DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223, 224, and 226

[Docket No. 210415–0080]

RIN 0648–BI06

Endangered and Threatened Wildlife and Plants: Designating Critical Habitat for the Central America, Mexico, and Western North Pacific Distinct Population Segments of Humpback Whales

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

ACTION: Final rule.

SUMMARY: We, the NMFS, issue this final rule to designate critical habitat for the endangered Western North Pacific distinct population segment (DPS), the endangered Central America DPS, and the threatened Mexico DPS of humpback whales (*Megaptera novaeangliae*) pursuant to section 4 of the Endangered Species Act (ESA). Specific areas designated as critical habitat for the Western North Pacific DPS of humpback whales contain approximately 59,411 square nautical miles (nmi^2) of marine habitat in the North Pacific Ocean, including areas within the eastern Bering Sea and Gulf of Alaska. Specific areas designated as critical habitat for the Central America DPS of humpback whales contain approximately 48,521 nmi^2 of marine habitat in the North Pacific Ocean within the portions of the California Current Ecosystem off the coasts of Washington, Oregon, and California. Specific areas designated as critical habitat for the Mexico DPS of humpback whales contain approximately 116,098 nmi^2 of marine habitat in the North Pacific Ocean, including areas within portions of the eastern Bering Sea, Gulf of Alaska, and California Current Ecosystem.

DATES: This rule becomes effective on May 21, 2021.

ADDRESSES: This final rule, critical habitat maps, as well as documents supporting this final rule are available on our website (*www.fisheries.noaa.gov/species/humpback-whale#conservation-management*), or may be obtained by contacting Lisa Manning, Endangered Species Division, Office of Protected Resources, National Marine Fisheries Service.

FOR FURTHER INFORMATION CONTACT: Lisa Manning, NMFS, Office of Protected Resources, 301–427–8466.

SUPPLEMENTARY INFORMATION:

Background

Under the ESA, we are responsible for determining whether certain species are threatened or endangered, and, to the maximum extent prudent and determinable, designating critical habitat for endangered and threatened species at the time of listing (16 U.S.C. 1533(a)(3)(A)(i)). On September 8, 2016, we published a final rule that revised the listing of humpback whales under the ESA by removing the original, taxonomic-level species listing, and in its place listing four DPSs as endangered and one DPS as threatened (81 FR 62260). We also determined that nine additional DPSs did not warrant listing. Prior to this revision, the humpback whale had been listed as an endangered species in 1970 under the precursor to the ESA (the Endangered Species Conservation Act of 1969), and then transferred to the list of endangered species under the ESA. Although the ESA was later amended to require the designation of critical habitat for listed species, when humpback whales were originally listed, there was no statutory requirement to designate critical habitat for this species. Section 4(a)(3)(A)(i) of the ESA now requires that, to the maximum extent prudent and determinable, critical habitat be designated at the time of listing (16 U.S.C. 1533(a)(3)(A)(i)). Pursuant to implementing regulations at 50 CFR 424.12(g), critical habitat is not designated within foreign countries or in areas outside the jurisdiction of the United States. Thus, the listing of DPSs of humpback whales under the ESA in 2016 triggered the requirement to designate critical habitat, to the maximum extent prudent and determinable, for those DPSs occurring in areas under U.S. jurisdiction—specifically, the Central America (CAM), Mexico (MX), and Western North Pacific (WNP) DPSs. The statute and our regulations presume that designation is prudent except in relatively rare circumstances where a finding that it is not prudent may be appropriate (see 50 CFR 424.12(a)(1)).

In the final rule to list five DPSs of humpback whales, we concluded that critical habitat was not yet determinable, which had the effect of extending by one year the statutory deadline for designating critical habitat (16 U.S.C. 1533(b)(6)(C)(ii)). On March 15, 2018, the Center for Biological Diversity, Turtle Island Restoration Network, and the Wishtoyo Foundation filed a complaint seeking court-ordered deadlines for the issuance of proposed and final rules to designate critical habitat for the CAM, MX, and WNP DPSs of humpback whales. *See Center for Biological Diversity et al.* v. *National Marine Fisheries Service, et al.,* No. 3:18–cv–01628–EDL (N.D. Cal.). The parties entered into a settlement agreement with the approval and oversight of the court, and subsequently amended the dates specified in the original order. The amended settlement agreement stipulated that NMFS submit a proposed determination concerning the designation of critical habitat for these three DPSs to the **Federal Register** by September 26, 2019. This deadline was met and a proposed rule was published on October 9, 2019 (84 FR 54354). The parties recently agreed to extend the date for submission of the final rule to the **Federal Register** to April 15, 2021.

In 2018, a critical habitat review team (CHRT), consisting of biologists from NMFS and NOS, was convened to assess and evaluate information in support of a critical habitat designation for the CAM, MX, and WNP DPSs of humpback whales. Based on the Draft Biological Report (NMFS 2019a), the Draft Economic Analysis (IEc 2019), and the initial Draft Section 4(b)(2) Report (NMFS 2019b), we published a proposed rule (84 FR 54354, October 9, 2019) to designate critical habitat for all three DPSs. All of the areas proposed for designation serve as feeding habitat for the relevant listed DPSs and contain the essential biological feature of humpback whale prey. Approximately 78,690 nmi^2 of marine habitat within the eastern Bering Sea, around the eastern Aleutian Islands, and in the western Gulf of Alaska were proposed for designation for the WNP DPS. Approximately 48,459 nmi^2 of marine habitat within portions of the California Current Ecosystem (CCE) off the coasts of Washington, Oregon, and California were proposed for designation for the CAM DPS. Approximately 175,812 nmi^2 of marine habitat within eastern Bering Sea, around the eastern Aleutian Islands, in the Gulf of Alaska, and within CCE were proposed for the MX DPS. Based on consideration of economic impacts under section 4(b)(2) of the ESA, we proposed to exclude approximately 44,119 nmi^2 of marine habitat from the designation for the WNP DPS, approximately 12,966 nmi^2 of marine habitat from the designation for the CAM DPS, and approximately 30,527 nmi^2 of marine habitat from the designation for the MX DPS. Based on

consideration of national security impacts under section 4(b)(2) of the ESA, we also proposed to exclude approximately 48 nmi² of marine habitat from the critical habitat designation for the MX DPS in Southeast Alaska and about 1,522 nmi² of marine habitat off the coast of Washington from the designations for the CAM and MX DPSs.

We requested public comment on the proposed designations and supporting reports (*i.e.,* Draft Biological Report (NMFS 2019a), Draft Economic Analysis (IEc 2019a), and Draft Section 4(b)(2) Report (NMFS 2019b)) through December 9, 2019, and held five public hearings (84 FR 55530, October 17, 2019). In response to requests, we extended the public comment period through January 31, 2020 (84 FR 65346, November 27, 2019) and held a sixth public hearing (84 FR 65346, November 27, 2019). For a complete description of our proposed action, we refer the reader to the proposed rule (84 FR 54354, October 9, 2019).

This final rule describes the critical habitats for the CAM, MX, and WNP DPSs of humpback whales and the basis for the designations, including a summary of, and responses to, the significant public comments received. The following supporting documents provide detailed discussions of information and analyses that contributed to the conclusions presented in this final rule: Final Biological Report (NMFS 2020a), Final Economic Analysis (FEA; IEc 2020), and Final Section 4(b)(2) Report (NMFS 2020b). The Final Biological Report is a compilation of the best available scientific information as gathered and reviewed by the CHRT, and the FEA is the analysis of probable economic impacts associated with the critical habitat areas as conducted by economists contracted by NMFS (*i.e.,* Industrial Economics, Inc.). These reports, drafts of which were subjected to public and peer review, inform the final designation decision we, NMFS, set out here. The Final Section 4(b)(2) Report, prepared by NMFS, describes our analysis of the eligibility of areas for designation (under section 4(a)(3)(B)(i) of the ESA) as well the analysis of particular areas for exclusion from the designations (under section 4(b)(2) of the ESA). These supporting documents are referenced throughout this final rule.

Critical Habitat Definition and Process

Section 3(5)(A) 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 (16 U.S.C. 1532(5)(A)). Certain areas owned or controlled by the Department of Defense are ineligible for designation (16 U.S.C. 1533(a)(3)(B)(i). Section 3(5)(C) of the ESA provides that, except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species. Under our implementing regulations, we may consider designating unoccupied areas that are essential for the conservation of the species only where a designation limited to occupied areas would be inadequate to ensure the conservation of the species (50 CFR 424.12(b)(2)).

''Conservation'' is defined in section 3(3) of the ESA as 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 the ESA are no longer necessary (16 U.S.C. 1532(3)). Therefore, a critical habitat designation is not limited to the areas necessary for the survival of the species, but rather includes areas necessary for supporting the species' recovery. (*See Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F.3d 1059, 1070 (9th Cir. 2004) (''Clearly, then, the purpose of establishing 'critical habitat' is for the government to carve out territory that is not only necessary for the species' survival but also essential for the species' recovery.''), *amended on other grounds,* 387 F.3d 968 (9th Cir. 2004); *Alaska Oil and Gas Ass'n* v. *Jewell,* 815 F.3d 544, 555–56 (9th Cir. 2016).)

The United States Supreme Court has recently held that ''critical habitat'' must logically be a subset of the species' ''habitat'' that is ''critical.'' *Weyerhaeuser Co.* v. *U.S. Fish and Wildlife Service,* 139 S. Ct. 361, 368 (U.S. 2018). That issue arose in the context of a critical habitat designation by the U.S. Fish and Wildlife Service (USFWS) that included an area that was not currently occupied by the species. For areas within the occupied range of the species, such questions do not arise, because by definition if an area is occupied by the species at the time of listing, then it can be occupied as habitat by that species. The criteria in the ESA's definition of occupied critical habitat serve to validate that any area meeting that statutory definition is in fact habitat.

In determining whether the essential physical or biological features ''may require'' special management considerations or protection, it is necessary only to find that there is a possibility that the features may require special management considerations or protection in the future; it is not necessary to find that such management is presently or immediately required. *Home Builders Ass'n of N. California* v. *U.S. Fish and Wildlife Serv.,* 268 F. Supp. 2d 1197, 1218 (E.D. Cal. 2003). The relevant management need may be ''in the future based on possibility.'' *Bear Valley Mut. Water Co.* v. *Salazar,* No. SACV 11–01263–JVS, 2012 WL 5353353, at *25 (C.D. Cal. Oct. 17, 2012). *See also Cape Hatteras Access Pres. Alliance* v. *U.S. Dept. of Interior,* 731 F. Supp. 2d 15, 24 (D.D.C. 2010) (''The Court explained in CHAPA I that 'the word ''may'' indicates that the requirement for special considerations or protections need not be immediate' but must require special consideration or protection 'in the future.' '') (citing *Cape Hatteras Access Pres. Alliance* v. *U.S. Dept. of Interior,* 344 F. Supp. 2d 108, 123–24 (D.D.C. 2004)).

Section 4(b)(2) of the ESA requires the Secretary to designate critical habitat for threatened and endangered species on the basis of the best scientific data available and after taking into consideration various impacts of the designation (16 U.S.C. 1533(b)(2)). The first sentence of section 4(b)(2) requires the Secretary to take into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat (16 U.S.C. 1533(b)(2)). Regulations at 50 CFR 424.19(b) specify that, in carrying out this mandatory consideration, the Secretary will consider the ''probable'' impacts of the designation at a scale that the Secretary determines to be appropriate, and that such impacts may be qualitatively or quantitatively described. The Secretary will compare impacts with and without the designation (50 CFR 424.19(b)). This requires that we assess the incremental impacts attributable to the critical habitat designation relative to a baseline that reflects regulatory impacts that already exist in the absence of the critical habitat due to the protections afforded to the listed humpback whales under the ESA and from other statutes.

