of inbreeding (Barrett-Lennard, 2000; Barrett-Lennard and Ellis, 2001).

Based on scale sampling and stomach contents studies, Southern Resident killer whales are known to consume 22 species of fish and one species of squid (Scheffer and Slipp, 1948; Ford *et al.*, 1998; 2000; Ford and Ellis, 2005; Saulitis *et al.*, 2000). Most published information originates from a single study (Ford *et al.*, 1998; Ford and Ellis, 2005) in British Columbia, including southeastern Vancouver Island, that focused primarily on Northern Residents, relied on several field techniques susceptible to bias (*e.g.*, surface observations and scale sampling), and reported on a relatively small sample of observations for Southern Residents. Of the 487 records of apparent fish predation events from 1974–2004, only 68 (14 percent) observations came from Southern Residents. While this information is limited, it is the best information available.

In this study, salmon were found to represent over 96 percent of the prey during the summer and fall. Chinook salmon (*Oncorhynchus tshawytscha*) were selected over other species, comprising over 70 percent of the identified salmonids taken. This preference occurred despite the much lower abundance of Chinook in the study area in comparison to other salmonids and is probably related to the species' large size, high fat and energy content, and year-round occurrence in the area. Other salmonids eaten in smaller amounts included chum (*O. keta,* 22 percent of the diet), pink (*O. gorbuscha,* three percent), coho (*O. kisutch,* two percent), and sockeye (*O. nerka,* one percent) salmon, and steelhead (*O. mykiss,* less than one percent) (Ford and Ellis, 2005). This work suggests an overall preference for Chinook salmon during the summer and fall, but also revealed extensive feeding on chum salmon in the fall. Rockfish (*Sebastes spp.*), Pacific halibut (*Hippoglossus stenolepis*), and Pacific herring (*Clupea pallasi*) were also observed during predation events (Ford and Ellis, 2005), but in much smaller amounts. This study may underestimate the extent of feeding on bottom fish (Baird, 2000) because it is more difficult to observe predation on bottom fish.

A number of smaller flatfish, lingcod (*Ophiodon elongatus*), greenling (*Hexagrammos spp.*), and squid have been identified in stomach content analyses of resident whales (Ford *et al.*, 1998). Additional sampling of prey remains in 2004 and 2005 also indicate consistent primary selection of Chinook by the Southern Residents in the seasons sampled (NWFSC, unpubl. data).

The energy requirements of killer whales are about 85,000 kcal per day for juveniles, 100,000 kcal per day for immatures, 160,000 kcal per day for adult females, and 200,000 kcal per day for adult males (Osborne, 1999). Based on these values and an average size for five salmon species combined, Osborne (1999) estimated that adults must consume about 28–34 adult salmon daily and that younger whales (<13 years of age) need 15–17 salmon daily to maintain their energy requirements. These data provide a ''rule of thumb'' of approximately 25 salmon per day per whale, estimated over all age classes. We estimate that a Southern Resident DPS of 90 individuals would eat about 820,000 adult salmon annually (Osborne, 1999). This does not, however, account for any other prey species and is therefore likely an overestimate of potential salmon consumption. The average fish size in the extrapolation was based on a combination of five species, so the estimate also does not account for consumption of varying amounts of different species of salmon.

As with other delphinids, killer whales hear sounds through the lower jaw and other portions of the head, which transmit the sound signals to receptor cells in the middle and inner ears (Mhl *et al.*, 1999; Au, 2002). Hearing ability extends from one to at least 120 kHz, but is most sensitive in the range of 18–42 kHz (Szymanski *et al.*, 1999). The most sensitive frequency is 20 kHz, which corresponds with the approximate peak energy of the species' echolocation clicks (Szymanski *et al.*, 1999). Clicks are brief pulses of ultrasonic sound given singly or more often in series known as click trains. They are used primarily for navigation and discriminating prey and other objects in the surrounding environment, but are also commonly heard during social interactions and may have a communication function (Barrett-Lennard *et al.*, 1996). Killer whales locate their prey through a combination of echolocation and passive listening (Barrett-Lennard *et al.*, 1996), but probably rely on vision and echolocation during capture.

Vocal communication is particularly advanced in killer whales and is an essential element of the species' complex social structure. Like all dolphins, killer whales produce numerous types of vocalizations that are useful in navigation, communication, and foraging (Dahlheim and Awbrey, 1982; Ford, 1989; Barrett-Lennard *et al.*, 1996; Ford *et al.*, 2000; Miller, 2002; Miller *et al.*, 2004). Dialects are complex and stable over time, and are unique to single pods. Call patterns and structure are also distinctive within matrilines (Miller and Bain, 2000). Individuals likely learn their dialect through contact with their mother and other pod members (Ford, 1989; 1991; Miller and Bain, 2000). Distinct vocal repertoires, or dialects, may be a mechanism that guides breeding with individuals

outside of natal pods, but within the resident group.

Killer whales frequent a variety of marine habitats that do not appear to be constrained by water depth, temperature, or salinity (Baird, 2000). They are highly mobile, can cover large distances, and range over a variety of habitats, including inland waters and open ocean coastal areas.

The Southern Residents spend large amounts of time in ''core'' inland marine waters coinciding with congregations of migratory salmon returning from the Pacific Ocean to spawn in U.S. and Canadian Rivers. The topographic and oceanographic features in these core areas include channels and shorelines which congregate prey and assist with foraging. Southern Residents are large mammals requiring abundant food sources to sustain metabolic processes throughout the year. Prey availability changes seasonally, and Southern Residents appear to depend on different prey species and habitats throughout the year. The seasonal timing of salmon returns to Southern Puget Sound river systems likely influences the movements of Southern Residents out of core summer areas. Whales may travel significant distances to locate prey aggregations sufficient to support their numbers.

Physical or Biological Features Essential for Conservation (Primary Constituent Elements)

Joint NMFS–U.S. Fish and Wildlife Service regulations for listing endangered and threatened species and designating critical habitat at 50 CFR 424.12(b) state that 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 (hereafter also referred to as 'Essential Features' or 'Primary Constituent Elements'/ 'PCEs').'' Pursuant to the regulations, such requirements include, but are not limited to, the following: (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. These regulations state that we shall focus on essential features within the specific areas considered for designation. These features ''may include, but are not limited to, the following: spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, geological formation, vegetation type, tide, and specific soil types.''

Fish are the major dietary component of resident killer whales in the northeastern Pacific, with 22 species of fish and one species of squid (*Gonatopsis borealis*) known to be eaten (Scheffer and Slipp, 1948; Ford *et al.*, 1998; 2000; Ford and Ellis, 2005; Saulitis *et al.*, 2000). Observations from this region indicate that salmon are clearly preferred as prey (Ford *et al.*, 1998; Ford and Ellis, 2005) and are likely consumed in large amounts, as indicated by the estimates of total salmon consumed by the Southern Resident killer whale DPS. Sufficient prey abundance is necessary to support individual growth to reach sexual maturity and reproduction, including lactation and successful rearing of calves.

In addition to a sufficient biomass of prey species, the prey must not have amounts of contaminants that exceed levels that can cause mortality or reproductive failure. Because of their long life span, position at the top of the food chain, and their blubber stores, killer whales accumulate high concentrations of contaminants. Organochlorines, such as polychlorinated biphenyls (PCBs) and dichlorodiphenyltrichloroethane (DDT), and many other chemical compounds are a concern because of their ability to induce immune suppression, reproductive impairment, and other physiological damage, as observed in several species of marine mammals (Béland *et al.*, 1998; Bergman *et al.*, 1992; De Guise *et al.*, 2003; Jepson *et al.*, 1999; Reijinders, 2003; Ross, 2002). To move between important habitat areas, find prey, and fulfill other life history requirements, the Southern Resident killer whales require open waterways that are free from obstruction, such as in-water structures that block passage.

Killer whale habitat use is dynamic, and specific breeding, calving or resting areas have not been documented. Births occur largely from October to March, but may take place in any month (Olesiuk *et al.*, 1990), and, therefore, potentially in any part of the whales' range. Southern Residents are highly mobile and can travel up to 100 miles (160 km) in a 24-hour period (Baird, 2000), allowing rapid movements between areas. These movements likely coincide with prey concentrations. Individual knowledge of productive feeding areas and other special habitats is probably important in the selection of locations visited and is likely a learned tradition passed from one generation to the next (Ford *et al.*, 1998).

Based on this natural history of the Southern Resident killer whales and their habitat needs, the physical or biological features of Southern Resident killer whale habitat identified in the proposal to list the species (69 FR 76673; December 22, 2004) were:

(1) Water quality to support growth and development;

(2) Prey species of sufficient quantity, quality and availability to support growth and development;

(3) Sound levels that do not exceed thresholds that inhibit communication or foraging activities or result in temporary or permanent hearing loss; and

(4) Safe passage conditions to support migration and foraging.

NMFS received several comments on the features mentioned in the proposal to list the species. For purposes of this proposal to designate critical habitat, we have revised the PCEs as follows:

(1) Water quality to support growth and development;

(2) Prey species of sufficient quantity, quality and availability to support individual growth, reproduction and development, as well as overall population growth; and

(3) Passage conditions to allow for migration, resting, and foraging.

We are gathering additional information to assist us in evaluating sound as a potential PCE, see Public Comments Solicited.

Geographical Area Occupied by the Species

Photo-identification studies, tracking by boats, and opportunistic sightings have provided considerable information on the ranges and movements of Southern Resident killer whales since the early 1970s. Ranges are best known from late spring to early autumn (May-September), when survey effort is greatest. During this period, all three Southern Resident pods—J, K and L—are regularly present in the Georgia Basin (defined as the Georgia Strait, San Juan Islands, and Strait of Juan de Fuca) (Heimlich-Boran, 1988; Felleman *et al.*, 1991; Olson, 1998; Osborne, 1999).