The second sentence of section 4(b)(2) describes a further process by which the Secretary may go beyond the mandatory consideration of impacts and weigh the benefits of excluding any particular area

(*i.e.,* avoiding the economic, national security, or other relevant impacts) against the benefits of designating it (primarily, the conservation value of the area). If the Secretary concludes that the benefits of excluding particular areas outweigh the benefits of designation, he may exclude the particular area(s), so long as he concludes on the basis of the best scientific and commercial data available that the exclusion will not result in extinction of the species (16 U.S.C. 1533(b)(2); 50 CFR 424.19(c)). NMFS and the USFWS have adopted a joint policy setting out non-binding guidance explaining generally how we exercise our discretion under section 4(b)(2) (see Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (''4(b)(2) Policy,'' 81 FR 7226, February 11, 2016)).

Critical habitat designations must be based on the best scientific data available, rather than the best scientific data *possible. Bldg. Indus. Ass'n. of Superior Cal.* v. *Norton,* 247 F.3d 1241, 1246–47 (D.C. Cir. 2001). *See also Alaska Oil & Gas Ass'n* v. *Jewell,* 815 F.3d 544, 555 (9th Cir. 2016) (The ESA ''requires use of the best available technology, not perfection.'') Provided that the best available information is sufficient to enable us to make a determination as required under the ESA, we must rely on it even though there is some degree of imperfection or uncertainty. *See Alaska* v. *Lubchenco,* 825 F. Supp. 2d 209, 223 (D.D.C. 2011) (''[E]ven if plaintiffs can poke some holes in the agency's models, that does not necessarily preclude a conclusion that these models are the best available science. Some degree of predictive error is inherent in the nature of mathematical modeling.''); *Oceana, Inc.* v. *Ross,* 321 F. Supp. 3d 128, 142 (D.D.C. 2018) (''[E]ven where data may be inconclusive, an agency must rely on the best available scientific information.''). There is no obligation to conduct independent studies and tests to acquire the best possible data. *Ross,* 321 F. Supp. 2d at 142 (citations omitted). *See also San Luis & Delta-Mendota Water Auth.* v. *Locke,* 776 F.3d 971, 995 (9th Cir. 2014) (holding that the best available science standard ''does not require an agency to conduct new tests or make decisions on data that does not yet exist.''); *Am. Wildlands* v. *Kempthorne,* 530 F.3d 991, 999 (D.C. Cir. 2008); *Southwest Ctr. for Biological Diversity* v. *Babbitt,* 215 F.3d 58, 60 (D.C. Cir. 2000) (''The 'best available data' requirement makes it clear that the Secretary has no obligation to conduct independent studies.'')

Once critical habitat is designated, section 7(a)(2) of the ESA requires Federal agencies to ensure that actions they authorize, fund, or carry out are not likely to destroy or adversely modify that habitat (16 U.S.C. 1536(a)(2)). This requirement is additional to the section 7(a)(2) requirement that Federal agencies ensure their actions are not likely to jeopardize the continued existence of ESA-listed species (sometimes referred to as the ''jeopardy'' standard). Specifying the geographic location of critical habitat also facilitates implementation of section 7(a)(1) of the ESA by identifying areas where Federal agencies can focus their conservation programs and use their authorities to further the purposes of the ESA (16 U.S.C. 1536(a)(1)). Critical habitat requirements do not apply to citizens engaged in actions on private land that do not involve a Federal agency.

Summary of Changes From the Proposed Designations

We evaluated the comments and information received from the public during the public comment period and at public hearings. Based on our consideration of these comments and information and our reconsideration of issues discussed in the proposed rule, we have made several changes from the proposed designations. Below we briefly summarize these changes, which are discussed in further detail in the relevant responses to comment and other sections of this final rule.

(1) *Revised the essential feature.* In response to public comments requesting that we add specificity to the regulatory definition of the essential feature, we have revised the description of the prey essential feature, which as proposed read: ''Prey species, primarily euphausiids and small pelagic schooling fishes of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.'' Multiple commenters expressed concerns that the proposed prey feature was too broad or vague, and requested that additional specificity be added to the description, including identifying particular prey species for each DPS as well as the relevant age-classes of those prey species. After thorough review of the best available scientific information, we have determined that it would be most consistent with the purposes of the ESA to add specific examples to the descriptions of the prey feature for each DPS. This will enable the public to have notice of primary prey species that are relied upon by each DPS. We have therefore revised the prey feature by including explicit references to certain prey species that have been recognized and documented as key prey species within the diet of humpback whales and that occur within the specific critical habitat areas of the listed DPSs. Because these species occur commonly and consistently in the whales' diets, we conclude that they are essential to the conservation of the particular DPS. The revised prey essential features that we adopt in this final rule are as follows:

CAM DPS: Prey species, primarily euphausiids (*Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*) and small pelagic schooling fishes, such as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), and Pacific herring (*Clupea pallasii*), of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

WNP DPS: Prey species, primarily euphausiids (*Thysanoessa and Euphausia*) and small pelagic schooling fishes, such as Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), juvenile walleye pollock (*Gadus chalcogrammus)* and Pacific sand lance (*Ammodytes personatus*) of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

MX DPS: Prey species, primarily euphausiids (*Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*) and small pelagic schooling fishes, such as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), juvenile walleye pollock (*Gadus chalcogrammus*), and Pacific sand lance (*Ammodytes personatus*) of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

(2) *Excluded Unit 1, Bristol Bay Area, from the final designations for the WNP DPS.* In response to public comments regarding the data that were considered in our initial assessment of the relative conservation value of specific areas and how we considered those data (*e.g.,* that we had considered data that was not specific to the particular DPS), we reconvened a CHRT, refined the set of data considered and applied in the analysis for each DPS, and conducted a fresh assessment of the conservation value of each specific critical habitat area and for all three DPSs. In response to public comments, the CHRT placed greater emphasis during this reassessment on data regarding the distribution of whales from the particular listed DPSs (versus humpback whales generally). As a consequence of this additional review of the best

scientific data available, the CHRT concluded that there is insufficient information to evaluate the relative conservation value of Unit 1 specifically for the whales in the WNP DPS. The CHRT found that the available information for this specific area (which does not include any photo-identification or genetic data) is insufficient to permit reliable evaluation of the relative proportions of whales from the WNP or MX DPSs and the non-listed Hawaii population in Unit 1 or the predicted use of this area by WNP DPS whales. Therefore, the CHRT concluded that this area is ''data deficient'' with regard to its value for the WNP DPS whales. We agree with the conclusion that the available data do not permit a determination regarding the extent to which whales from the WNP DPS are relying on this particular area, their predicted use of this area, or the importance of this area to their conservation. Based on our consideration of the benefits of designating this area versus the estimated economic impacts associated with designating this area pursuant to section 4(b)(2) of the ESA, we conclude that the benefits of including this particular area are outweighed by the benefits of excluding this area from the designation for the WNP DPS. Therefore, Unit 1 is not included in the final critical habitat designation for this DPS.

(3) *Excluded Units 1, 4, 6, and 10 from the final designations for the MX DPS.* As discussed in the preceding paragraph, we received public comments expressing concerns regarding the data considered in our initial assessment of the relative conservation value of specific areas and how we considered that data. We also received extensive public comments and supporting information asserting that we had underestimated the economic impacts of the proposed designation and overestimated the conservation value of specific areas. Many of these comments were specific to Alaska, and in particular to Southeast Alaska (Unit 10). In response to public comments and new information received, we revised the economic analysis (see IEc 2020), and the relative conservation value of all specific areas were reassessed for each DPS by the CHRT (see NMFS 2020a).

As previously described, the CHRT's reassessment of the relative conservation value of the specific areas placed greater emphasis on the relative distribution of the listed whales (versus humpback whales generally) within each of the specific areas proposed for designation. As a result of this reassessment, and for the same reasons as described for the WNP DPS, the CHRT concluded that Unit 1 was ''data deficient;'' currently available data are not sufficient to reliably determine the relative proportions of humpback whales from different populations in Unit 1. In other words, the CHRT could not determine the extent to which MX DPS whales rely on this particular area, their predicted use of this area, or the importance of this area to the conservation of the MX DPS. Based on our consideration of the benefits of designating this area versus the estimated economic impacts associated with designating this area, we conclude that the benefits of designating this area for the MX DPS are outweighed by the benefits of excluding this particular area. Therefore, Unit 1 is not included in the final critical habitat designation for this DPS.

Based on the CHRT's reassessment of the relative conservation values of several specific areas occupied by the MX DPS, the qualitative conservation ratings (*i.e.,* ''very high,'' ''high,'' ''medium,'' and ''low'') were revised for several specific areas. As presented in detail in the Final Biological Report (NMFS 2020a), the conservation rating remained the same for eight habitat units, went down for seven habitat units, and increased for three habitat units. The conservation ratings for Units 4 (Central Peninsula Area), 6 (Cook Inlet Area), and 10 (Southeast Alaska) were revised from medium to low conservation value. As discussed in the Final Section 4(b)(2) Report (NMFS 2020b), based on a weighing of the benefits of designating these particular areas against the annualized estimated economic impacts resulting from designation for each particular area (which have been revised upwards by about $2,000 for Units 4 and 6 and by about $14,000 for Unit 10; see IEc 2020), we conclude that the benefits of including these particular areas in the designation are outweighed by the benefits of excluding the particular areas. Thus, Units 4, 6, and 10 are not included in the final critical habitat designation for the MX DPS of humpback whales.

(4) *Reduced the area excluded for the Quinault Range Site.* In response to public comments expressing opposition to the proposed exclusion of the Department of the Navy's (''Navy'') requested exclusion of the Quinault Range Site (QRS), a Naval training and testing area off the coast of Washington, and a 10-km buffer around the QRS, we reviewed and reconsidered the information supporting this proposed national security exclusion. Following thorough consideration of the public comments and additional information submitted by the Navy in support of their requested exclusion, we have reduced the extent of the 10-km buffer where the QRS overlaps with the Olympic Coast National Marine Sanctuary (OCNMS). As detailed in the Section 4(b)(2) Report (NMFS 2020b), the benefits of designating critical habitat for the MX and CAM DPSs within this portion of the buffer was not found to be outweighed by national security impacts of including that portion. This change represents a reduction in the size of the area being excluded from critical habitat—from a proposed exclusion of about 1,522 nmi^2 to 1,461 nmi^2 for the QRS and associated, reduced buffer.

(5) Added regulatory language to clarify that the critical habitat does not include manmade structures (e.g., ferry docks, seaplane facilities). In response to a request for clarification of the extent of the critical habitat, we have added language to the final regulation to clarify that the critical habitat designations do not include manmade structures that are within the areas being designated. Specifically, we have added the following regulatory text: ''Critical habitat does not include manmade structures (*e.g.,* ferry docks, sea plane facilities) and the land on which they rest within the critical habitat boundaries and that were in existence as of May 21, 2021.''

Summary of Public Comments and Responses

We requested public comments on the proposed rule to designate critical habitat for the Western North Pacific, Central America, and Mexico DPSs of humpback whales, and on the supporting documents (*i.e.,* the draft Biological Report (NMFS 2019a), draft Economic Analysis (IEc 2019a), and draft ESA Section 4(b)(2) Report (NMFS 2019b)), which were made available on the Federal eRulemaking Portal (*www.regulations.gov*) and the NOAA Fisheries website (*www.fisheries.noaa.gov*). Public comments were received over a 115-day period ending on January 31, 2020, via standard mail, email, the Federal eRulemaking Portal, and at six public hearings. Public comments are posted on the Federal eRulemaking Portal (docket number: NOAA–NMFS–2019–0066). All public comments and significant new information received through the comment and hearings period have been reviewed and fully considered in developing the final critical habitat designation.

We received over 180 public comment submissions through *www.regulations.gov* and over a dozen comment submissions during the public hearings. Comments were received from a range of sources that included individual members of the public, a federally recognized Indian Tribe and tribal organizations, state and local officials, foreign governments, state natural resources agencies, other Federal agencies (*e.g.,* the Marine Mammal Commission, NOAA's National Ocean Service National Marine Sanctuaries Program), commercial fishing and other professional trade associations, seafood companies, the North Pacific Fishery Management Council, scientific organizations, and environmental organizations. One comment letter included signatures of 17,675 people in support of the proposed designations, and another submission included a spreadsheet with similar written comments from 16,554 individuals, most of whom expressed concerns regarding entanglement and ship strikes and urged us to quickly designate all areas considered and add a sound-related essential feature. In general, comments expressed support for the designations, requested some changes to the proposed designations, or expressed opposition to the designation of one or more specific areas. A large majority of the comment submissions that expressed concern or opposition to the proposed designations pertained to proposed critical habitat areas in Alaska.

Summaries of the substantive public comments received and our responses are provided below by topic. Similar comments are combined where appropriate. We did not consider, and do not include below, comments that were not germane to the proposed critical habitat rule. Such unrelated comments addressed issues other than critical habitat designation, such as the 2016 revision of the listing of humpback whales under the ESA, delisting of humpback whale DPSs, funding for humpback whale monitoring, development of recovery plans for the listed humpback whale DPSs, and expansion of critical habitat for North Pacific right whales.

Economic Impacts of Critical Habitat Designation

Comment 1: Multiple commenters stated that the 2019 draft economic analysis (DEA) underestimated the impacts of the proposed critical habitat designation because it only quantifies the incremental administrative costs associated with interagency consultations on Federal actions pursuant to section 7(a)(2) of the ESA (16 U.S.C. 1536(a)(2)). Several of these commenters also suggested that the economic analysis only quantified costs to NMFS and other governmental agencies and does not include costs to local residents, stakeholders, and governments that undertake activities with a Federal nexus. These commenters requested an expanded economic analysis that would take into account impacts to small communities, industries, and state/local governments. One commenter suggested discussion of qualitative economic metrics including indirect costs, risks, and economic vulnerability.

Response: As described in Section 1.3.3 of the FEA, the economic analysis considers multiple potential categories of impacts that may result from the critical habitat designation. In addition to administrative costs of section 7 consultations, the analysis evaluates the potential for costs resulting from additional conservation efforts for the humpback whales that may be recommended through consultation, as well as the potential for indirect impacts (not related to section 7 outcomes), such as project delays or regulatory uncertainty. (Note: The term ''conservation efforts'' is used throughout the FEA and in this final rule as a generic term to refer to efforts that NMFS may identify through formal consultation to avoid destruction and adverse modification of critical habitat (*i.e.,* reasonable and prudent alternatives), measures that NMFS may suggest through formal or informal consultation to avoid adverse effects of an action (*i.e.,* conservation recommendations), and efforts that action agencies or other entities may otherwise undertake to avoid adverse effects of projects or activities on the humpback whale and/or its habitat.) As summarized in Section 2.2, the economic analysis finds that it is most likely that the costs resulting from critical habitat designation will be largely limited to the administrative costs of consultation, with the potential for some additional costs to result from in-water construction and dam-related project delays that may occur following designation. However, the best available data provide no basis to identify whether and for how long project delays may occur. Therefore, the potential for time delays and associated costs are described qualitatively in the report.

The costs of the designation are largely administrative because we do not presently anticipate recommending incremental changes to agency actions as a result of the designation of critical habitat for the majority of forecasted activities. For most of the activities for which we can project the likelihood of a consultation, consultation would have already been required in order to ensure the action would not jeopardize the continued existence of the listed whales, due to the presence of the whales, and the newly arising obligation to also consider potential destruction or adverse modification of critical habitat is not expected generally to change the outcomes of such consultations. For certain activities (*e.g.,* the Coastal Pelagic Species (CPS) commercial fishery), previous consultations on the activity have not analyzed the impacts of removal of prey species on humpback whales due to lack of quantitative tools necessary to assess the biomass requirements to support humpback whales and other predators under varying ecosystem conditions and specify the indirect impacts of removal of biomass of a particular prey species. Future consultations on the CPS fisheries are likely to consider potential effects of prey removal on humpback whales and their habitat to the extent possible on the basis of the best information available at such time. The analysis of whether a project or activity is likely to result in adverse modification of critical habitat, and the specific recommendations we may make through section 7 consultation to avoid destruction or adverse modification, are project specific. We cannot speculate about the outcome of future consultations, but rather must base both our designation and the future consultations on the best available data at the time our agency decisions are undertaken. At present, we are not able to identify a circumstance under which it is likely that the conservation efforts recommended for the humpback whales would be greater or different due to the designation of critical habitat.

The revised economic analysis highlights key areas of uncertainty associated with this conclusion and presents that information alongside the quantified impacts. In particular, public comments from the State of Alaska and other entities identified the potential for project delays related to in-water construction and dam relicensing to result from the critical habitat designation. Public comments did not identify any particular instances of critical habitat designations across the region specifically resulting in a project delay, and we were not able to find such examples through additional outreach to state agencies (*e.g.,* Alaska Department of Environmental Conservation, Alaska Department of Transportation and Public Facilities). We agree with the

commenters that, if likely to occur, the costs of time delays specifically tied to the designation would be considered costs of the rule. However, the best available data provide no basis to identify whether and for how long project delays may occur. Therefore, we conclude that such impacts are not probable impacts of the designation (see 50 CFR 424.19(b)). Nevertheless, to the extent possible, the potential for time delays and associated costs are described qualitatively in the report. We considered both the quantitative results and qualitative discussion of potential unquantified impacts and the associated uncertainty when weighing the benefits of excluding particular areas from the critical habitat designation against the benefits of including those areas.

The administrative costs quantified in the economic analysis are not limited to the costs of consultation that would be borne by NMFS and other governmental agencies. As shown in Exhibit 1–3 of the FEA, the analysis estimates administrative costs for each forecasted consultation to NMFS, a hypothetical Federal action agency, and a hypothetical third party. A third party having an interest in a section 7 consultation could be a private company (*e.g.,* an applicant for a Federal permit), a local or state government, or some other entity. The FEA clarifies that third-party administrative costs are quantified, and expands on the potential for other impacts to non-Federal entities as a result of critical habitat designation. Based on information provided during the public comment period, the FEA includes more detailed discussion of concerns related to the potential, unquantified economic impacts of the designation in Alaska. Although the FEA finds that the quantified costs of designation are limited to the administrative costs of section 7 analysis incurred by NMFS, Federal action agencies, and third parties, the FEA highlights in Section 2.2 the State of Alaska's concerns related to potential unquantified costs, and discusses the potential for indirect or unquantified direct impacts related to certain activities throughout Chapter 2.

Comment 2: Multiple commenters expressed concern that the critical habitat designation will place a disproportionate burden on rural Alaskan communities. One commenter noted that rural Alaskan communities already face economic threats including recent ferry reductions, cuts to municipal revenues, and reductions in Chinook salmon harvests. Several commenters noted that commercial fishing is the most important industry in many Alaskan communities and any impacts to fishing would have broad effects on the economy. One local government noted that it is dependent on fish tax revenue. Another commenter noted that harbor construction and hydropower projects are already difficult for small communities to afford. Multiple commenters requested that we expand on baseline socioeconomic conditions in rural Alaskan communities and further assess potential adverse impacts to coastal economies. Multiple commenters requested that we exclude Southeast Alaska (Unit 10) due to the economic reliance of small coastal communities on the commercial fishing industry.

Response: Given the importance of marine resource-based industries to rural Alaskan communities and that alternative economic opportunities are more limited in these areas, we agree that these communities would be more vulnerable to any additional costs of consultation or required conservation efforts resulting from the designation of humpback whale critical habitat. In response to this comment, the FEA includes additional discussion in Sections 2.3.1 and 2.6.1 highlighting the value of fisheries and in-water construction and port infrastructure to these communities. The FEA highlights that added costs to these activities may affect these communities more than other, more populated and economically diverse communities. However, as described in Sections 2.3.1 and 2.6.1., the analysis finds that the only direct incremental costs of the critical habitat designations relative to these activities will be administrative costs associated with participation in section 7 consultation. This is primarily because Federal agency actions in or near the proposed critical habitat areas, including federally managed fisheries, predominantly involve activities for which consultations under section 7 of the ESA already consider effects to listed humpback whales via effects on the whales' prey. Additionally, Alaska fisheries that target the primary prey species for humpback whales that are not federally managed are not subject to section 7 consultation (*e.g.,* the state-managed herring fishery). Thus, the critical habitat designation is not expected to change the viability or management of development projects of small Alaskan communities or commercial fishing activities. The analysis does, however, identify the potential for some costs to be incurred as a result of delays in in-water construction activities and dam relicensing, though the potential for these costs is uncertain. To the extent that these costs are incurred, they would be an incremental impact of the rule. As noted in response to Comment 1, this impact is highlighted as a key uncertainty of the analysis.

As discussed in more detail later, in response to Comment 43, and in the Final Section 4(b)(2) Report, Southeast Alaska (Unit 10) is excluded from the final critical habitat designation for the MX DPS. This particular area is forecasted to have disproportionately high estimated administrative costs relative to other areas and was rated as having a low conservation value for the MX DPS whales. Thus, we concluded that the benefits of excluding this area outweigh the benefits of including this particular area in the designation of critical habitat for the MX DPS.

Comment 3: Multiple commenters stated that the DEA underestimated the costs of the proposed critical habitat designation on Alaskan fisheries. Commenters requested that the economic analysis assess the costs associated with potential changes to fisheries management actions, including gear restrictions and time and area closures and restrictions, for both commercial and recreational fisheries. Commenters requested an analysis of direct costs of such management actions (*e.g.,* loss of revenues) as well as broader impacts on coastal communities dependent on the seafood industry. Several commenters acknowledged that we do not presently anticipate any additional conservation efforts as a result of critical habitat designation, but noted that if this assumption proves false or changes in the future then there could be significant economic impacts in Alaska.

Response: The economic analysis recognizes the importance of fisheries to Alaskan communities and economies. In response to these comments, Section 2.3.1 of the FEA includes an expanded description of the importance of the fishing industry to Alaska, and to small, rural communities in particular, including information on the value of fisheries in each of the proposed critical habitat units. It further discusses the state's concerns related to the potential for fishery management actions to be required through future consultations, such as fishery closures or limiting the harvest of humpback whale prey species. The FEA quantifies costs of consultations on fishery management plans in Alaska, including a total of four anticipated consultations on the Fishery Management Plans for the Bering Sea/Aleutian Island and Gulf of Alaska groundfish fisheries and the Pacific halibut fishery over the next ten years.

However, as described in Section 2.3.1 of the FEA, we do not presently anticipate the critical habitat designations for humpback whales will require changes to management of these fisheries because humpback whale prey species are either not targeted by those fisheries or are not taken in significant amounts overall.

In developing the final economic analysis and in order to respond to the comments received, we sought relevant information from the State of Alaska to understand how the state-managed herring fishery, which does target humpback whale prey, may be affected by the designations. Absent a Federal nexus requiring consultation, any conservation efforts undertaken to change practices in the state-managed fishery in response to the rule would be the state's decision, and communications with the state did not indicate that the state expects to take any such actions absent a regulatory requirement from NMFS to do so. Because we are not proposing any such regulations, the FEA's quantified costs are limited to those administrative costs incurred as a result of section 7 consultation on Federal actions including Federal fishery management plans. We conclude that it would be erroneous to quantify costs associated with hypothetical management actions that are not anticipated outcomes of this critical habitat rule.

Comment 4: Several commenters based in Alaska noted that prior to the designation of critical habitat for Steller sea lions (*Eumetopias jubatus*), NMFS did not predict that changes to fisheries management would be required. However, subsequent to the designation, NMFS has closed multiple fisheries to protect Steller sea lions. Commenters are concerned that we may not anticipate management actions in the short-term, but closures could occur in the future as happened with Steller sea lions.

Response: In response to public comments received and communications with the State of Alaska, Section 2.3.1.3 of the FEA includes a discussion of fisheries closures for Steller sea lions and their critical habitat, and the potential relevance to the designation of critical habitat for humpback whales. As noted in the discussion, we do not currently anticipate any restrictions of Federal fisheries for humpback whale prey species to result from the critical habitat. In addition, the State of Alaska, which manages a fishery for a primary prey species for humpback whales in Alaska (Pacific herring), has not indicated any intent to limit the geographic extent or level of harvest in that fishery as a result of critical habitat designation absent a regulatory requirement from NMFS to do so.