While in inland waters during summer months, all of the pods concentrate their activity in Haro Strait, Boundary Pass, the southern Gulf Islands, the northeastern end of the Strait of Juan de Fuca, and several localities in southern Georgia Strait (Heimlich-Boran, 1988; Felleman *et al.*, 1991; Olson, 1998; Ford *et al.*, 2000). Pods commonly occur and are observed foraging in areas where salmon frequent, especially during the times of year

salmon are migrating to their natal rivers (Heimlich-Boran, 1986; 1988; Nichol and Shackleton, 1996). Notable concentrations include Haro Strait and Boundary Passage, the southern tip of Vancouver Island, Swanson Channel off North Pender Island, and the mouth of the Fraser River delta, which is visited by all three pods in September and October (Felleman *et al.*, 1991; Ford *et al.*, 2000). These sites are major corridors for migrating salmon.

Individual pods are generally similar in their preferred areas of use (Olson, 1998), although some seasonal and temporal differences exist in areas used. All three pods typically arrive in May or June and spend most of their time in inland waters until departing in October or November. However, K and L pods make frequent trips lasting a few days to the outer coasts of Washington and southern Vancouver Island during this time period (Ford *et al.*, 2000). During early autumn, Southern Resident pods, especially J pod, routinely expand their movements into Puget Sound, probably to take advantage of chum and Chinook salmon runs (Osborne, 1999). Additional studies currently underway have identified finer scale pod differences in seasonal movement patterns and use of core areas (Hauser *et al.*, in prep).

There are no confirmed sightings of Southern Resident killer whales inside Hood Canal. On one occasion in 1995, acoustic recordings from Dabob Bay were identified as J pod vocalizations (Unger, 1997). We do not consider this sufficient evidence of presence to find Hood Canal ''within the geographical area occupied by the species.'' (Transient killer whales, in contrast, have been observed in Hood Canal on multiple occasions and have remained in Hood Canal for extended periods in the last several years.)

We also do not consider extremely shallow waters of Puget Sound to be within the geographical area occupied by the species. Male killer whales grow to 29.5 feet (9m), and females to 25.3 feet (7.7m), which may limit maneuverability in shallow waters. Southern Residents are seldom observed in shallow waters. (This is in contrast to transient killer whales, which enter shallow water to capture seals and sea lions, and Northern Residents, which spend time in shallow water at rubbing beaches.) Because there is limited information, we are requesting information on killer whale use of shallow areas with less than 20 feet (6.1m) of water (see Public Comments Solicited).

During the late fall, winter, and early spring, the ranges and movements of the Southern Residents are less well known. J pod continues to occur intermittently in the Georgia Basin and Puget Sound part of this time, but its location during apparent absences is uncertain (Osborne, 1999). One sighting of this pod was made off Cape Flattery, Washington, in March 2004 (Krahn *et al.*, 2004). Prior to 1999, K and L pods followed a general pattern in which they spent progressively smaller amounts of time in inland waters during October and November and departed them entirely by December of most years (Osborne, 1999). Sightings of both groups passing through the Strait of Juan de Fuca in late fall suggested that activity shifted to the outer coasts of Vancouver Island and Washington (Krahn *et al.*, 2002), although it is unclear if the whales spend a substantial portion of their time in this area or simply transit to other locations.

While there are considerable data on the use of inland waters of Washington, there is very little information on the movements of Southern Resident killer whales off the coast. Areas of activity of all pods are virtually unknown during their absences from inland waters. In the last 30 years of study, there are only 28 confirmed sightings in outside waters (Krahn *et al.*, 2004; NWFSC unpubl. data). The majority of these sightings were opportunistic, with most occurring within 10 miles (16.1 km) of shore, and we do not know how far from shore the Southern Residents range. Several new sightings occurred during the last 5 years, when effort was increased with dedicated ship surveys and expanded volunteer coastal sighting networks. Our knowledge of the southern and northern boundaries of the range has expanded with these new sightings from California and the Queen Charlotte Islands in recent years. At this time there are few data on how the whales are using offshore areas; however, some of the sightings included observations of feeding.

There is an active research effort underway to identify coastal and offshore distribution of Southern Residents. We have increased outreach efforts to gather sighting information from coastal communities, vessel operators, and pilots along the coasts of Oregon, Washington, and British Columbia. In addition, researchers are conducting dedicated ship surveys to locate the whales and observe their activities outside of Puget Sound. The research program is a long-term effort, but we hope to greatly increase the number of coastal observations in the next 5 years. As new information is collected on the coastal and offshore distribution and habitat use, we hope to fill in the data gaps about the important habitat features of these coastal and offshore areas.

NMFS regulations at 50 CFR 424.12(h) state: ''Critical habitat shall not be designated within foreign countries or in other areas outside of United States jurisdiction.'' Although the Southern Residents' range includes inland waters of Canada, we are not proposing these areas for designation.

Specific Areas Within the Geographical Area Occupied by the Species

Several commenters stated that designating critical habitat was important for the recovery of Southern Resident killer whales and that designation should occur as soon as possible. Suggestions for essential features, and specific areas where they could be found, were general and included ''most of Puget Sound,'' ''Puget Sound and the Straits of Georgia and Juan de Fuca,'' and ''all internal waters of Washington State.''

We reviewed the available information on Southern Resident distribution, habitat use and habitat needs in a biological report to assist in identifying critical habitat (NMFS, 2006a). Within the geographical area occupied by the Southern Resident killer whales we have identified three specific areas that contain essential habitat features. We have divided the inside waters of Washington State into specific areas based on the habitat features and the use patterns of the Southern Resident killer whales.

We analyzed Southern Resident killer whale sightings data from The Whale Museum (Osborne, 2005; The Whale Museum Orca Master, 1990–2003) to assist in identifying specific areas based on habitat use patterns by the whales. The Whale Museum data are predominantly opportunistic sightings from a variety of sources, including public reports, commercial whale watching industry pager system, Soundwatch, Lime Kiln State Park land-based observations, and compilations of independent researcher reports. The data set does not account for level of effort by season or location, and, therefore, the sampling and data are biased (Osborne, 2005). The 1990–2003 Whale Museum data set is, however, the most comprehensive long-term data available to evaluate broad-scale whale distribution in inland waters at this time (with a total number of sighting records of 22,509). In order to evaluate frequency of use, our analysis of the sightings was limited to one unique location sighting, per location, per day to reduce the bias introduced by multiple sightings of the same whales in

the same location on the same day (total number of unique sightings per day is 11,836). For the majority of the killer whale sightings the location reported was not an exact point location (Lat./Long.), and all locations were subsequently assigned to a center point in a quadrant system (Osborne, 2005). Almost half of the data is from the Whale Watch pager system created by the commercial whale watch industry and available to subscribers. A validation of recent pager data revealed greater than 90 percent accuracy in locating whales (Hauser *et al.*, in prep).

From the sightings and other data, we have identified three ''specific areas,'' within the geographical area occupied by the species, that contain PCEs. We considered presence and movements of the whales, behavioral observations and studies, and other information to verify that one or more of the physical or biological features, or PCEs, can be found in these three areas. In some cases where direct data on PCEs were not available, we relied on distribution patterns of the whales to infer presence of PCEs.

Area 1. Core Summer Area—Bordered to the North and West by the U.S./Canadian border, Area 1 includes the waters surrounding the San Juan Islands, the U.S. portion of the Southern Strait of Georgia, and areas directly offshore of Skagit and Whatcom counties. Prey species, one of the PCEs, are present in Area 1. Runs of salmon passing through Area 1 include Chinook, chum, coho, pink, and sockeye salmon, which have all been identified as prey for Southern Residents (Ford *et al.*, 1998; Ford and Ellis, 2005; NWFSC, unpubl. data). The Strait of Juan de Fuca, Haro and Georgia Straits are relatively narrow channels and concentrate salmon returning from the Pacific Ocean to spawn in U.S. and Canadian rivers. In particular, Area 1 lies near the mouth of the Fraser River, which has the largest salmon runs in the Georgia Basin/Puget Sound region (Northcote and Atagi, 1997).

Occurrence of Southern Residents in Area 1 coincides with concentrations of salmon. Southern Resident killer whales have been sighted in Area 1 during every month of the year, but sightings are more consistent and concentrated in the summer months of June through August. The Whale Museum database from 1990–2003 contains 11,836 unique sightings after duplicate locations on the same date are excluded. Of these, 8,508 are in U.S. waters, and 85 percent of the U.S. sightings are in Area 1. Although sighting effort in Area 1 is extensive during the summer months as compared to other areas, which biases the data, the strength of the summer use pattern would undoubtedly persist if accounting for sighting effort. Sighting data from 1976–1990, when effort was significantly lower, also reflects this pattern (Whale Museum, unpubl. data). The largest number of sightings in Washington's inland waters is from Haro Strait off the west side of San Juan Island. There are over 1,200 unique sightings from 1990–2003 in one quadrant off the west side of San Juan Island.

Much of the behavioral research on Southern Residents takes place within Area 1. Southern Residents are observed exhibiting a variety of behaviors in this area, including travel, forage, social, and play. Resident whales spend 50–67 percent of their time foraging (Heimlich Boran, 1988; Ford, 1989; Morton, 1990; Felleman *et al.*, 1991). Opportunities to forage are presumed to be a major factor attracting Southern Residents to Area 1, particularly in the summer months when it is considered a primary feeding area for all three pods (J, K, and L).

Area 2. Puget Sound—south from Deception Pass Bridge, entrance to Admiralty Inlet, Hood Canal Bridge. Southern Resident killer whale occurrence in Area 2 has been correlated with fall salmon runs, a prey-related PCE. Feeding has been observed in Area 2 (NWFSC, unpubl. data), though few behavioral studies have been conducted in this area. During the fall, Southern Residents, especially J pod, expand their movements into Puget Sound, likely taking advantage of chum and Chinook salmon runs (Osborne, 1999). A fall chum run was suggested as the likely reason for an extended presence of members of L pod in Dyes Inlet during October and November of 1997.