Comment 5: Multiple commenters from Alaska expressed concern that the critical habitat designation could result in changes to the management of humpback prey species, including herring. One local government added that herring fisheries are important to the local economy as well as subsistence harvesters and that the impacts of any changes to herring fishery management were not adequately considered.

Response: In response to this comment, the FEA includes a more detailed discussion of the economic importance of the herring fishery to the state and in particular, to Southeast Alaska. However, there is no Federal nexus with the Alaska commercial and subsistence Pacific herring fisheries, which are managed by the State of Alaska, and therefore there is no requirement for the state to engage in section 7 consultation with NMFS regarding humpback whale critical habitat. Any restriction of these herring fisheries in Alaska would be at the state's discretion. This is discussed in Section 2.3.1.3 and Section 3.2.4 of the FEA. Subsistence harvest for humpback whale prey species (*e.g.,* herring and capelin) occurs within some Federal waters off Alaska and is regulated through the Federal Subsistence Management Program. According to information from the Office of Subsistence Management at the USFWS and the Alaska Region of the U.S. Forest Service, overall participation is low and harvest levels of humpback whale prey species are low across all areas covered in this program, especially relative to harvest in the state managed fisheries. Given the nature of these activities and the limited harvest, we do not anticipate any additional management measures would likely be required for these activities as a result of the critical habitat designations.

Comment 6: Several commenters requested that the economic analysis present data on the economic importance of the seafood industry to Alaskan communities. Two commenters referenced economic information on Alaska's seafood industry available from the Alaska Seafood Marketing Institute.

Response: Section 2.3.1 of the FEA incorporates information provided by the commenters on the economic importance of the seafood industry to describe employment in the industry and tax contributions to the state and local governments made by related businesses. However, because we do not anticipate any changes to fisheries management due to the critical habitat designations (see responses to previous comments), the FEA does not anticipate impacts to the seafood industry.

Comment 7: Multiple commenters requested that we clarify which Alaskan fisheries will be affected by the proposed critical habitat designation, including state-managed fisheries and federally managed fisheries.

Response: The FEA provides a discussion of the relevant Federal fisheries in Alaska that are subject to the requirements of section 7 of the ESA and thus could be affected by this rule. NMFS' authority to prescribe alternatives to an agency action or to recommend conservation efforts to avoid destruction or adverse modification of critical habitat as a result of a designation is through section 7 consultation, which applies only to fisheries with a Federal nexus. Because prey are identified as the essential biological feature for humpback whales, the fisheries of greatest relevance to this analysis are those Federal fisheries that harvest prey species used by humpback whales such as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), capelin (*Mallotus villosus*), and juvenile pollock (*Gadus chalcogrammus*). Thus, theoretically, fishing activities that adversely affect these species would have the greatest potential to result in destruction or adverse modification of critical habitat. However, because prey species are also important to ensuring Federal agencies avoid jeopardizing the listed whales and to protecting these whales under the Marine Mammal Protection Act (MMPA), NMFS already considers how fisheries for the prey species may affect whales and provides recommendations via section 7 consultation, even without any critical habitat designation. We do not expect particular changes in the management of these fisheries to result specifically from the critical habitat designation.

Geographic overlap with the critical habitat designation alone is not indicative of the potential for the critical habitat designation to affect a fishery. Absent a Federal nexus, incremental impacts of this critical habitat rule may also occur if a state elects to change the management of its own fisheries as a result of the critical habitat designation. As discussed in the FEA, the State of Alaska, which manages the fishery for one of the whales' primary prey species in Alaska (herring), has not indicated an intent to limit the geographic extent or level of harvest in that fishery as a result of critical habitat designation absent a regulatory requirement from NMFS to do so.

Comment 8: Numerous commenters stressed the need for the economic analysis to consider the value of and potential impacts to fisheries and associated communities in California, Oregon, and Washington. Several commenters noted that closing areas in California to fishing would have a substantial impact on communities and families. Another commenter added that any restrictions on fishing could harm the livelihoods of thousands of fishermen and coastal communities all along the U.S. West Coast. This commenter noted that the Dungeness crab fishery is particularly economically valuable and requested that we exclude all Dungeness crab fishing areas from the designation to avoid catastrophic economic impacts. Another commenter noted that the critical habitat overlaps with many fisheries in Washington State, including Dungeness crab, albacore tuna, whiting/pollock, pink shrimp, groundfish, hagfish, and other fin and shellfish. The commenter stated that the combined ex-vessel value of these fisheries was over $75 million in 2019, and that many Washington coastal communities are dependent on these fisheries. Another commenter noted that commercial fisheries in Oregon landed over $150 million in ex-vessel value in 2019. This commenter added that any restrictions on Oregon fisheries as a result of the critical habitat designations could have a significant economic impact on Oregon. Another commenter stated that if NMFS anticipates any commercial fisheries closures as a result of critical habitat, the costs of those closures must be analyzed.

Response: The FEA recognizes the economic value of fisheries to communities in Washington, Oregon, and California (see Section 2.3.2 of the FEA). We note that most of the commercially-harvested species referenced in the comments are managed by the states (*e.g.,* Dungeness crab) and/or are not humpback whale prey species (*e.g.,* crab, tuna, shrimp, hagfish). Therefore, we do not anticipate that any additional conservation efforts, including closing areas to fishing, will be required as a result of the designations of critical habitat. However, as discussed in Section 2.3 of the FEA, the CPS fishery is a federally managed fishery that does directly target primary prey species for humpback whales. Thus, this particular fishery may affect the identified essential feature of the designated critical habitats. The FEA discusses and we acknowledge that while additional conservation efforts, such as stock assessments or changes in restrictions to the annual catch limits in the CPS fishery are theoretically possible, it is unlikely that the need to consider adverse modification would trigger different conservation efforts than would already result from such consultations due to the need to consider the potential for this fishery to take or jeopardize the species even without a critical habitat designation.

The Dungeness crab fishery occurs within important humpback whale feeding areas for the MX DPS and within the only documented feeding habitat for the CAM DPS of humpback whales. Because there are no anticipated economic impacts on the Dungeness crab fishery stemming from the critical habitat designations, there is no basis to exclude this area from the designations.

Comment 9: One commenter expressed concern about the potential impacts of critical habitat designation on the CPS fishery. In particular, the commenter was concerned that the prey element of critical habitat could lead to lawsuits aimed at imposing additional management restrictions on the CPS fishery. Additionally, the commenter stated that the economic analysis failed to consider potential negative impacts to local fishing communities and families, and did not capture the full economic contribution of the CPS fishery, including the role of the CPS fishery as live bait for recreational fisheries along the entire U.S. West Coast.

Response: Any new conservation efforts in the CPS fishery resulting from the critical habitat designation would have the potential to impact the fishing industry and fishing-dependent communities. However, as described in Section 2.3.2.1 of the FEA, we do not anticipate that any additional conservation efforts, including closing areas to fishing, will be required solely as a result of the designation of critical habitat, and any further conservation measures that could potentially be required in the future for this fishery are not expected to differ from those that would already be required to avoid jeopardizing the listed whales. Previous consultations on the fishery have considered but not included a quantitative analysis of the impacts of removal of prey species on humpback whales due to lack of data and the necessary analytical tools. Future consultations on the CPS fisheries are likely to consider potential effects on humpback whales and their habitat to the extent possible on the basis of the best information available at such time. However, as previously stated, critical habitat is not expected to affect conservation efforts recommended as part of these consultations, because of the importance of prey availability when considering potential for jeopardy to the whales.

Comment 10: Several commenters expressed concern that critical habitat designation could result in added costs for in-water construction projects through delays, additional staff time, the hiring of consultants and attorneys, and compliance with conditions set forth in the Federal permitting process. Commenters noted that construction projects are already subject to significant delays and permitting costs due to the MMPA, critical habitat for other species (including Steller sea lions), and other Federal and state laws. One commenter noted that regulatory costs for waterfront projects can already run into the hundreds of thousands of dollars without critical habitat in place. As a result, the commenter expressed skepticism that the comparatively minor administrative costs included in the economic analysis reflect a full accounting of the potential costs of critical habitat designation on in-water projects.

Response: Section 2.6.1 of the FEA acknowledges the concern that additional regulatory burden introduced through the critical habitat designations may generate project delays, and identifies this as an uncertain and potential unquantified cost of the rule. The FEA does quantify some additional time required to consider adverse modification as part of the section 7 consultation process. This additional time, as reflected in the incremental administrative costs, is most likely minor as it is unlikely that the proposed critical habitat designation will result in changes in the outcome of future section 7 consultations on in-water construction activities. As indicated in the discussions in section 2.6 of the FEA, existing baseline protections for the whales, other marine mammals, and water quality, are likely to confer a high level of protection for humpback whale prey species and humpback whale feeding activity. However, the costs related to permitting and delays for in-water construction described in this comment are attributable to preexisting protections such as the MMPA or existing critical habitat designations for other species and are therefore part of the baseline of the economic analysis. That is, they are costs associated with species protection that would be incurred regardless of whether humpback whale critical habitat is designated and are therefore not included as incremental costs of this rule. The fact that requirements for in-water construction relative to the MMPA are already in place, and that

these costs are already incurred, supports the FEA finding that substantial baseline protections exist for the humpback whales.

Comment 11: The Alaska Department of Transportation and Public Facilities (DOT&PF) noted that as early as May 2020 they could have four projects start in-water construction, and that they have six planned projects that could enter section 7 consultation this year. Alaska DOT&PF expressed concern that critical habitat designation could require consultations on these projects to be reinitiated and that in-water work could be shut down during the reinitiation process. Alaska DOT&PF noted that stopping or delaying projects would result in significant economic impacts.

Response: Section 2.6.1 of the FEA discusses the potential costs that could be incurred should the critical habitat designation result in project delays. Regulations at 50 CFR 402.16(a) require Federal agencies that have retained discretionary involvement or control over an action, or where such discretionary involvement or control is authorized by law, to reinitiate consultation on previously reviewed actions in instances where: (1) New information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16(a)(2)–(4)). Consequently, some Federal agencies may request (or we may recommend) reinitiation of consultation on actions for which consultation has been completed, if those actions may affect designated critical habitat for the humpback whales. However, we do not anticipate that any such projects would experience significant delays due to reinitiation of consultation to take into account impacts on critical habitat, because adverse effects to prey species for humpback whales are generally already considered as part of the analysis of the proposed action's impacts to the species as part of the jeopardy analysis. Even if consultation is reinitiated for such projects, this would not necessarily require in-water work to be shut down during consultation, which would need to be assessed in the context of each situation and taking into account the requirements of section 7(d).

Comment 12: Numerous comments stated that the DEA did not adequately evaluate the potential for economic impacts to hatchery operations in Alaska. One commenter expressed concern that critical habitat designation could adversely impact operations at existing hatcheries and delay or prevent the permitting of new facilities. Another commenter added that the guided recreational fishing industry in Alaska relies on salmon hatcheries to subsidize wild stocks, thus any impacts to hatcheries would also impact the charter fishing industry.

Response: Section 2.8 of the FEA has been expanded to include a more specific discussion of salmon hatcheries as an industry with the potential to be affected by the critical habitat designation, and notes the concerns expressed in the comments regarding potential economic impacts. However, as noted in the report, the analysis finds that the anticipated costs associated with this industry are minimal. The Alaska Region of NMFS has received only infrequent consultation requests related to salmon hatchery operations; in certain limited cases, informal section 7 consultations have been requested (Letters of Concurrence), resulting in some administrative costs, which are captured in the analysis. Follow-up conversations with the Alaska Department of Fish and Game (ADF&G) confirmed that no specific type or extent of costs are missing from the analysis as it relates to this activity.

Comment 13: Multiple commenters stated that the DEA did not consider the potential impact of critical habitat designation on mariculture activities, including the shellfish and seaweed industries, in Alaska, particularly Southeast Alaska. Commenters stated that both of these industries are expected to grow substantially in the near future. One commenter specified that the seaweed industry in Alaska is still in its infancy and that any additional impacts due to critical habitat could be particularly damaging. The commenter noted that the existing state and Federal permitting process already takes upwards of two years.

Response: In response to this comment and based on information provided by ADF&G in response to outreach from the contracted economic firm (Industrial Economics, Inc.), the FEA estimates 12 consultations per year will occur for these federally permitted activities, which increases the anticipated economic impacts on this activity from what was presented in the DEA. Section 2.8 of the FEA includes an expanded discussion of the multiple types of aquaculture activities in Alaska that are carried out within the proposed critical habitat, the role of the state in managing these activities, and the status of the industry and predicted future trajectory. It discusses state-level initiatives promoting and seeking to expand the growth of aquaculture in the state, resulting in an anticipated increase in activity levels in the future, but explains that the state is not able at this time to anticipate the future levels of activity. The DEA relied upon the history of consultations for these activities in Alaska to estimate the number and location of future activities to develop an estimate of the administrative costs that would likely result from the designation. Prior to 2014, an Aquaculture General Permit issued by the U.S. Army Corps of Engineers (Corps) covered most aquatic farm permits, limiting the need for individual consultations. This General Permit expired in 2014. As described in Section 2.8, the expiration of the General Permit and the recognition by the Corps of a broader array of potential impacts on listed species from these activities is expected to increase the number of consultations in the future. These developments have resulted in an increased anticipated number of consultations, which is now reflected in the FEA.

Comment 14: One commenter stated that the impacts assessment only considers present conditions and expressed concern regarding implications for future activities.

Response: The FEA acknowledges that the level and locations of many activities change over time. This fact is particularly relevant in the case of emerging activities such as renewable energy development. To the extent possible, given available supporting data, the analysis relies upon planning documents and information from Federal action and state agencies to project the best possible forecast of the future rate, location, and types of activities that are likely to be subject to section 7 consultation over the next ten years. For example, in the case of aquaculture and hatcheries, the State of Alaska informed us that they expect the level of activity to increase over the next ten years from current levels. In response to this information, the FEA now reflects a higher rate of activity (12 consultations per year) in Alaska than the level estimated in the DEA.

Comment 15: The Alaska Department of Environmental Conservation (ADEC) stated that the economic analysis did not include certain costs to state agencies. They stated that the economic analysis did not acknowledge that pursuant to the Clean Water Act (CWA),

the State of Alaska has had primacy over the Alaska Pollutant Discharge Elimination System (APDES) since 2012. ADEC requested that the economic analysis include costs to the Alaska state government for consideration of critical habitat during consultation on individual and general permits under the CWA and provided information on the number and nature of these consultations. They also specified that the cost estimates in the report for consultations with the Corps on CWA section 404 permits should include the cost to ADEC for issuing a Section 401 Certificate of Reasonable Assurance (''401 Certification'') confirming that state water quality standards are being met. ADEC stated that economic impacts are underestimated without including these state permitting actions.

Response: In response to this comment and based on information provided by ADEC with their comment and in response to outreach, Section 2.12 of the FEA clarifies Alaska's role in National Pollutant Discharge Elimination System (NPDES) permitting and development of water quality standards, including administration of General Permits for seafood discharges and cruise ship discharges, through the APDES program. It further describes that the state presently devotes substantial effort and resources to ensuring that its water quality management activities are protective of listed species and their habitat, even absent designated critical habitat for humpback whales. However, the state agency is not required to consult with NMFS on individual discharge permits under section 7 and, according to information provided by ADEC, the state agency incurs minimal costs during permit development associated with demonstrating a discharge will not adversely affect an endangered species. As such, designation of critical habitat is unlikely to result in any incremental costs to the state outside of the administrative costs that would already be associated with regular re-issuance of the two general permits, which are reflected in the FEA.

Comment 16: One local government in Southeast Alaska expressed concern that critical habitat designation could add delays and costs to the Federal Energy Regulatory Commission's (FERC) licensing and oversight process for power plants. The commenter also stated that any changes to the NPDES discharge permit for a local wastewater treatment plant due to the critical habitat designation would negatively affect citizen rate payers who fund the operation of the plant.

Response: The additional time, cost, and effort associated with consultations subsequent to critical habitat designation is included in the administrative costs captured in the analysis. Specifically, the analysis assumes these costs would be incurred for consultations on three dam-related activities in Unit 10 (Southeast Alaska) over the next 10 years. Delays in FERC dam relicensing resulting from the critical habitat designation, to the extent any are likely to occur, that are not already captured by those costs would be an incremental impact of the rule. Consultations between NMFS and FERC during the past 10 years on dam-related activities in Southeast Alaska have been completed through informal consultations that considered impacts to listed humpback whales as well as Steller sea lions. Based on our consultation record on such projects in Southeast Alaska, we do not anticipate that the additional consideration of impacts to critical habitat would affect the outcome of consultations on these projects, and thus the potential for delays of these projects that would occur due to the critical habitat is low. However, the analysis highlights the potential for the critical habitat rule to generate project delays as an uncertain impact that is too speculative to quantify.

In communications with ADEC, the agency confirmed that it does not consult with NMFS on individual discharge permits, including for activities occurring within critical habitat, and that only minimal incremental costs are incurred considering potential effects on threatened and endangered species pursuant to state regulations, regardless of the critical habitat designation. As a result, it is unlikely that additional costs would be incurred related to issuance of individual NPDES permits (as the State of Alaska has primacy for issuing these permits, the state refers to them as ''APDES permits''). (See also the response to Comment 15 above.)

Comment 17: One commenter stated that the analysis may overlook oil and gas activity in state waters in Cook Inlet.

Response: The analysis presented in the DEA included consideration of oil and gas activities in both state and Federal waters, and quantified the incremental administrative costs associated with those activities. Section 2.4.1 of the FEA includes a more detailed description of the extent and geographic distribution of oil and gas activities in state waters, including a map of existing oil and gas activities in state waters and the state's role in managing those activities. The analysis estimates a total of approximately five consultations between 2020 and 2029 in this area (Unit 6), and total costs of $17,700 costs over the next ten years (Total Present Value, 7 percent Discount Rate).

Comment 18: Several commenters requested that the economic analysis provide additional information on the economic benefits of humpback whale conservation. These commenters cited reports by the International Monetary Fund (IMF), the University of Alaska's Center for Economic Development, and the U.S. Department of Commerce Bureau of Economic Analysis with information on the value of wildlife viewing to Alaska's economy and the ecosystem service value of great whales.

Response: NMFS appreciates receiving these additional references. Additional information regarding benefits of humpback whale conservation has been incorporated into Section 4.1.2 and 4.1.3 of the FEA as appropriate. In addition, we note here, that the recent IMF report (Chami *et al.* 2019) attempted to quantify the economic value of a large whale over its lifetime by considering the value of carbon sequestration by a large whale as well as the value of other contributions, such as fishery enhancement and ecotourism. While we cannot identify the values estimated in this report as specific economic benefits resulting directly from this rule, we do agree that, as a general matter and as discussed in ecological literature cited in the report, certain benefits, including multiple ecosystem services, can be derived from conservation of large whales.

Comment 19: Two commenters stated that the economic analysis overestimates the value of whale watching activities in Alaska. One commenter stated that the regional expenditure estimates are misleading since the bulk of the expenditures are not actually spent within Alaska. Another commenter expressed concern that the economic values presented are not exclusive to whale watching.

Response: As described in Section 4.1 of the FEA, the analysis does not attempt to quantify the incremental economic benefits resulting from critical habitat designation (including those related to whale watching) because of the difficulty of isolating the effect of the designation on humpback whale populations separately from all other ongoing and planned conservation efforts for the species. The studies presented in Chapter 4 of the DEA were intended only to provide evidence that the public holds a positive value for efforts that either increase humpback whale populations, or increase the

probability of recovery for the species. They are not intended to specifically quantify the economic benefit of the critical habitat designation.

The whale watching expenditure statistics presented in Exhibit 4–2 of the FEA represent both direct spending on whale watching tickets as well as estimated spending in the local economy by whale watch participants. For example, in Alaska, the $540 million in estimated expenditures represents $480 million in whale watching ticket sales and $60 million in additional spending in the local economy attributable to whale watching participants.

Comment 20: Multiple commenters stated that administrative costs to small entities are underestimated. One local government stated that the estimated cost of $4,900 per year to small entities is significantly underestimated, as the local government said they already pay more than that in direct expenses and delay costs for in-water construction projects permitted under the MMPA.

Response: The costs to small entities identified in the comment represent an incremental administrative cost of participation in section 7 consultations borne by a third-party engaged in section 7 consultation (*e.g.,* local governments or private businesses). The economic impacts identified in Chapter 3 of the FEA represent the total economic impacts that would be anticipated to be incurred as a result of designating all specific areas meeting the definition of critical habitat (*i.e.,* not factoring in any exclusions of areas). Of those costs, only a portion of that total cost would potentially be incurred by third parties, and of those third parties, only a portion would be considered small entities. Chapter 5 of the FEA identifies the potential impacts of critical habitat designation on small entities.

Chapter 5 begins by identifying the universe of activities in which third parties are likely to be party to a section 7 consultation, and for which there is more than one consultation anticipated per year across all critical habitat areas. ''In-Water Construction'' and ''Aquaculture'' are identified as the only activities for which it is likely that a small entity may be party to a consultation (*e.g.,* as a permit applicant), and where more than one consultation is anticipated annually across the critical habitat area. Based on the revised analysis presented in Chapter 5 of the FEA, we estimate that $5,200 per year may be borne by small entities involved with in-water construction, while $5,300 per year may be borne by small entities engaged in aquaculture. However, as indicated in this chapter, the estimated costs for in-water construction activities are based on projects occurring in Unit 10. Because Unit 10 is excluded from the final designation for the MX DPS, the estimated $5,200 per year for small entities would not be incurred. The analysis estimates that 12 aquaculture consultations per year are distributed across the critical habitat units in Alaska, with six occurring in Unit 10, and six occurring in southcentral (Units 6–9) and southwestern Alaska (Units 1–5). Again, because several of these areas are excluded from the final designations (Unit 10 in particular), the estimated $5,300 per year expected to be borne by small entities is an overestimate, and costs to small entities is estimated to be half of that amount.

The direct expenses and delay costs currently incurred by third parties for in-water construction permitted under the MMPA are not costs resulting from the critical habitat designation and thus are not appropriate to include in the cost estimate for this rule. That the existing administrative costs resulting from requirements that predate and are unrelated to the critical habitat designation are high does not indicate that costs are underestimated for this rule.

Comment 21: One commenter noted that the IRFA lists the Wrangell-Petersburg Census Area as a small government jurisdiction adjacent to critical habitat that may be involved in future consultations. The commenter stated that the Wrangell-Petersburg Census Area no longer exists and that it should be replaced in the IRFA with Petersburg Borough and the City and Borough of Wrangell.

Response: NMFS appreciates this comment and has updated Chapter 5 of the FEA accordingly.

Comment 22: Several commenters expressed concern about potential changes to vessel traffic management in response to the designation of critical habitat. Two Alaskan communities noted that they are reliant on ship traffic, including commercial and sport fishing fleets and the cruise ship industry. One commenter noted that vessel traffic regulations in the Traffic Separation Scheme (TSS) areas of California and Washington already result in economic costs to the maritime industry, and expressed concern about additional conservation efforts in critical habitat. The commenter also noted that ships traveling along the West Coast off the United States, including Alaska, follow recommended routes developed by the U.S. Coast Guard (USCG) that overlap with the proposed critical habitat. The commenter requested that the economic analysis consider potential impacts to vessel traffic not just for TSS areas but along the entire coastal area proposed for designation.