Southern Resident killer whales have been sighted in parts of Area 2 in all seasons despite limited search effort. The presence of Southern Residents in Area 2 is intermittent, with the smallest number of sightings in May–July. There are different sighting patterns in Area 2 for the three pods. In the most southern portion of Area 2, south of Tacoma Narrows Bridge, there have been only a small number of Southern Resident sightings from October–January, with one additional sighting in April.

Area 3. Strait of Juan de Fuca—Deception Pass Bridge, San Juan and Skagit County lines to the northeast, entrance to Admiralty Inlet to the southeast, U.S./Canadian border to the north, Bonilla Point/Tatoosh Island line to the West. All pods regularly use the Strait of Juan de Fuca for passage from Areas 1 and 2 to outside waters in the Pacific Ocean. Area 3 is predominantly a passage used to access outer coastal waters feeding grounds, including Swiftsure and La Perouse Banks, off Tofino, British Columbia, and off Westport, as well as other areas with unknown usage, such as the coast of northern California. Recent observations at Westport coincided with presence of a spring Chinook salmon run, although other species were also likely present (NWFSC, unpubl. data). The presence of migrating salmonids in the Strait of Juan de Fuca suggests that feeding might occur during times the whales are transiting. However, the whales are not known to spend long periods in localized areas in the Strait. Sightings of the Southern Residents in Area 3 are limited, particularly on the U.S. side of the international boundary, as there is little observation effort in the area, particularly to the west toward the Bonilla Point/Tatoosh Island line. Even with a small number of actual sightings, we can infer that the whales are using this corridor, and the passage PCE is present in Area 3 based on the inland and coastal sightings of whales. The Strait of Juan de Fuca is not the only transit corridor between inland waters and coastal British Columbia, and the whales occasionally use the Strait of Georgia and Johnstone Strait in Canadian waters as an alternate route.

Special Management Considerations

The specific areas within the geographical area occupied by a species meet the definition of critical habitat only if they contain physical or biological features that ''may require special management considerations or protection.'' Agency regulations at 50 CFR 424.02(j) define ''special management considerations or protection'' to mean ''any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species.'' Several forms of human activity have the potential to affect the habitat of killer whales and, specifically, the PCEs that are essential to their conservation.

Most salmon stocks throughout the Northwest are at a fraction of their historic levels. Historically, overfishing was a major cause of decline. More recently the major cause is loss of freshwater habitat. Poor ocean conditions over the past two decades reduced populations already weakened by the degradation and loss of freshwater and estuary habitat, fishing pressures, hydropower system management, and hatchery practices.

Continued regulation of contaminants and pollution in Puget Sound is also necessary to protect the prey PCE for

Southern Residents through management schemes, such as the National Pollutant Discharge Elimination System (NPDES). Contaminants enter marine waters and sediments from numerous sources, but are typically concentrated near areas of high human population and industrialization. Once in the environment these substances proceed up the food chain, accumulating in long-lived top predators like Southern Resident killer whales. Chemical contamination through the food chain continues to be a potential threat to Southern Resident killer whales, despite the enactment of modern pollution controls in recent decades, which were successful in reducing, but not eliminating, the presence of many contaminants in the environment.

Oil spills are another source of contamination that can have long-lasting impacts on habitat (although the primary concern with oil spills is the potential for direct injury to the whales). The Environmental Protection Agency and U.S. Coast Guard oversee the Oil Pollution Prevention regulations promulgated under the authority of the Federal Water Pollution Control Act. There is a Northwest Area Contingency Plan, developed by the Northwest Area Committee, which serves as the primary guidance document for oil spill response in Washington and Oregon.

Southern Residents are highly mobile and use a variety of areas for foraging and other activities, as well as for traveling between these areas. Human activities can interfere with movements of the whales and impact the passage PCE. In particular, vessels may present obstacles to whale passage, causing the whales to swim further and change direction more often, which potentially increases energy expenditure for whales and impacts foraging behavior (although this effect of vessels is primarily a direct effect on the whales rather than an effect on their habitat).

Major categories of habitat-related activities which may require special management considerations or protection include fishery management, vessel activities, and water quality management. All of these activities have the potential to affect the PCEs by altering prey abundance, prey contamination levels, and passage between areas.

Features Which May Require Special Management Considerations or Protection in Each Specific Area

Area 1. Area 1 likely has areas of low to moderate levels of contaminated sediments. Levels of contaminants in marine mammals such as harbor seals show a trend of decreasing levels of contamination moving north from South Puget Sound to the San Juans and up into Canadian waters (Jeffries *et al.*, 2003; Ross *et al.*, 2004). Exposure to contaminants for species of salmon depends on feeding patterns and may also be linked to salmon spending different amounts of time in Puget Sound (O'Neill *et al.*, 2005). Three of the four major oil refineries in Puget Sound are located in Area 1. There is commercial and recreational fishing for salmon and other species in Area 1, and effort is seasonally dependent on fish abundance.

Area 1 and nearby adjoining Canadian waters contain the highest level of commercial and recreational whale watching activity in the region. The majority of both Canadian- and U.S.-based whale watching vessels originate from ports and marinas in Area 1, although there are a small number of vessels originating from ports in Areas 2 and 3 (Hauser *et al.*, in prep). Fishing vessels, ferries, oil tankers, and commercial shipping vessels are also present in Area 1, which contains a major shipping channel along the U.S.-Canada border.

Area 2. Contaminated sediment levels in Area 2 likely range from low/moderate (northern portions) to very high (*e.g.*, near Tacoma). A higher number of NPDES permits are issued in Area 2 than in Areas 1 or 3. One of the four major oil refineries in Puget Sound is located in Area 2. Considerable vessel traffic (including shipping, oil tanker and ferry traffic) occurs in Area 2, and the ports of Seattle and Tacoma are located in Area 2. Whale watching may be expanding in Area 2 to include fall months following the primary summer whale watch season. There is commercial and recreational fishing for salmon and other species in Area 2, and effort is seasonally dependent on fish abundance.

Area 3. Contaminated sediment levels in Area 3 likely range from low to moderate with isolated spots of moderate/high levels (*e.g.*, Port Angeles). Area 3 contains a major shipping lane for commercial shipping vessels entering and departing major U.S. ports of Seattle and Tacoma, and Vancouver in British Columbia, Canada. Oil tankers also use the shipping lane to transport crude oil to the four major refineries in Puget Sound. There is little whale watching activity in Area 3. There is commercial and recreational fishing for salmon and other species in Area 3, and effort is seasonally dependent on fish abundance.

Coastal and Offshore Areas

We have few data on Southern Resident distribution and habitat use of coastal and offshore areas in the Pacific Ocean. While we know that the whales occupy these waters for a portion of the year and they are considered part of the geographical area occupied by the species, we do not have detailed information about distribution, behavior, and habitat. While we can infer that some of the PCEs, such as prey, must be present to support the whales, we do not have sufficient data to describe them adequately and identify ''specific areas'' with those features. Based on the difficulties of determining PCEs, we cannot assess the human activities affecting them or the special management considerations for their protection. At this time we are not proposing to designate coastal or offshore areas, though we do recognize that they are important for the Southern Resident killer whales. There is an active research program to fill the data gaps regarding coastal and offshore distribution and habitat features, and we anticipate obtaining additional data in the coming years. We will consider new information as it becomes available to inform future considerations of critical habitat for Southern Residents.

Unoccupied Areas

ESA section 3(5)(A)(ii) further defines critical habitat to include ''specific areas outside the geographical area occupied'' if the areas are determined by the Secretary to be ''essential for the conservation of the species.'' Regulations at 50 CFR 424.12(e) specify that NMFS ''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 any areas outside the geographical area occupied by the species that are essential for its conservation, and, therefore, we are not proposing to designate any unoccupied areas. During the comment period we are requesting information on any potential unoccupied areas that may be essential for conservation.

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, require an ESA section 7 consultation. Such activities include, but are not limited to, fishery management practices, vessel traffic, dredging and disposal, sub-marine cable/pipeline installation and repair, oil and gas exploration, pollutant discharge, and oil spill prevention and response.

This proposed designation of critical habitat will provide Federal agencies, private entities, and the public with clear notification of proposed critical habitat for Southern Resident killer whales and the boundaries of the habitat. This proposed designation will also assist Federal agencies and others in evaluating the potential effects of their activities on critical habitat and in determining if ESA section 7 consultation with NMFS is needed. Consistent with recent agency guidance on conducting adverse modification analyses (NMFS, 2005a), we will apply the statutory provisions of the ESA, including those in section 3 that define ''critical habitat'' and ''conservation,'' to determine whether a proposed action might result in the destruction or adverse modification of critical habitat.

Application of ESA Section 4(b)(2)

The foregoing discussion describes the specific areas that fall within the ESA section 3(5) definition of critical habitat and are eligible for designation as critical habitat. Specific areas eligible for designation are not automatically designated as critical habitat. Section 4(b)(2) of the ESA requires the Secretary to first consider the economic impact, impact on national security, and any other relevant impact of designation. The Secretary has the discretion to exclude an area from designation if he determines the benefits of exclusion (that is, avoiding the impact that would result from designation) outweigh the benefits of designation based upon best scientific and commercial data. The Secretary may not exclude an area from designation if exclusion will result in the extinction of the species. Because the authority to exclude is discretionary, exclusion is not required for any area.

The first step in conducting an ESA section 4(b)(2) analysis is to identify the ''particular areas'' to be analyzed. ESA section 3(5) defines critical habitat in terms of ''specific areas,'' and ESA section 4(b)(2) requires the agency to consider certain factors before designating ''particular areas.'' Depending on the biology of the species, the characteristics of its habitat, and the nature of the impacts of designation, ''specific'' areas might be different from, or the same as, ''particular'' areas. For this designation, we analyzed two types of ''particular'' areas. Where we considered economic impacts, and weighed the economic benefits of exclusion against the conservation benefits of designation, we used the same biologically-based ''specific'' areas we had identified under section 3(5)(A) (Areas 1, 2, and 3). This delineation allowed us to most effectively consider the conservation value of the different areas when balancing conservation benefits of designation against economic benefits of designation. Where we considered impacts on national security, however, we instead used a delineation of ''particular'' areas based on ownership or control of the area. This delineation allowed us to compare and balance the benefits of designation and exclusion relative to land ownership and management.