Response: As described in Section 2.7 of the FEA, we do not anticipate that the critical habitat designation will generate additional conservation efforts for humpback whales associated with vessel traffic management. As such, the FEA estimates that incremental costs will be limited to the additional administrative costs of consultation. The FEA assumes that, based on the best available information, the past rate of consultation on vessel traffic management is reflective of the future rate of consultation. From 2007 to 2017, the USCG consulted with NMFS on three projects related to vessel traffic management, including one formal consultation regarding a TSS modification and two informal consultations related to aids to navigation (replacement of existing structures). Current economic costs resulting from vessel traffic re-routing and voluntary vessel speed restrictions that have already been implemented in the TSS area would not be considered incremental impacts of the critical habitat designation because they predate and are completely separate from the designation and thus are not quantified in the FEA.

Comment 23: Two commenters stated that scientific research should be included in the economic analysis as an activity that may be affected by critical habitat designation. The commenters specifically referenced field operations within National Marine Sanctuaries and basic marine research supported by the National Science Foundation (NSF) (*e.g.,* NSF Ocean Observatories Initiative). One commenter recommended that we list this category of activity as part of our summary of activities that may adversely modify the critical habitat or be affected by the designation per section 4(b)(8) of the ESA.

Response: The DEA previously included scientific research activities under the Oil and Gas and Seismic Surveys activity category, as the consultation history related to that activity indicated that scientific research activities consisted exclusively of seismic research. In response to this comment, the FEA has been revised so that it now groups scientific research as a separate activity category and also considers a more complete suite of scientific research activities taking place within the proposed critical habitat (see Section 2.4 of the FEA). Both the DEA

and FEA assume, based on the best available information, that the past rate of consultation on scientific research is reflective of the future rate of consultation. To further address this comment, we have also added research activities to the discussion in this rule regarding activities that may adversely affect the critical habitat or be affected by the critical habitat designations (see section on Activities That May Be Affected).

Comment 24: Several commenters expressed concerns regarding the consideration of in-land activities in the economic impact analysis, stating that the regulation appears to overreach by extending to upland areas that are not even inhabited by the whales. One commenter also stated that references to ''timber'' are not explained in light of the recreational, silviculture, habitat restoration, mineral exploration and extraction, road construction and maintenance, and many other activities that routinely occur on national forest lands.

Response: The scope of the impact analysis includes Federal actions that ''may affect'' the critical habitat and that will therefore require section 7 consultation. Thus, the universe of relevant Federal actions is not limited to projects and activities located within the critical habitat, but also includes actions with effects that may extend into and potentially affect the critical habitat. The vast majority of Federal actions considered in the FEA would, however, take place within the boundaries of the critical habitat. We have made revisions to the FEA to separately identify the costs associated with U.S. Forest Service activities, and in Section 2.14 of the FEA, we explain the nature and type of timber-related activities that have been subject to section 7 consultation. Much of the Forest Service-related activities described in the comments occur in terrestrial habitat and do not pose a threat to humpback whales or their habitat (and as a result, would not be subject to section 7 consultation to consider effects on the humpback whale or its habitat and therefore would not experience any associated costs resulting from the critical habitat designation). However, past consultations on Forest Service activities do identify a limited number of potential impacts to marine species and/or their habitats (particularly from timber activities in Alaska), including impacts from the transportation of timber on barging routes used for log transport, and impacts on water quality related to log transport facilities (LTFs). The FEA quantifies the administrative costs to these activities that may result from critical habitat designation.

Comment 25: One commenter stated that the economic analysis was arbitrarily truncated at ten years.

Response: As described in Section 1.3.3.7, for regulations with a predetermined duration, the time frame of the economic analysis would ideally be based on the time period over which the regulation is expected to be in place. However, guidance from the Office of Management and Budget (OMB) indicates that ''if a regulation has no predetermined sunset provision, the agency will need to choose the endpoint of its analysis on the basis of a judgment about the foreseeable future.'' (U.S. Office and Management and Budget, Circular A–4). Because critical habitat designation rules have no pre-determined sunset, we had to determine the endpoint for the analysis based on a judgment as to the ''foreseeable future'' as supported by the best available information. The information on which this analysis is based includes, but is not limited to, information regarding activities that are currently authorized, permitted, or funded, or for which proposed plans are currently available to the public. Forecasted impacts are based on the planning periods for potentially affected projects and look out over a ten-year time horizon. The time frame we have adopted is consistent with OMB guidance stating that ''for most agencies, a standard time period of analysis is ten to 20 years, and rarely exceeds 50 years'' (OMB, February 7, 2011, Regulatory Impact Analysis: Frequently Asked Questions). The time frame selected in this case is consistent with long-standing NMFS practice, Executive Order (E.O.) 12866, OMB Circular A–4 and the cited implementing guidance.

Comment 26: One commenter stated that even if NMFS does not currently anticipate significant economic consequences of critical habitat designation, the designation could lead to lawsuits from advocacy groups aimed at imposing additional conservation efforts. As an example, the commenter cited recent legal notice from the Wild Fish Conservancy that they will sue NMFS if actions are not taken to stop recreational and commercial fisheries from intercepting Chinook salmon stocks that serve as prey for Southern Resident Killer Whales. Another commenter noted that critical habitat would make the permitting process less predictable and would open up reviews of infrastructure projects to court challenges.

Response: While the potential exists for third party lawsuits involving designated critical habitat, the likelihood, timing, and outcome of such lawsuits are uncertain. Data do not exist to reliably estimate the potential impacts of such legal actions. Any attempt to estimate the number, scope, and timing of potential legal challenges would entail significant speculation. Furthermore, such litigation risk already exists in light of existing protections already afforded the whales under the MMPA and by virtue of their listing under the ESA. In response to this comment, Section 2.3.1.3 of the FEA now describes the concern and potential for this type of impact; however, it concludes that determining the outcomes of such lawsuits would be speculative.

Benefits of Critical Habitat Designation

Comment 27: Numerous commenters stated that critical habitat is crucial to supporting the recovery of humpback whales and will result in additional ecological, educational, and economic benefits. Commenters specifically noted the significant economic benefits that could extend to the whale-watching, outdoor recreation, and tourism industries, especially in Alaska, and how these activities can in turn provide public education and increased public support for whale conservation. Multiple commenters stated that improved conservation of the humpback whales and their habitats would have multiple ecosystem and environmental benefits, for example through enhancing phytoplankton productivity and sequestering carbon, as well as scientific benefits. Commenters also noted that protecting humpback whale prey, such as krill and herring, through the critical habitat designations will benefit the many other marine predators that rely on these species and is thus an economically and ecologically sound decision. Some commenters stated that with the rapidly changing marine food webs, as evidenced by the collapse of multiple fisheries and sea-bird die offs in Alaska, critical habitat protection for humpback whales is all the more important for the positive benefits it could have on the larger ecosystem. Commenters noted that due to their various ecosystem, fisheries, and economic contributions, individual large whales have recently been valued at $2 million per whale in a recent study released by the International Monetary Fund, and that this economic value for the larger community should therefore be considered alongside concerns about potential economic costs.

Response: We appreciate these comments and the associated references provided by the commenters. We agree

that the critical habitat designations for the WNP, MX, and CAM DPSs of humpback whales can have multiple ancillary and indirect benefits, such as those identified by the commenters. Such benefits are discussed in Section 4(b)(2) Report (NMFS 2020b), and the additional information regarding potential economic benefits has been incorporated as appropriate into Sections 4.1.2 and 4.1.3 of the FEA. However, as we discuss in the Section 4(b)(2) Report, the existing data are not sufficient to allow us to monetize all of these benefits and distinguish the extent to which they would be attributable to the critical habitat designations (over and above the benefits of protections already afforded through the ESA listings and other ongoing conservation efforts).

Comment 28: The ADF&G stated that designating very large areas as critical habitat dilutes the conservation benefits of the critical habitat and recommended that, as a general matter, the size of the critical habitat be considered when determining areas to include in a designation. They stated that this 'dilution effect' occurs from our approach to designations because the evaluation of adverse modification under section 7 of the ESA is based on impacts to the whole of the designated critical habitat; therefore, the larger the area designated as critical habitat, the less likely a proposed activity will result in a ''may negatively affect'' (in an informal consultation) or a ''destruction or adverse modification'' finding (in a formal consultation). They stated we need to explain that critical habitat provides conservation through examination of impacts to the ''whole'' of critical habitat so the public understands the likelihood of a conservation action. They provided their analysis of the conservation benefits of increasingly large areas to demonstrate this effect. They asserted that large critical habitat designations mask negative effects in truly essential habitats, undermining the education value of critical habitat and by assigning a single value (*i.e.,* ''critical'') to all areas, and hiding important heterogeneity in conservation value. They concluded that designating very large areas as critical habitat results in more complex consultations and more costs without providing corresponding conservation benefits. Based on the results of their analysis, ADF&G also concluded that the critical habitat designation that would provide the greatest conservation value would be one that was limited to the existing Biologically Important Areas (BIAs) off the west coast of the contiguous states and the northern side of the Eastern Aleutians BIA for the MX DPS and limited to the northern side of the Eastern Aleutians BIA for the WNP DPS. They therefore recommended the final designations for the WNP and MX DPSs be limited to those specific areas.

Response: We reviewed the comments and the State's analysis, but did not adopt the particular recommendations for several reasons. First, the conceptual approach proposed by the State finds no legal basis in the text of the ESA or in caselaw. The ESA directs us to designate critical habitat to the maximum extent prudent and determinable, and we have implemented that requirement through our joint implementing regulations with the USFWS (see 50 CFR 424.12). The regulations set out a series of stepwise analytical steps for developing a critical habitat designation. The statute, implementing regulations, and caselaw guide us in our evaluation of areas that meet the definition of critical habitat, and none of these sources provide support for the new analytical approach advocated by the commenter. Application of the State's proposed approach would seem to require that once the cumulative area meeting the definition of critical habitat reaches a certain (unspecified) size, then particular areas meeting the definition of critical habitat would be automatically excluded from the designation on the assumption that the benefit of their designation would be presumed to be outweighed by any costs associated with designating those areas.

Under the ESA and our regulations, areas meeting the definition of critical habitat are to be designated as critical habitat unless the Secretary elects to exercise his discretion to consider exclusion of particular areas under section 4(b)(2) of the ESA. Where the Secretary enters into such an analysis, he has discretion to exclude particular areas from a designation if the benefits of excluding that particular area outweigh the benefits of its designation. His discretion is not unlimited. He may not exclude an area if failure to include that area in the designation will result in extinction of the species. Further, the Secretary's analysis must reflect consideration of the specific information in the record for each particular area. The statute does not mandate exclusions of areas, and individual determinations must be made on the basis of the best available information to support each particular area that is ultimately excluded.

Secondly, the State's proposed approach does not appear to account for the particular species and its life history needs. Stated generally, critical habitat as defined in section 3 of the ESA includes areas and habitat features that are essential to or for the conservation of the listed species (16 U.S.C. 1532(5)(A)). The term ''conservation'' is further defined in section 3 of the ESA as using and the use of all methods and procedures necessary to bring any endangered or threatened species to the point at which their protection under the ESA is no longer necessary (16 U.S.C. 1532(3) (defining ''conserve,'' ''conserving,'' and ''conservation'')). Therefore, critical habitat is expressly defined so as to include not just areas necessary to support the continued survival of the species, but also those that further its recovery and removal from the list of threatened and endangered species. *See Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Serv.,* 378 F.3d 1059, 1070 (9th Cir. 2004) (''Clearly, then, the purpose of establishing 'critical habitat' is for the government to carve out territory that is not only necessary for the species' survival but also essential for the species' recovery.''); *Sierra Club* v. *U.S. Fish and Wildlife Serv.,* 245 F.3d 434, 442 (5th Cir. 2001) (noting that the ESA's definition of critical habitat ''is grounded in the concept of 'conservation' ''); *Center for Biological Diversity, Defenders of Wildlife* v. *Kelly,* 93 F. Supp. 3d 1193, 1201 (D. Idaho 2015) (noting that critical habitat is ''defined and designated 'in relation to areas necessary for the conservation of the species, not merely to ensure its survival.' '') (quoting *Arizona Cattle Growers' Ass'n* v. *Salazar,* 606 F.3d 1160, 1166 (9th Cir. 2010)). Thus, courts have recognized that the ''whole point behind designating critical habitat is to identify those physical and biological features of the occupied area and/or those unoccupied areas that are essential to the conservation of a species with the aim of arriving at the point where the species is recovered, *i.e.,* no longer in need of the measures provided for in the ESA.'' *Kelly,* 93 F. Supp. 3d at 1201.