Impacts of Designation

ESA Section 4(b)(2) provides that the Secretary shall consider certain impacts before designating critical habitat: ''the Secretary shall designate critical habitat * * * on the basis of the best scientific data available and after taking into consideration the economic impact, impact to national security, and any other relevant impact of specifying any particular area as critical habitat.'' The primary impact of a critical habitat designation comes from the ESA section 7(a)(2) requirement that Federal agencies ensure their actions are not likely to result in the destruction or adverse modification of critical habitat. Determining this impact is complicated by the fact that section 7(a)(2) contains the overlapping requirement that Federal agencies must also ensure their actions are not likely to jeopardize the species' continued existence. The true impact of designation is the extent to which Federal agencies modify their actions to ensure their actions are not likely to adversely modify the critical habitat—beyond any modifications they would make because of listing and the jeopardy requirement. Additional impacts of designation include state and local protections that may be triggered as a result of designation, and benefits that may arise from education of the public to the importance of an area for species conservation. We did not identify state or local protections that may be triggered by this proposed designation, but have identified educational benefits. We discuss educational benefits in the ''Benefits of Designation'' section below.

We have found it difficult to predict the incremental change in Federal agency activities as a result of critical habitat designation and the adverse modification prohibition, beyond the changes predicted to occur as a result of listing and the jeopardy prohibition. For example, in our recent critical habitat designations for salmon and steelhead, informed by a Tenth Circuit decision, we considered the ''co-extensive'' impact of designation—that is, the predicted change in agency action as a result of critical habitat designation and the adverse modification prohibition, even if the same change would have occurred because of listing and the jeopardy prohibition. For the present rulemaking, we have again predicted the co-extensive impact of designation.

We examined the types of Federal activities that may affect Southern Resident killer whale critical habitat. We identified three categories of activities that may affect killer whale critical habitat and therefore be subject to ESA section 7's adverse modification requirement: Salmon fishing, vessel traffic, and water quality management. Because killer whales are newly listed and we lack a consultation history, we necessarily had to make assumptions about what types of Federal activities might undergo section 7 consultation. We next considered the range of modifications we might seek in these activities to avoid adverse modification of Southern Resident killer whale critical habitat, again making assumptions, given the lack of consultation history. We relied on information from our proposed conservation plan for the Southern Resident killer whales developed under the Marine Mammal Protection Act (70 FR 57565; October 3, 2005), comments on that plan, comments on the proposed listing determination, and other information available to the agency to establish the types of activities and the potential range of changes.

A draft economic report describes in detail the actions we assumed may be affected, the potential range of changes we might seek in those actions, and the estimate of economic impacts that might result from such changes (NMFS, 2006b). A separate draft ESA 4(b)(2) report describes which actions we consider more directly linked to habitat effects than species effects, as well as our consideration of benefits of designation versus benefits of exclusion (NMFS, 2006c). This report also describes the likelihood of an ESA section 7 consultation resulting in changes to each type of action. These reports are available on the NMFS Northwest Region Web site at *http://www.nwr.noaa.gov/*. We are soliciting comments on our analysis of impacts and their potential benefits and costs.

Impacts of Designation Generally

To predict potential impacts of designation, we first identified three categories of activities that may affect killer whale critical habitat and therefore be subject to ESA section 7 consultation and the adverse modification prohibition: Salmon fishing, vessel traffic, and water quality management. For salmon fishing, we considered a range of potential changes: Reductions in commercial and recreational salmon fishing from 5 percent to 50 percent, and closures of fisheries in different catch management areas. We could not identify a federal nexus for a section 7 consultation on vessel traffic that would relate to the effects of vessels on killer whale passage. (The only vessels we identified with a section 7 nexus were U.S. vessels, such as military, Coast Guard, etc., and ferries, which receive federal funding. However, since these vessels do not affect the whales' ability to pass freely among areas, we do not anticipate section 7 consultations will have any habitat-related impacts on operations of these vessels.) For actions related to water quality management, we considered it too speculative to predict either the actions that might undergo ESA section 7 consultation or the types of changes we might seek.

Where possible, we allocated impacts to each particular area. For impacts to salmon fisheries, we did allocate impacts to particular areas but recognize that because of the migratory behavior of salmon (in contrast to fixed habitat features), designation of any area has the potential to affect harvest in other areas.

In considering potential impacts for each particular area, we kept in mind certain analytical limitations resulting in part from our lack of a consultation history: Not all activity types are equally likely to incur changes as a result of ESA section 7 consultation; all estimates are based on potential changes resulting from section 7 consultation, regardless of whether the modifications are the result of the ''jeopardy'' or ''adverse modification'' prohibition of section 7; within each activity type, estimates are based on potential changes, so there is a wide range of estimated impacts; while some impacts are allocated to a particular area, they could result because of other areas being designated. Regarding the first two limitations, we have attempted in this analysis to weigh impacts of designation according to whether they are more or less likely to occur, and whether they are more closely associated with jeopardy or adverse modification, as described below.

Regarding the first limitation, we considered each of the activity types and how likely it was that a change in a proposed Federal action would be required as a result of ESA section 7 consultation. We considered some changes to be ''likely'' (it is foreseeable a change will occur in most cases); some changes to be ''potential'' (it is foreseeable a change will occur but we currently lack data to predict with any confidence the nature and extent of the change); or ''unlikely'' (it is foreseeable a change will not occur in most cases). In balancing the benefits of designation against the benefits of exclusion, we gave greater weight to changes we considered ''likely'' or ''potential'' than to changes we considered ''unlikely.''

Regarding the overlapping prohibitions of section 7 under the ESA, we analyzed each type of activity to determine whether it directly affects individual members of the species or affects them through a habitat modification (that is, does the activity bear a more direct relationship to the jeopardy or adverse modification prohibition of section 7?). In balancing the benefits of designation against the benefits of exclusion, we gave greater weight to changes we considered as having a more direct relationship to adverse modification of critical habitat and less weight to changes we considered as having a more direct relationship to jeopardy. Table 1 summarizes the nature and likelihood of impact for each type of activity, and Table 2 depicts the relative weight we gave each impact as a result of these considerations. A summary of how we assigned the likelihood, nature of impacts, and weights follows the tables.

TABLE 1.—NATURE AND LIKELIHOOD OF IMPACT RESULTING FROM ESA SECTION 7 CONSULTATION, BY ACTIVITY TYPE

Activity type	Essential feature affected and nature of effect	Type of impact	Likelihood of section 7 impact
Fisheries	—Affects prey —Potential to impact individuals and habitat modification.	Harvest reduction or change in timing, location, etc. by critical habitat area.	Potential
		Harvest closure by management area	Unlikely.
Water Quality Management—Contaminants.	—Affects prey —Stronger connection to habitat modification.	Changes in NPDES standards	Potential.
		Changes in sewer and stormwater runoff standards.	Potential.
Water Quality Management—Oil Spills	—Affects water quality —Stronger connection to impact on individuals.	Changes in oil spill regulations	Unlikely.

TABLE 2.—IMPACT OF DESIGNATION—RELATIVE WEIGHTS FOR EACH TYPE OF ACTIVITY

[Greatest Weight at Top Left of the Matrix, Least Weight at Bottom Right]

		Likely (high weight)	Potential	Unlikely
Likelihood of change occurring as a result of section 7 consultation				
Relationship to section 7: jeopardy vs. adverse modification.	*Adverse modification (high weight).*		—Water Quality Management (NPDES). —Sewer and stormwater runoff.	
	Both		—Harvest Reduction or Modification.	—Harvest closure by management area.

TABLE 2.—IMPACT OF DESIGNATION—RELATIVE WEIGHTS FOR EACH TYPE OF ACTIVITY—Continued

[Greatest Weight at Top Left of the Matrix, Least Weight at Bottom Right]

		Likely (high weight)	Potential	Unlikely
	Jeopardy			—Changes in oil spill regulations.

Salmon Fishing. We considered changes to salmon harvest, either through harvest reductions or changes in timing or location of fishing effort to be ''potential.'' The limited available information about killer whale foraging indicates salmon are their primary prey species (NMFS, 2006a). We are therefore likely to focus ESA section 7 consultations on actions affecting salmon abundance, particularly in times and areas where the whales are foraging. There is presently little direct information, however, about the interactions between salmon harvest and foraging success of whales. Because we presently lack information allowing us to predict the nature and extent of any changes we might seek, we consider reductions in salmon harvest or changes in the location and timing of harvest as ''potential'' impacts of section 7 consultation. In contrast, we considered harvest closure by management area ''unlikely'' because the management areas are large, not necessarily aligned with whale foraging areas, would likely involve species that may not be important components of the Southern Residents' diet, and could include large numbers of fish that surpass the nutritional requirements of the whales for some catch areas.

We considered fishing to have an equally strong connection to both the jeopardy and the adverse modification prohibitions of ESA section 7. Salmon fishing directly affects individual members of the species by reducing the amount of food available, and, therefore, potentially affecting the ability of individual animals to meet their nutritional requirements. Salmon are also one of the biological features in the habitat essential to conservation of the whales, so fishing also modifies critical habitat by removing prey. Because changes in fisheries through catch reductions or changes in timing and location are potential, and because they have a connection to both the jeopardy and adverse modification prohibition of section 7, we gave these potential changes a moderate weight (see Table 2). We gave area management closures a low weight because, while they have a connection to both the jeopardy and adverse modification prohibitions, they are unlikely.

Water Quality Management. We considered changes in water quality management through changes in NPDES standards or changes in sewer and stormwater runoff standards to be ''potential.'' Presently, we lack sufficient information about the relationships among the sources of contaminants, their movement through the food chain, and their impact on killer whales to determine what changes we might seek. Once we have more information, however, we anticipate some changes may be required. Our ability to estimate impacts of designation is also complicated by the fact that the State of Washington has many efforts already underway to address water quality issues (PSAT, 2005) and recently announced a new Puget Sound Partnership initiative to restore and protect Puget Sound. These efforts would presumably be in addition to existing requirements under the Clean Water Act and other applicable standards. Any new requirements imposed or efforts undertaken by the state and local governments would alter the baseline conditions, which we use to determine the impacts of designation. We considered changes to oil spill regulations unlikely because we believe additional oil spill regulations are not needed to meet section 7 requirements.

Water quality management has the potential to affect individual Southern Residents, but is of greatest concern because it may allow contaminants to enter the whales' habitat and food chain. When ultimately consumed by killer whales, the contaminants can cause injury, but the effect is through the whales' prey, an important feature of their habitat. Once the contaminants enter the habitat, they cause a long-lasting modification of the habitat. This modification occurs regardless of whether the whales are present at the time of the activity. We therefore consider this the activity with the strongest link to the adverse modification prohibition of ESA section 7. Oil spills have the potential to modify habitat, but are a primary concern because of their potential to directly injure individual animals. We considered this activity to have a stronger link to the jeopardy prohibition of ESA section 7. Because changes to NPDES standards and sewer and runoff standards are potential, and have a strong connection to the adverse modification prohibition of section 7, we gave these changes a moderate to high weight. We gave changes to oil spill regulations a low weight because we consider such changes an unlikely result of section 7 consultation and because such changes would be more closely linked to jeopardy than to adverse modification.

Benefits of Designation

The primary benefit of designation is that section 7 of the ESA requires all Federal agencies to ensure their actions are not likely to destroy or adversely modify the designated habitat. This is in addition to the requirement that all Federal agencies ensure their actions are not likely to jeopardize the species' continued existence. Another benefit of designation is that it provides notice of areas and features important to species conservation, and information about the types of activities that may reduce the conservation value of the habitat, which can be effective for education and outreach. Critical habitat designation may also trigger protection under state or local regulations.

In addition to the direct benefits of critical habitat designation to the killer whales, there may be ancillary benefits. These other benefits may be economic in nature, or they may be expressed through beneficial changes in the ecological functioning of Puget Sound. For example, Puget Sound supports an active whale watching industry, and so an increase in the killer whale population could increase the economic value of that activity. Another example could be the increased viability of Puget Sound salmon populations if their harvest is reduced to assure a larger prey supply for killer whales. Yet another example could be reduced levels of pollution in Puget Sound.

With sufficient information, it may be possible to monetize benefits of critical habitat designation. For the direct benefits, this would require us to first quantify the benefit to killer whales expected from ESA section 7 consultation (for example, the number of killer whales saved or the increase in their longevity, health, productivity,

etc.), and then translate that benefit into dollars (for example, using information about willingness-to-pay). For the ancillary benefits, monetizing benefits would require quantifying the effects of critical habitat protection to these other possible sources of benefits, and then translating these impacts into dollars.

We are not aware of any available data that would support either step of such an analysis for killer whales. The short statutory timeframes and the ESA's requirement to use the best ''available'' information suggest such a costly and time-consuming approach is not currently possible. In addition, ESA section 4(b)(2) requires us to consider and weigh impacts other than economic impacts that are equally difficult to monetize, such as the benefits to national security of excluding areas from critical habitat. Given the lack of information that would allow us either to quantify or monetize the benefits of designation for the whales, we have determined the qualitative conservation benefits of designating each of the three particular areas identified as critical habitat for Southern Residents. In determining the benefit of designation for each area, we considered a number of factors. We took into account the physical and biological features present in the area, the types of human activities occurring in the area that may threaten the features, and the likelihood that designation would lead to changes in those activities either because of an ESA section 7 consultation or because of the educational effect of designation. We also considered that each area is unique and supports a distinct aspect of the whales' life history. This consideration is described in the 4(b)(2) report supporting this proposed rule (NMFS, 2006c) and summarized below.

Area 1. This is the particular area where Southern Residents are most frequently observed and likely the most important area for their conservation. Whales are observed feeding, socializing, traveling and resting in Area 1. The Strait of Juan de Fuca and the Haro and Georgia Straits are relatively narrow channels that concentrate salmon returning from the Pacific Ocean to spawn in U.S. and Canadian rivers. In particular, Area 1 lies near the mouth of the Fraser River, which has the largest salmon runs in the Georgia Basin/Puget Sound region (Northcote and Atagi, 1997). Runs of salmon passing through the area include Chinook, chum, coho, pink, and sockeye, which have all been identified as prey for Southern Residents (Ford *et al.*, 1998; Ford and Ellis, 2005; NWFSC, unpubl. data).

Killer whales require abundant prey for successful foraging. Designation of Area 1 as critical habitat is likely to improve the ability of an ESA section 7 consultation to focus on salmon abundance as an essential biological feature of the whales' habitat. It is also likely to improve the ability of a section 7 consultation to affect water quality management activities, though we have little information at this time to predict what those actions may be and how such actions may be changed as a result of section 7 consultation.

There is little likelihood that an ESA section 7 consultation would affect vessel traffic in Area 1, but we believe critical habitat designation may provide significant conservation benefits to killer whales, particularly in Area 1 because of its educational value for the large numbers of boaters and whale watchers. If we can highlight that the area is ''critical habitat'' for the whales, it will strengthen the messages to boaters about operating their vessels responsibly in the area. Table 3 illustrates the various factors we considered in weighing the benefit of designation for Area 1.

TABLE 3.—BENEFIT OF DESIGNATION FOR AREA 1

PCEs	Threats	Frequency/Importance of threats	Weights of impacts based on Table 2	Likelihood of education benefits
Water quality	Oil spills	High	Low.	
Prey	Water quality	Moderate	Mod-High.	
	Fishing	High	Moderate.	
Passage	Physical presence of vessels	High		High.

Area 2. Southern Resident killer whales have been seen in parts of Area 2 in all seasons, but they use Area 2 more in the fall than in the summer. They likely move into this area to take advantage of chum and Chinook runs as their occurrence in the area has been correlated with fall salmon runs. Feeding has been observed in Area 2 (NWFSC, unpubl. data), although few behavioral studies have been conducted in this area. The J pod in particular expands into this area in the fall (Osborne, 1999), and a fall chum run has been suggested as the likely reason for an extended presence of members of L pod in Dyes Inlet during October and November of 1997.

Area 2 may be less important than Area 1 to killer whale conservation. There are fewer sightings of whales in this area, particularly south of the Tacoma Narrows bridge, and salmon stocks are not as abundant as in Area 1. Nevertheless, late salmon runs appear to provide needed prey during the fall, particularly for J pod. As with designation of Area 1, designation of Area 2 as critical habitat is likely to improve the ability of an ESA section 7 consultation to focus on salmon abundance as a habitat feature. It may also improve the ability of a section 7 consultation to affect water quality management activities. Though we have little information at this time to predict what those actions may be and how they may be changed as a result of section 7 consultation, it is clear that water quality in Area 2 is the most impaired of all three areas.

There is little likelihood that a section 7 consultation would affect vessel traffic in Area 2, but we believe critical habitat designation may provide some conservation benefits to killer whales in this area because of its educational value for boaters. Interference with the whales from vessels is not as great a concern in Area 2 as in Area 1, but it is still an important concern because of the large number of recreational vessels in this area and the potential for disturbance. Table 4 illustrates the various factors we considered in weighing the benefit of designation for Area 2.

TABLE 4.—BENEFIT OF DESIGNATION FOR AREA 2

PCEs	Threats	Frequency/Importance of threats	Weights of impacts based on Table 2	Likelihood of education benefits
Water quality	Oil spills	High	Low.	
Prey	Water quality	High	Mod-High.	
	Fishing	High	Moderate.	
Passage	Physical presence of vessels	Moderate		Moderate.

Area 3. Area 3 provides needed passage for Southern Residents from the interior waters of Puget Sound to coastal waters. Although the whales may also feed as they transit this area, the most important habitat feature of this area is passage. Sightings of the Southern Residents in Area 3 are limited, particularly on the U.S. side of the international boundary as there is little observation effort in the area, particularly to the west near the Bonilla Point/Tatoosh Island line. Even with a small number of actual sightings we can infer that the whales are using this corridor and the passage is an essential feature of Area 3 based on the inland and coastal sightings of whales. The Strait of Juan de Fuca is not the only transit corridor between inland waters and coastal British Columbia; the whales occasionally use the Strait of Georgia and Johnstone Strait in Canadian waters as an alternate route.

It is difficult to compare the importance of this area to Areas 1 and 2 because the whales use the areas for different activities. Designation of Area 3 as critical habitat may provide less benefit than designation of Areas 1 or 2. It may improve the ability of a section 7 consultation to affect water quality management activities, though we have little information at this time to predict what those actions may be and how they may be changed as a result of section 7 consultation. Water quality in Area 3 is the least impaired of all three areas. Although there are limited observations in this area, it appears that the Southern Residents do not stop and feed here, but primarily use this area for transit. Table 5 illustrates the various factors we considered in weighing the benefit of designation for Area 3.

TABLE 5.—BENEFIT OF DESIGNATION FOR AREA 3

PCEs	Threats	Frequency/Importance of threats	Weights of impacts based on Table 2	Likelihood of education benefits
Water quality	Oil spills	High	Low.	
Prey	Water quality	Moderate	Mod-High.	
	Fishing	Moderate	Moderate.	
Passage	Physical presence of vessels	Low		Low.