A critical habitat designation therefore must be developed based on consideration of the type and nature of the habitat needed by the particular species to support its recovery. Humpback whales are large, highly migratory marine species that use vast areas of oceanic habitat to carry out their normal life functions and behaviors. Individual humpback whales feed over thousands of square kilometers (*e.g.,* Mate *et al.* 2018, Palacios *et al.* 2020) and target prey that

vary spatially and temporally in terms of their distribution, availability, and energy content in response to changes in ocean and climate conditions (*e.g.,* NOAA 2020). The size of the habitat that is essential to support the recovery of the listed humpback whales should, and does, reflect these factors. The feeding areas being designated as critical habitat for each DPS reflect the life history needs of the whales, represent only a portion of their total occupied ranges, and represent a fraction of the U.S. Exclusive Economic Zone (EEZ) where humpback whales are known to occur (*e.g.,* roughly 15 percent for the MX DPS). Thus, the final critical habitat designations, though large, correspond to the needs of the species as reflected in the best available science and consistent with the requirements for and the purpose of critical habitat under the ESA.

Third, in asserting that there should be an upper limit on the appropriate size for a critical habitat designation, the State's analysis presumes that there is a theoretical tipping point at which ''adverse modification'' outcomes in future section 7 consultations would become unlikely. Beyond this point, once a certain amount of high-conservation areas are identified for inclusion in the designation, the State asserts there is categorically no conservation benefit of including additional, relatively lower-value critical habitat areas in the designation. Thus, they conclude, these lower-value areas should be excluded under section 4(b)(2) of the ESA, because the economic impact of designating these areas should be thought of as categorically outweighed by the benefits of designating them (which they assert are non-existent or even negative). We fundamentally disagree with this conceptual approach to determining the appropriate extent of critical habitat designations and how to evaluate areas for exclusion under section 4(b)(2). There are several errors in the State's approach, including reliance on an assumption that critical habitat only provides conservation benefits to the listed species when there is an adverse modification outcome of a consultation under section 7 of the ESA. This is inconsistent with our experience. Where a consultation does not result in a finding that an action would be likely to cause destruction or adverse modification of the habitat such that major changes would be required to the proposed action, the process of consultation can, and often does, lead to conscious structuring by Federal agencies of their actions to minimize impacts to habitat at the outset. Thus, the benefits of a critical habitat designation cannot be measured simply by the number of ''destruction or adverse modification'' determinations that may or may not be the outcome of future section 7 consultations. Although the State acknowledges some of these benefits in their comments, such as project design changes and adoption of mitigation and minimization measures during informal consultations, these types of positive conservation outcomes are not factored into their analysis.

Further, we disagree with the State's assumption that larger critical habitat designations necessarily result in more complex section 7 analyses or result in more costs without a conservation benefit. The complexity and cost of a consultation are a function of the scope and nature of the particular Federal action, as well as the *number* of listed species and designated critical habitats—not the size of the overall designations—that are affected by the Federal action. The large majority of the consultations completed in Alaska are in fact informal consultations (that conclude with a letter of concurrence that the action is not likely to adversely affect the habitat rather than with a biological opinion), and this pattern is not expected to change based on the types of Federal projects that are forecasted to occur over the next 10 years in Alaska.

In their proposed approach, the State stated that the most important habitat areas should be prioritized for designation. Although, as indicated above, we did not adopt the State's proposed method for assessing the conservation value of areas or making decisions regarding exclusions under section 4(b)(2), we do agree that areas found to have greater importance to the species' conservation on the basis of the best available scientific data should receive greater weight, relative to less biologically important areas, when comparing the benefits and impacts of designating particular areas in a section 4(b)(2) analysis. As we have done in the course of many previous designations, this was achieved in our analysis by assigning relative conservation values to specific areas for each DPS and in how we weighed these values against the forecasted impacts of designation. Through our approach, areas considered to have greater importance to the conservation of each DPS were in effect prioritized for designation above areas that are considered to be less important. This is appropriate under the statute and our regulations because, in the 4(b)(2) process, we must determine which factors are relevant and how much weight to assign each factor (see 50 CFR 424.19(c)). In light of the purpose of critical habitat under the ESA (to support the conservation, or recovery, of the species) and the statutory mandate to designate critical habitat to the maximum extent prudent and determinable, it is reasonable to give great weight to the conservation value of the habitat, and greatest weight to areas with the highest conservation value.

Lastly, we do not agree that large critical habitat designations undermine conservation because they provide a single value, *i.e.,* ''critical,'' to all areas, hide important heterogeneity in conservation value, and mask impacts on truly important habitats. The Secretary has the authority to map critical habitats at a scale the Secretary deems appropriate (50 CFR 424.12(b)(1)) and, when several habitats, each satisfying the requirements for designation as critical habitat, are located in proximity to one another, the Secretary has the authority to designate an inclusive area as critical habitat (50 CFR 424.12 (d)). The ESA also establishes and defines the concept of ''critical habitat,'' without distinction for different degrees of ''criticalness.'' In implementing the ESA, we must apply the statutory definition and regulatory provisions on the basis of the best available scientific information. We see no legal basis for recognizing novel tiers of habitat not recognized in the ESA, and the State points to none; nor is it necessary to do so. Furthermore, section 7 consultations evaluating impacts of an action on designated critical habitat take into consideration the best available data for the given species and its habitat, including relevant data regarding habitat heterogeneity as well as distribution patterns of the listed species across the critical habitat. When evaluating impacts to large critical habitats in the context of a consultation, we consider how the particular Federal action would affect the relevant area, features, and function of the designated habitat and how that in turn affects the overall conservation value of the critical habitat for the listed species. In other words, designating large areas as critical habitat does not remove the requirement that we rely on the best available science when conducting section 7 analyses, does not interfere with our ability to understand the nature and magnitude of particular impacts on the critical habitat, and does not undermine conservation.

Overall, we find that the analysis provided by the State does not support restricting the critical habitat designation to the areas suggested by the

State—*i.e.,* to the northern portion of the BIA in the Aleutian Islands Area (Unit 2) and the seven BIAs off the coasts of Washington, Oregon, and California. (BIAs, which were discussed in the proposed rule (84 FR 54354, 54366, October 9, 2019) are discussed in more detail in response to other comments specific to the BIAs in the next subsection.) We also note that such a designation would eliminate from the critical habitat known feeding destinations for WNP DPS and MX DPS whales, and particularly for MX DPS whales that breed off the Revillagigedo Islands, which preferentially feed in areas off Alaska.

In the proposed rule, we described the effects of critical habitat designations, and consistent with the requirements of section 4(b)(8) of the ESA, we provided a brief discussion of those activities (whether public or private) that may adversely modify the proposed critical habitat or that may be affected by such designation. Such information is also provided in this final rule. The regulatory definition of ''destruction or adverse modification'' has been added to that discussion to provide additional information regarding the effect of critical habitat designations.

Comment 29: ADF&G stated that we inappropriately conflated the conservation value of specific areas with the incremental benefits a critical habitat designation would provide. They stated that the Draft Section 4(b)(2) Report inaccurately concludes that it is not possible to isolate and quantify the effect that a critical habitat designation would have on recovery of a humpback whale DPS. They state that our use of a conservation value assessment of specific areas to represent the benefit of designation is inappropriate because the evaluation of the economic costs already provides considerable assessment on the potential benefits of a designation, which could be used to provide a qualitative assessment of the benefits of the designation. They also state our assessment was inappropriate because the conservation value assessment is not likely to be a good predictor of the potential benefits of designating a specific area. Instead, they posit that we should use a qualitative assessment of the incremental benefit, based on whether additional conservation measures from the designation are likely in addition to the value of specific areas to the conservation of each listed DPS.

Response: As noted above (in our response to Comment 28), we disagree with the assertion that the incremental benefit of a critical habitat designation is equal to the number of likely additional conservation measures that may result from section 7 consultations. As discussed in the proposed rule and Section 4(b)(2) Report, while it is true that the primary, regulatory benefit of critical habitat designation stems from the ESA section 7(a)(2) requirement that all Federal agencies ensure that their actions are not likely to destroy or adversely modify the designated habitat, several non-regulatory benefits of designation are also recognized. For example, critical habitat provides notice to other Federal agencies of areas and features important to species conservation; provides information about the types of activities that may reduce the conservation value of the habitat; and may stimulate research, voluntary conservation actions, and outreach and education activities. Although the critical habitat is not expected to change NMFS' identification of conservation efforts for humpback whales through section 7 consultations, the adverse modification analysis conducted as part of section 7 consultations can provide useful scientific information to build upon NMFS' and other Federal agencies' understanding of the biological needs of, and threats to, the humpback whales and their habitat. The draft and final economic analyses (Chapter 4, IEc 2019 and 2020) also discuss the use, non-use, and ecosystem benefits of conservation of the whales in general (*e.g.,* whale-watching, water quality improvements, enhanced habitat conditions for other marine and coastal species). Other indicators that critical habitat may have benefits that extend beyond the protections of section 7(a)(a) have been reported in the literature and include findings that species with designated critical habitat are more likely to have increased and less likely to have declined, are more likely to have a revised recovery plan, and are more likely to have these plans implemented (Harvey *et al.* 2002; Lundquist *et al.* 2002, Taylor *et al.* 2005).

Further, the State's implicit assumption that benefits of designation can accurately be assessed only to the extent they are quantified or monetized is also unfounded. We agree it would be useful and informative if available data allowed us to monetize the benefits of critical habitat designation to enable a direct comparison with the estimated economic benefits of excluding particular areas from the designation. However, as discussed in the Section 4(b)(2) Report and proposed rule, data to monetize these benefits are not available and is not required. Because the ESA requires designation of critical habitat to further the conservation of listed species, an area meeting the definition of critical habitat draws inherent but unquantifiable value from fulfilling that statutory mandate. In considering potential exclusions under section 4(b)(2) and its implementing regulations, moreover, the Secretary has discretion to determine the factors to be considered and what weight to assign them in comparing the benefits of exclusion with the benefits of inclusion (50 CFR 424.19(c)). In carrying out our analyses, it is not possible using the best available scientific tools to quantify the effect that a critical habitat designation would have on recovery of humpback whales over and above other separate, preexisting protections, including those that extend from listing under the ESA.

In our analysis, we used the CHRT's relative conservation value ratings to represent the relative conservation benefits of designating specific areas identified as critical habitat for each DPS. The CHRT's ratings of the relative conservation value of the critical habitat were based on relevant biological considerations (*e.g.,* distribution of whales from the DPS across the areas, prey availability or evidence of consistent feeding). This approach relied on the best available information and employed a structured, systematic method for applying expert judgement. The approach taken in our analysis is consistent with the purpose and requirements of the ESA and our implementing regulations at 50 CFR 424.19, which provides the Secretary discretion to consider any relevant benefits and assign the weight given to those benefits. Our approach is also consistent with multiple, other critical habitat designations that employed a biological approach to assessing the conservation value of particular areas—an approach that has been recognized as an appropriate alternative where data are not available to monetize the benefits of designation (*e.g.,* loggerhead sea turtles (79 FR 39856, July 10, 2014); black abalone (76 FR 66806, October 27, 2011); green sturgeon (74 FR 52300, October 9, 2009)).

Comment 30: ADF&G stated that we made substantive mistakes in rating the relative conservation value of the specific areas and provided a series of specific comments regarding the application of the available data. They requested that we re-do the analysis to correct various mistakes they state were made by the CHRT and provide a more detailed discussion of how data were applied in the assessment.