Determining the Benefits of Excluding Particular Areas and Balancing the Benefits of Designation Against the Benefits of Exclusion

Section 4(b)(2) of the ESA calls for balancing the benefits of designation against the economic, national security, and other benefits of exclusion. We recognize that, in reality, excluding an area from designation will not likely avoid all of the impacts we considered, because the ESA section 7 requirement regarding jeopardy still applies, just as designating an area provides protection that overlaps with that afforded by the section 7 jeopardy prohibition. To determine the benefits of excluding particular areas, we considered the previously-discussed Federal activities that could be changed as a result of a section 7 consultation and application of the adverse modification prohibition. We considered changes to those actions that could potentially be required to avoid adversely modifying critical habitat, regardless of whether the changes could also potentially be required to avoid jeopardizing the whales' continued existence. We also considered economic benefits of excluding each of the three ''particular'' areas and considered national security benefits of excluding the 18 ''particular'' areas delineated based on military ownership or control.

ESA section 4(b)(2) calls for balancing the benefits that are not directly comparable—the benefit associated with species conservation balanced against the economic benefit, benefit to national security, or other relevant benefit that results if an area is excluded from designation. ESA section 4(b)(2) does not specify a method for the weighing process. Agencies are frequently required to balance benefits of regulations against impacts; Executive Order (E.O.) 12866 established this requirement for Federal agency regulation. Ideally such a balancing would involve first translating the benefits and impacts into a common metric. Executive branch guidance from the Office of Management and Budget (OMB) suggests that benefits should first be monetized (converted into dollars). Benefits that cannot be monetized should be quantified. Where benefits can be neither monetized nor quantified, agencies are to describe the expected benefits (U.S. Office of Management and Budget, Circular A–4, September 17, 2003 (OMB, 2003)).

Economic Impacts (Economic Benefits of Exclusion)

A draft economic report describes in detail the actions we assumed may be affected, the potential range of changes we might seek in those actions, and the estimate of economic impacts that might result from such changes. We considered a range of potential modifications to fishing in Puget Sound (described above) and developed an expected direct cost for changes at each end of the range as well as in some cases for intermediate points within the range. We considered it too speculative at this time to postulate likely consultations on water quality management actions, and what changes we might seek in those actions. The results of our analysis are contained in a draft economic report (NMFS, 2006b) supporting this proposed rule and are summarized below. Although the range of potential impacts is large, we consider it unlikely that the extreme ends of the range will be achieved. The extreme ends of the range (for all impacts in a category) assume that every project or action

consulted on would have the lowest or highest possible cost for that type of action. This outcome is highly unlikely, as projects are likely to have a distribution of costs within the low-high range. Further, because we lack information on the likely distribution of costs across projects, we believe it is reasonable to construct a range of costs for each area.

Regarding impacts from changes to water quality management activities, we are aware of many of the programs currently in place to restore and protect Puget Sound (PSAT, 2005), and we intend to coordinate with the State of Washington and other Federal agencies between the publication of this proposed rule and the final rule, to obtain better information on current and proposed programs. We will use this information to account for any changes in State programs or requirements that may alter the baseline conditions and to better estimate economic impacts of designation for the final rule.

Tables 6 through 8 illustrate the potential range of economic benefits of exclusion for each area, both by activity category and by total for the area. For activity categories where there were two mutually exclusive options, we selected the more likely option. Thus, for salmon fishing, the more likely option is harvest reduction or changes in area and timing, rather than closure of management areas. The tables also display the weight we gave each activity, which is relevant to our consideration of costs for each area. As described in the draft economics report (NMFS 2006c), the total range of estimated economic impacts for this proposed designation is $1,007,000–$10,071,000. (This number is slightly lower than the sum of the impacts shown in Tables 6–8 due to rounding.)

TABLE 6.—ECONOMIC BENEFIT OF EXCLUSION FOR AREA 1

[in $1,000s]

Activity type	Type of impact	Weight	Range
Salmon Fisheries	Harvest reduction or change in timing or location	Moderate	305–3,055
Water Quality Management	NPDES standards	Moderate-High	NA
	Sewer and stormwater runoff	Moderate-High	NA
	Oil spills	Low	0
Total			305–3,055

TABLE 7.—ECONOMIC BENEFIT OF EXCLUSION FOR AREA 2

[in $1,000s]

Activity type	Type of impact	Weight	Range
Salmon Fisheries	Harvest reduction or change in timing or location	Moderate	466–4,660
Water Quality Management	NPDES standards	Moderate-High	NA
	Sewer and stormwater runoff	Moderate-High	NA
	Oil spills	Low	0
Total			466–4,660

TABLE 8.—ECONOMIC BENEFIT OF EXCLUSION FOR AREA 3

[in $1,000s]

Activity type	Type of impact	Weight	Range
Salmon Fisheries	Harvest reduction or change in timing or location	Moderate	236–2,357
Water Quality Management	NPDES standards	Moderate-High	NA
	Sewer and stormwater runoff	Moderate-High	NA
	Oil spills	Low	0
Total			236–2,357

Section 4(b)(2) of the ESA requires that we balance the benefit of designation against the economic benefit of exclusion for each particular area. The co-extensive benefit to the species of designation depends upon the inherent conservation value of the area, the seriousness of the threats to that conservation value, and the extent to which an ESA section 7 consultation or the educational aspects of designation will address those threats. If a threat bears a closer relationship to the adverse modification prohibition of section 7, we can begin to understand and give weight to the incremental benefit of designation beyond the protection provided by listing and the jeopardy prohibition. We have identified the threats that face each area and the likelihood that the adverse modification prohibition will enhance our ability to address those threats.

We listed the whales as endangered, citing, among other reasons, ''the ongoing and potentially changing nature of pervasive threats, in particular, disturbance from vessels, the persistence of legacy toxins and the addition of new ones into the whales' environment, and the potential limits on prey availability (primarily salmon) given uncertain future ocean conditions.'' As described above, designation of critical habitat will enhance our ability to address some of these threats, either through an ESA section 7 consultation or through ongoing public outreach and education. Because some of these threats bear a stronger relationship to adverse modification than to jeopardy, we also believe there is an incremental benefit of designation beyond the protection afforded by the jeopardy prohibition.

The benefit of designation also depends on the inherent conservation value of the area. The habitat areas for these killer whales are unique and irreplaceable. It is difficult to separate the value of any one of the areas: each of the three areas supports a distinct aspect of the whales' life history, and the conservation function of each area complements the conservation function of the others. Therefore, designation of each particular area benefits the conservation function of the other areas. For all of the reasons discussed above, we consider the benefit of designation of each area to be high.

The benefit of exclusion of an area depends on some of the same factors—the likelihood of an ESA section 7 consultation and the extent to which an activity is likely to change as a result of that consultation. As with the benefit of designation side of the equation, if a threat bears a closer relationship to the adverse modification prohibition of section 7, we can begin to understand and give weight to the incremental cost of designation (benefit of exclusion) beyond the cost associated with listing and the jeopardy prohibition. In balancing the potential costs of designation, we also considered the nature of the threats and the relevance of section 7's adverse modification prohibition to each threat. Because adverse modification and jeopardy bear an equally strong relationship to fishing, and because some changes in fishing are likely as a result of consultation, we gave these costs of designation moderate weight. We recognize that adverse modification bears the strongest relationship to water quality management, but we presently lack sufficient data to estimate an economic impact. We also recognize that we have not monetized (quantified) the costs that may be associated with the education benefit of designation with respect to vessel traffic.

We conclude that the economic benefits of excluding each particular area do not outweigh the conservation benefits of designating each particular area as critical habitat, given the endangered status of the whales, the uniqueness of the habitat, the fact that threats to habitat were a primary concern leading to our endangered finding, and the fact that designation will enhance the ability of an ESA section 7 consultation to protect the habitat.

We will seek further information, including public comment and information from other Federal agencies, on important and relevant aspects of this economic analysis to better understand economic impacts before a final designation. These include a better understanding of the potential impacts of designation on water quality management activities.

Impacts on National Security

Prior to listing Southern Resident killer whales under the ESA, we contacted the DoD by letter and identified 18 military sites, previously addressed during salmon and steelhead habitat designations, that potentially overlapped with areas under consideration for Southern Resident killer whale critical habitat: (1) Naval Undersea Warfare Center, Keyport; (2) Naval Ordnance Center, Port Hadlock (Indian Island); (3) Naval Fuel Depot, Manchester; (4) Naval Air Station, Whidbey Island; (5) Naval Station Everett; (6) Naval Hospital Bremerton; (7) Fort Lewis (Army); (8) Pier 23 (Army); (9) Puget Sound Naval Ship Yard; (10) Strait of Juan de Fuca naval air-to-surface weapon range, restricted area; (11) Strait of Juan de Fuca and Whidbey Island naval restricted areas; (12) Admiralty Inlet naval restricted area; (13) Port Gardner Naval Base restricted area; (14) Port Orchard Passage naval restricted area; (15) Sinclair Inlet naval restricted area; (16) Carr Inlet naval restricted area; (17) Port Townsend/Indian Island/Walan Point naval restricted area; and (18) Crescent Harbor Explosive Ordnance Units Training Area.

These 18 sites overlap with areas we found to meet the definition of critical habitat for the Southern Resident killer whale DPS. These sites include shore-based facilities and offshore areas in Puget Sound where the Navy has security restrictions. Because of mapping imprecision, we cannot determine the extent to which the shore-based facilities may extend into 20-foot (6.1 m) deep waters of Puget Sound, and, therefore, the exact amount of overlap with proposed killer whale critical habitat. There are, however, sites that clearly include waters deeper than 20 feet (6.1 meters). The 18 sites, including open marine areas associated with these sites, cover approximately 112 square miles (291 sq km) out of the total 2,676 square miles (6,931 sq km) under consideration as critical habitat for Southern Residents. The shore-based sites cover 81 miles (130 km) of shoreline out of the total 2,081 miles (3,349 km) of shoreline in the proposed critical habitat areas.

The DoD confirmed that the 18 sites are owned or controlled by the DoD, identified the types of military activities that take place in the areas, and provided an assessment as to whether designation of critical habitat would affect military readiness. The Army and Navy concluded that critical habitat designation at any of these sites would likely impact national security by diminishing military readiness. The DoD requested that we consider conducting an ESA section 4(b)(2) analysis to determine whether all of the sites could be excluded from designation because the benefits of exclusion outweigh the benefits of designation. The possible impacts to national security include: preventing, restricting, or delaying training or testing exercises or access to sites; restricting or delaying activities associated with vessel/facility maintenance and ordnance loading; and delaying response times for ship deployments and overall operations.

The benefit of excluding these particular areas is that the Navy would only be required to comply with the jeopardy prohibition of ESA section 7(a)(2) and not the adverse modification prohibition. The Navy maintains that the additional commitment of resources in completing an adverse modification analysis, and any change in its activities to avoid adverse modification of critical habitat, would likely reduce its readiness capability. Given that the Navy is currently actively engaged in training, maintaining, and deploying forces in the current war effort, this reduction in readiness could reduce the ability of the military to ensure national security.

We assessed the benefit of designating these areas of overlap based on: the physical or biological features of each area, the Southern Residents' use of each area (including how frequently they are present), the Federal activities in each area that might trigger an ESA section 7 consultation, the likelihood that we would seek a modification of those activities, and the strength of the connection between those activities and habitat modification. The benefit of designation is that the section 7 requirement regarding adverse modification would focus our section 7 consultations on essential physical and biological features of the whales' habitat, particularly where the Federal activity has a more direct impact on habitat features and a less direct impact on individual killer whales.

We considered the overlap of killer whale habitat within the boundaries of military sites; the conservation value of that habitat; and the types of Federal activities in those areas that would likely undergo ESA section 7 consultation. We also considered the high priority placed on national security, the potential for critical habitat designation to have some impact on

military readiness, and the fact that, collectively, these areas represent relatively small percentages of the total habitat and none of them are located in Area 1, the core summer area. Based on our consideration of these factors, we concluded that the national security benefits of exclusion outweigh the conservation benefits of designation for each of the 18 sites, and we are not proposing to designate these DoD sites as critical habitat.

Other Relevant Impacts

We did not identify other relevant impacts of designation beyond economic impacts and impacts on national security. In this proposed rule, we are seeking information on such impacts.

Critical Habitat Designation

We are proposing to designate approximately 2,564 square miles (6,641 km) of marine habitat within the area occupied by Southern Resident killer whales in Washington. Although areas with water less than 20 feet (6.1 meters) deep are not proposed for critical habitat, these shallow areas have not been subtracted from the estimate of square mileage, so it is an overestimate. The proposed areas are occupied and contain physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection. Some of these areas overlap with military sites, which are not proposed for designation because they were determined to have national security impacts that outweigh the benefit of designation and are therefore being excluded under ESA section 4(b)(2). We determined that the economic benefits of exclusion of any of the areas do not outweigh the benefits of designation, and we are therefore not proposing to exclude any areas based on economic impacts. Section 4(b)(2) does not allow the agency to exclude areas if exclusion will result in extinction of the species. We are recommending exclusion of only a small percentage of the whales' habitat because of impacts to national security. Given this small percentage, we conclude that the exclusion of these areas will not result in extinction of the Southern Resident killer whale DPS. No unoccupied areas are currently proposed for designation of critical habitat.

Public Comments Solicited

We request that interested persons submit comments, information, maps, and suggestions concerning this proposed rule during the comment period (*see* **DATES**). We are soliciting comments or suggestions from the public, other concerned governments and agencies, the scientific community, industry, or any other interested party concerning this proposed rule. Comments particularly are sought concerning:

(1) Maps and specific information describing the amount, distribution, and use type (*e.g.*, feeding, migration, resting) of Southern Resident killer whales in inland and coastal waters, including shallow areas with less than 20 feet (6.1 m) of water;

(2) Information on the identification, location, and quality of physical or biological features which may be essential to the conservation of Southern Resident killer whales, including information on sound as a PCE;

(3) Information regarding potential impacts of designating any particular area, including the types of Federal activities that may trigger an ESA section 7 consultation and the possible modifications that may be required of those activities as a result of section 7 consultation. In particular, we are seeking information on water quality management activities that may trigger section 7 consultation, potential modifications of those activities, and estimated costs of those modifications;

(4) Information regarding the benefits of designating any particular area of the proposed critical habitat;

(5) Information regarding the benefits of excluding particular areas from the critical habitat designation;

(6) Current or planned activities in the areas proposed for designation and their possible impacts on proposed critical habitat; and

(7) Any foreseeable economic or other potential impacts resulting from the proposed designations.

You may submit your comments and materials concerning this proposal by any one of several methods (*see* **ADDRESSES**). The proposed rule, map, fact sheets, references, and other materials relating to this proposal can be found on the NMFS Northwest Region Web site at *http://www.nwr.noaa.gov/*. We will consider all comments and information received during the comment period in preparing the final rule. Accordingly, the final decision may differ from this proposal.

Public Hearings

50 CFR 424.16(c)(3) requires the Secretary to promptly hold at least one public hearing if any person requests one within 45 days of publication of a proposed rule to designate critical habitat. 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 involvement in such ESA matters. Based on the level of public interest in Southern Resident killer whales, public meetings have been scheduled for July 12, 2006, 7–9 p.m., at the Seattle Aquarium, Seattle, WA and for July 13, 2006, 7–9 p.m., at the Whale Museum, Friday Harbor, WA. Requests for additional public hearings must be made in writing (*see* **ADDRESSES**) by July 31, 2006.

Peer Review

OMB issued its Final Information Quality Bulletin for Peer Review on December 16, 2004. The Bulletin went into effect June 16, 2005, and generally requires that all ''influential scientific information'' disseminated on or after that date be peer reviewed. A scientific document supports this proposal to designate critical habitat for Southern Resident killer whales—a draft Biological Report (NMFS, 2006a), which is available on our Web site (*see* **ADDRESSES**). We obtained independent peer review of this document and incorporated the peer review comments into the document prior to its dissemination in support of this rulemaking. A draft Economic Analysis (NMFS, 2006b) that supports the proposal to designate critical habitat for Southern Resident killer whales was also peer reviewed and is available on our Web site (*see* **ADDRESSES**).

Required Determinations

Regulatory Planning and Review

We have determined this proposed rule to be significant for purposes of E.O. 12866. A draft economic report and ESA section 4(b)(2) report document our consideration of alternatives to rulemaking as required by this E.O.

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 that describes 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, which is part of the draft Economic Analysis and available on our Web site

(NMFS, 2006b). The analysis is summarized below.

A description of the reasons why this action is being considered, as well as a statement of the objectives of, and legal basis for, this proposed rule is provided earlier in the preamble and is not repeated here. This proposed rule will not impose any recordkeeping or reporting requirements and will not duplicate, overlap, or conflict with any other laws or regulations.

At the present time, insufficient information exists regarding the cost structure and operational procedures and strategies in the sectors that may be directly impacted by the potential critical habitat designation. Further, significant uncertainty exists regarding the activities that may trigger an ESA section 7 consultation or how those activities may be modified as a result of consultation. Bearing in mind these limitations, 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.

There are 344 entities engaged in fishing activities in the region, 332 of which are considered ''small entities.'' Assuming reductions in catch, the annual impact across all regulated fishers may range from $1 million for a 5 percent reduction in catch to $10.1 million for a 50 percent reduction. Closing particular catch areas would have impacts ranging from $29,000 to $7.1 million, depending on the Catch Area closed.

Although ESA section 7 consultations may also occur on water quality management activities, at this time it is too speculative to estimate the type and number of activities and the potential modifications that could result from a consultation.

The RFA, as amended by SBREFA, requires us to consider alternatives to the proposed regulation that will reduce the impacts to small entities. We considered and rejected the alternative of not designating critical habitat for Southern Resident killer whales because such an approach does not meet the legal requirements of the ESA. We also rejected an alternative in which some or all of the critical habitat areas are excluded under the section 4(b)(2) authority because we did not find that the economic benefits of exclusion outweigh the conservation benefits of designation.

E.O. 13211

On May 18, 2001, the President issued an E.O. on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking any action that promulgates or is expected to lead to the promulgation of a final rule or regulation that (1) is a significant regulatory action under E.O. 12866 and (2) 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 and find the designation of critical habitat will not have impacts that exceed the thresholds identified above (NMFS, 2006b).

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act, NMFS makes the following findings:

(a) This proposed rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute or regulation that would impose an enforceable duty upon state, local, tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to state, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding'' and the state, local, or tribal governments ''lack authority'' to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program.'' The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the ESA, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities which 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 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; nor would critical habitat shift the costs of the large entitlement programs listed above to state governments.

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

Takings

In accordance with E.O. 12630, the proposed rule does not have significant takings implications. A takings implication assessment is not required. The designation of critical habitat affects only Federal agency actions. Private lands do not exist within the proposed critical habitat and therefore would not be affected by this action.

Federalism

In accordance with E.O. 13132, this proposed rule does not have significant federalism effects. A federalism assessment is not required. In keeping with Department of Commerce policies, we request information from, and will coordinate development of this proposed critical habitat designation with, appropriate state resource agencies in Washington. The proposed designation may have some benefit to state and local resource agencies in that the areas essential to the conservation of the species are more clearly defined, and the PCEs of the habitat necessary for the survival of the Southern Resident killer whales are specifically identified. While making this definition and identification does not alter where and

what federally sponsored activities may occur, it may assist local governments in long-range planning (rather than waiting for case-by-case ESA section 7 consultations to occur).

Civil Justice Reform

In accordance with E.O. 12988, the Department of Commerce has determined that this proposed rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the E.O. We are proposing to designate critical habitat in accordance with the provisions of the ESA. This proposed rule uses standard property descriptions and identifies the PCEs within the designated areas to assist the public in understanding the habitat needs of Southern Resident killer whales.

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

This proposed rule does not contain new or revised information collection for which OMB approval is required under the Paperwork Reduction Act. This proposed rule will not impose recordkeeping or reporting requirements on state or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act of 1969 (NEPA)

NMFS has determined that an environmental analysis as provided for under NEPA 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).

Government-to-Government Relationship With Tribes

The long-standing 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. E.O. 13175—Consultation and Coordination with Indian Tribal Governments—outlines the responsibilities of the Federal Government in matters affecting tribal interests.

None of the proposed critical habitat occurs on tribal lands. However, proposed critical habitat does overlap with Usual and Accustomed hunting and fishing grounds. The proposed designation of critical habitat for Southern Resident killer whales has the potential to affect tribal trust resources, particularly in relation to salmon, an important tribal resource and PCE for the whales. We will continue to consult with affected tribes regarding this proposal to designate critical habitat.

References Cited

A complete list of all references cited in this rulemaking can be found on our Web site at *http://www.nwr.noaa.gov/* and is available upon request from the NMFS office in Seattle, Washington (*see* **ADDRESSES.**)

List of Subjects in 50 CFR Part 226

Endangered and threatened species.

Dated: June 7, 2006.

William T. Hogarth,

Assistant Administrator for Fisheries, National Marine Fisheries Service.

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

PART 226—[AMENDED]

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

Authority: 16 U.S.C. 1533.

2. Add § 226.206, to read as follows:

§ 226.206 Critical habitat for the Southern Resident killer whale (Orcinus orca).

Critical habitat is designated for the Southern Resident killer whale as described in this section. The textual descriptions of critical habitat in this section are the definitive source for determining the critical habitat boundaries. The overview map is provided for general guidance purposes only, and not as a definitive source for determining critical habitat boundaries.

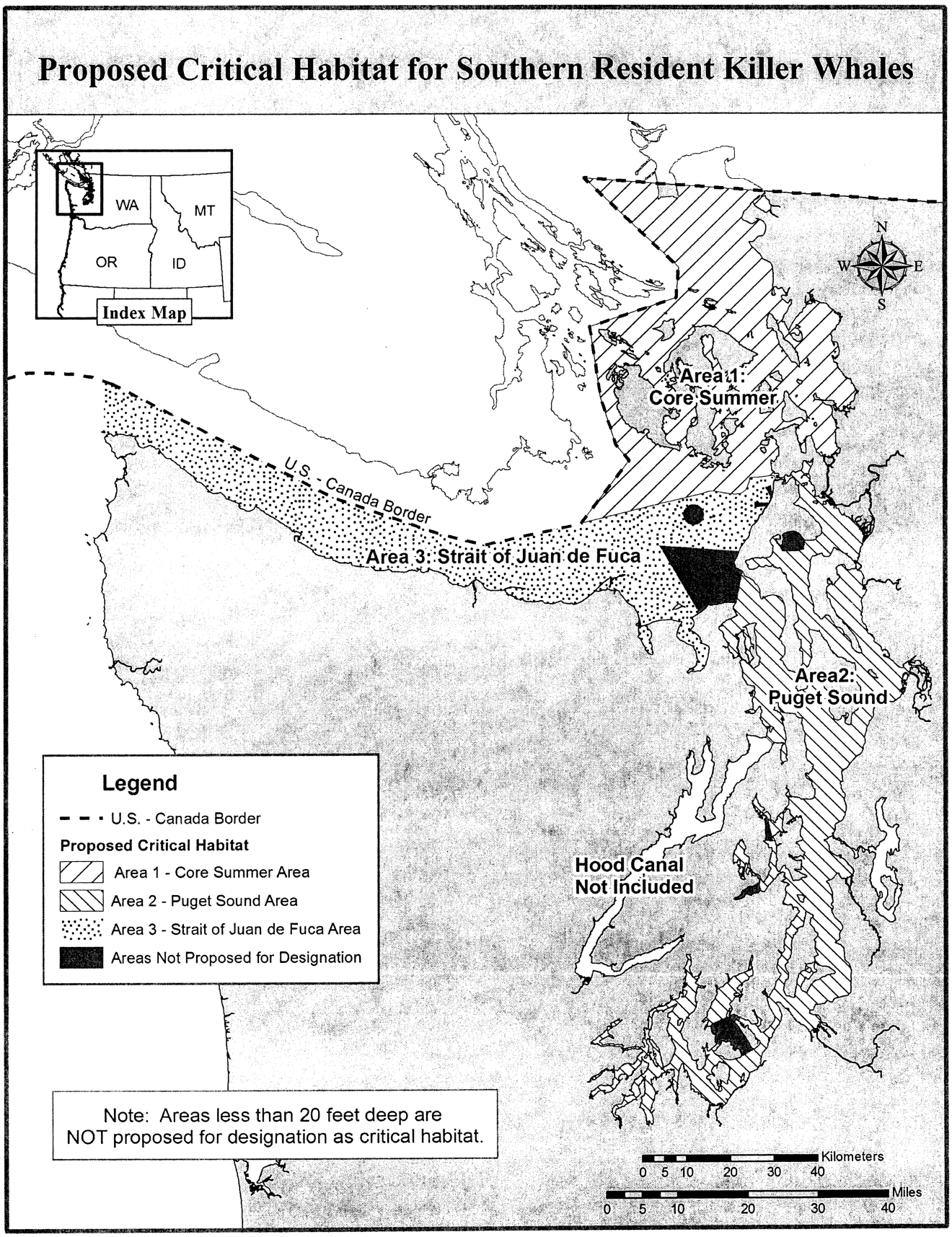
(a) *Critical Habitat Boundaries.* Critical habitat includes three specific marine areas of Puget Sound, Washington, within the following counties: Clallam, Jefferson, King, Kitsap, Island, Mason, Pierce, San Juan, Skagit, Snohomish, Thurston, and Whatcom. Critical habitat includes all waters deeper than 20 feet (6.1 m) relative to a contiguous shoreline delimited by the line of extreme high water in each of the following areas:

(1) *Summer Core Area:* All U.S. marine waters in Whatcom and San Juan counties; and all marine waters in Skagit County west and north of the Deception Pass Bridge (Highway 20) (48°24′ 25″ N./122°38′35″ W.)

(2) *Puget Sound Area:* All marine waters in Island County east and south of the Deception Pass Bridge (Highway 20) (48°24′ 25″ N./122°38′35″ W.), and east of a line connecting the Point Wilson Lighthouse (48°8′39″ N./122°45′12″ W.) and a point on Whidbey Island located at 48°12′30″ N./122°44′26″ W.; all marine waters in Skagit County east of the Deception Pass Bridge (Highway 20) (48°24′25″ N./122°38′35″ W.); all marine waters of Jefferson County east of a line connecting the Point Wilson Lighthouse (48°8′39″ N./122°45′12″ W.) and a point on Whidbey Island located at latitude 48°12′30″ N./122°44′26″ W., and north of the Hood Canal Bridge (Highway 104) (47°51′36″ N./122°37′23″ W.); all marine waters in eastern Kitsap County east of the Hood Canal Bridge (Highway 104) (47°51′36″ N./122°37′23″ W.); all marine waters (excluding Hood Canal) in Mason County; and all marine waters in King, Pierce, Snohomish, and Thurston counties.

(3) *Strait of Juan de Fuca Area:* All U.S. marine waters in Clallam County east of a line connecting Cape Flattery, Washington (48°23′10″ N./124°43′32″ W.), Tatoosh Island, Washington (48°23′30″ N./124°44′12″ W.), and Bonilla Point, British Columbia (48°35′30″ N./124°43′00″ W.); all marine waters in Jefferson and Island counties west of the Deception Pass Bridge (Highway 20) (48°24′25″ N./122°38′35″ W.), and west of a line connecting the Point Wilson Lighthouse (48°8′39″ N./122°45′12″ W.) and a point on Whidbey Island located at 48°12′30″ N./122°44′26″ W.

(b) An overview map of proposed critical habitat for Southern Resident killer whales follows.


Proposed Critical Habitat for Southern Resident Killer Whales
WA
MT
OR
ID
Index Map
N
W
E
S
Area 1:
Core Summer
U.S. - Canada Border
Area 3: Strait of Juan de Fuca
Area2:
Puget Sound
Hood Canal
Not Included
Legend
U.S. - Canada Border
Proposed Critical Habitat
Area 1 - Core Summer Area
Area 2 - Puget Sound Area
Area 3 - Strait of Juan de Fuca Area
Areas Not Proposed for Designation
Note: Areas less than 20 feet deep are
NOT proposed for designation as critical habitat.
Kilometers
0 5 10 20 30 40
Miles
0 5 10 20 30 40

(c) *Primary Constituent Elements.* The primary constituent elements essential for conservation of the Southern Resident killer whales are:

(1) Water quality to support growth and development;

(2) Prey species of sufficient quantity, quality and availability to support individual growth, reproduction and development, as well as overall population growth; and

(3) Passage conditions to allow for migration, resting, and foraging.

(d) *Sites owned or controlled by the Department of Defense.* Critical habitat does not include the following areas owned or controlled by the Department of Defense, or designated for its use, in the State of Washington:

(1) Naval Undersea Warfare Center, Keyport;

(2) Naval Ordnance Center, Port Hadlock (Indian Island);

(3) Naval Fuel Depot, Manchester;

(4) Naval Air Station, Whidbey Island;

(5) Naval Station, Everett;

(6) Naval Hospital Bremerton;

(7) Fort Lewis (Army);

(8) Pier 23 (Army);

(9) Puget Sound Naval Ship Yard;

(10) Strait of Juan de Fuca naval air-to-surface weapon range, restricted area;

(11) Strait of Juan de Fuca and Whidbey Island naval restricted areas;

(12) Admiralty Inlet naval restricted area;

(13) Port Gardner Naval Base restricted area;

(14) Port Orchard Passage naval restricted area;

(15) Sinclair Inlet naval restricted area;

(16) Carr Inlet naval restricted area;

(17) Port Townsend/Indian Island/Walan Point naval restricted area; and

(18) Crescent Harbor Explosive Ordnance Units Training Area.

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