In terms of specific assertions regarding misuse of data, ADF&G stated that in using data from Wade (2017) regarding predicted movement

probabilities of humpback whales into the feeding areas, we should have taken into account the size of our specific areas and the relative size of the areas used in the Wade (2017) analysis. Rather than using the estimated movement probabilities, ADF&G stated that the appropriate metric to use in our comparisons would have been the estimated density of humpback whales of the particular DPS in each specific unit. They also suggest that, in delineating our specific areas, it would have been appropriate to align the boundaries of our specific areas to those used in the Wade (2017) analysis, because those are in turn aligned with genetic and spatial breaks in humpback whale distributions. They also state that we used the wrong movement probability for the Shumagin Islands Area (Unit 3) for both the MX and WNP DPSs.

ADF&G also stated that we did not indicate that the CHRT recognized that the humpback whale density data used in our assessment conflates the abundance of various DPSs, and that this density information could be misleading. They also expressed concern regarding the use of results of the ''SPLASH'' study and stated that our application of these sightings data conflated the use of habitat units by other DPSs with that of the DPS being assessed. They stated that the SPLASH mark-resight data could be useful, but that we should include the unmatched sightings in the assessment in order to understand population size and account for differing survey effort.

Response: We appreciate the thorough and specific comments regarding our assessment of the relative conservation value of each specific area to the MX and WNP DPSs. To address and respond to these comments, we: Reconvened a CHRT; discussed and agreed to make certain modifications to the datasets used to support the CHRT's assessment; and then repeated the structured decision-making process to rate the relative conservation value of each critical habitat unit for the MX, CAM, and WNP DPSs, taking care to account for the limitations of the available data noted by the State. While we do not agree that the CHRT's analysis or our proposed rule was founded on misuse of the data, we do agree after considering the comments that it is more transparent and informative to refine our use of the best available scientific data. Further explanation is provided here, and a detailed discussion of this process, the datasets, and results are also provided the Final Biological Report (NMFS 2020).

A significant and unique challenge in developing these particular critical habitat designations is the fact that each of the DPSs of interest co-occur with multiple, other DPSs of the same taxonomic species in the areas meeting the statutory definition of critical habitat. Relevant data available to the CHRT that allow for an assessment of the relative use of particular areas by each DPS include photo-identification data, genetic data, and to a more limited extent, telemetry data. The ocean basin-wide study referred to as the ''Structure of Populations, Levels of Abundance, and Status of Humpbacks'' or the ''SPLASH study'' was a significant effort undertaken in coordination with 10 countries that involved the collection of both photo-identification and genetic data during three breeding seasons (2004, 2005, and 2006) and over two feeding seasons (2004, 2005) in known breeding and feeding areas. The SPLASH study informs and supports much of the current scientific understanding of the structure of humpback whale populations in the North Pacific, and the results of this study as well as subsequent analyses of data obtained in this study (*e.g.,* Calambokidis *et al.* 2008, Barlow *et al.* 2011, Baker *et al.* 2013, Wade 2017) were critical to informing the CHRT's analysis. We address each of the several concerns raised by the State with respect to how the CHRT applied these results in their assessment in turn here.

First, in response to the concern regarding the application of results from Wade (2017) regarding predicted movement probabilities of humpback whales into the feeding areas, we considered the State's suggestion of using densities of whales rather than the predicted movement probabilities from the Wade (2017) analysis; however, we did not find this to be a useful or appropriate modification. Analytical results presented in Wade (2017), which relied on the photo-identification data from the SPLASH study (Calambokidis *et al.* 2008, Barlow *et al.* 2011), include estimates of the proportion of whales from a breeding area (and hence a given DPS, since the DPSs are described based on the breeding area of origin of the member whales) occurring in the six major feeding regions. Thus, these estimated movement probabilities, which correct for sampling effort, provide an indication of the distribution of whales of the particular DPS across the feeding regions, and this information was very important to the CHRT's assessment of relative value of the specific critical habitat areas to each of the DPS. We continue find that this information—*i.e.,* the estimated number or proportion of whales from the listed DPS within a feeding region—to be an appropriate indicator of the relative value of the areas to the DPS and part of the best available data regarding habitat use by the listed DPSs. We do not find that the alternative metric suggested by ADF&G—*i.e.,* density of whales from the listed DPS within a feeding region—is a more appropriate or more informative metric. While our critical habitat units are generally aligned with the major regional breaks applied in the Wade (2017) analysis, they are not fully consistent with all of the boundaries, which were determined based on several other factors (*e.g.,* BIA boundaries), and were broken into smaller geographic units to facilitate an analysis of habitat areas on a smaller spatial scale. Thus, it would not be appropriate to calculate densities of whales for our particular habitat units based on the estimated probabilities provided in Wade (2017). The suggested density metric may also artificially deflate the value of larger feeding areas or artificially inflate the value of smaller feeding regions, because the delineation of the feeding regions and habitat units themselves (and thus their size) is partially a function of the particular marine ecosystem and its associated geology and oceanography. We find that using the estimated proportion or number of whales of a given DPS rather than their density is preferable because it avoids this potential bias.

With respect to how the critical habitat areas were delineated, we note that these areas should be identified at a scale determined by the Secretary to be appropriate (50 CFR 424.12(b)(1)). Data and information applied by the CHRT to systematically delineate boundaries for the specific critical habitat areas is discussed in detail in the Final Biological Report (NMFS 2020a). However, in response to comments, we reviewed the regional boundaries applied in Wade (2017) as well as survey effort and locations from the SPLASH study, and made several changes to improve or correct the data tables used to inform the CHRT's assessment. Specifically, we agree with ADF&G that we applied the incorrect movement probability for the Shumagin Islands Area (Unit 3), which is more appropriately assigned to the Gulf of Alaska Region as delineated in Wade (2017), and we corrected this for the relevant data tables (*i.e.,* for the WNP and MX DPSs). We also removed the estimated movement probability developed by Wade (2017) from the dataset considered in the CHRT's

assessment of Bristol Bay area (Unit 1), because SPLASH surveys did not extend into Unit 1. We concluded that extrapolating the results of Wade (2017) into an area that was beyond the SPLASH survey areas was not appropriate. The CHRT, however, noted that given the lack of photo-identification studies and data for Unit 1, and because humpback whales currently use and historically occurred in this area, future scientific survey effort should be directed at this particular area to better evaluate use of this area by humpback whales and by ESA-listed humpback whales in particular. Lastly, and without changing the actual data used in the tables (provided as Appendix C in the Final Biological Report), we modified how the estimated probabilities from Wade (2017) are displayed (using merged cells) to help clarify that the CHRT was aware that those probabilities do not apply independently to our particular, smaller habitat units but apply to broader regions.

In response to the concerns regarding how photo-identification match percentages from the SPLASH study were applied by the CHRT, we modified the data tables to avoid the perception that the CHRT had conflated the use of habitat units by other DPSs with that of the DPS being assessed. In our initial analysis, and as a means of examining relative distributions of whales of a given DPS across habitat units, we calculated the percent of unique sightings of whales of the given DPS out of all matched sightings (for all DPSs) that had occurred in that particular area. This column of data was changed to instead show the percent unique sightings of whales of the given DPS in the particular area out of the total number of matched sightings of whales of that same DPS. Thus, match data for whales from other DPSs were removed from the calculation, and information to help assess the relative distribution of whales of the given DPSs across the habitat units was retained. To provide further context for these percentages, we also included general information with respect to the SPLASH survey effort, including the number of vessel days, whether small boat surveys had been conducted in that area, and the total number of unique humpback whales sighted in that area. Although this information was not detailed or precise enough to be particularly informative, the CHRT felt it was relevant and helpful to include as it stimulated and facilitated discussions regarding survey effort across the areas.

In response to the concerns that the CHRT had been biased or inappropriately influenced by humpback whale density data that was not specific to a particular ESA-listed DPS, we also removed the general humpback whale density data from the data tables used by the CHRT. The CHRT agreed this was an appropriate simplification for several reasons. First, with the exception of the CAM DPS, for which we have a consistent set of density estimates for all critical habitat units occupied by that DPS, the estimated and observed density data that are currently available come from multiple studies with differing methodological approaches and for different time periods, and consequently, these data had not allowed the CHRT to make strong inferences with respect to the habitat units during their initial assessment. In addition, and as noted by the commenters, these general density data are affected to differing degrees across the habitat units by the presence of the non-listed Hawaiian whales. The CHRT had acknowledged the multiple limitations with applying these data in their original review and discussions, and was aware these issues were more acute for Alaska where scientific surveys have been more limited (both geographically and temporally) but included them because they comprise part of the best available data. Overall, the CHRT decided these data could be removed from consideration without limiting or undermining their ability to understand the relative conservation value of each habitat unit by the listed DPSs.

Comment 31: With respect to data considered during the assessment of the conservation value of particular areas, ADF&G expressed several concerns regarding the consideration of the proportion of a habitat unit that is covered by a BIA as a metric of conservation value of a particular area for a listed DPS. First, they state the size of the BIAs is not necessarily indicative of the value of the BIAs to humpback whales because the BIAs were drawn mainly as a function of the amount and type of data and information available. Secondly, they state that using a general humpback whale BIA conflates the use of an area by the listed DPS of interest with that of other DPSs. ADF&G stated that we should consider the BIAs within the context of the number of whales from a listed DPS using each summer foraging region (*i.e.,* the movement probabilities).

Response: As part of their reassessment of the relative conservation value of all habitat units, the CHRT discussed the concerns expressed by ADF&G regarding how presence and proportional size of BIAs were considered in the CHRT's assessment; however, we did not made any corresponding changes to how this information was considered. Information regarding the BIAs constitutes an important part of the best available scientific data, and is just one part of the range of information upon which the designations are based. The CHRT was aware of the differences in the approaches taken by the two separate teams that defined and drew the BIAs in Alaska versus the BIAs in the California Current system. This had been discussed and acknowledged by the CHRT, who had also discussed the BIAs and their development with the primary authors of the respective papers describing the BIAs (Ferguson *et al.* 2015a and 2015c, Calambokidis *et al.* 2015) prior to their initial assessment. We had also purposefully displayed those data in the tables in such a way as to clearly distinguish between the sources for the BIAs. Thus, all CHRT members were aware of the distinction in how the BIAs were created and what these data represent. The size of a BIA relative to the particular critical habitat unit was considered and discussed by CHRT members in a general and non-quantitative sense, and was not used independent of other information (*e.g.,* movement probabilities for a given DPS) for the particular habitat units. The information regarding the BIAs was considered useful and relevant to assessing relative conservation value of areas for a given DPS, and was thus retained as information considered by the CHRT during their reassessment of the relative conservation value of particular areas.

Comment 32: With respect to data considered during the assessment of the conservation value of particular areas, ADF&G also stated that consideration of confirmed sightings of whales of the listed DPSs within an area is difficult to interpret and should not be used as an indication of use of that area by the DPS. They assert such data could be misapplied in such a way as to exaggerate the value of an area. They state that a more appropriate metric would be multiple confirmed sightings that demonstrate regular use by the DPS.

Response: Information regarding whether confirmed sightings of whales of the listed DPSs were documented within each particular critical habitat unit was retained in the set of data considered by the CHRT during their reassessment of the relative conservation value of particular areas. While we agree with ADF&G that this information does not provide an indication of relative use of an area or

relative importance of a particular area to a given DPS, the CHRT considered it useful and more transparent to include this information to make it clear which areas had no confirmed sightings of whales of a given DPS and thus where presence of the DPS has instead been assumed given other available data for a larger or less precise geographic area. These data still constitute an important part of the best available data, which need not be perfect. Moreover, as stated previously, individual types or sources of data were not applied independently of the other available information for a particular are or DPS, which addresses the State's concern that taken alone the data could be misleading. To help eliminate the perception that the CHRT misinterpreted or misapplied data (see also Comments 30 and 31), we expanded the relevant discussions in the Final Biological Report (NMFS 2020a) to explain the data considered by the CHRT, the purpose of the data tables, and the approach used by the CHRT in conducting the structured decision-making process. The added discussion helps to further clarify that the CHRT did not limit their analysis to any one piece of data or the data presented directly in the data tables, but that the team also considered the expert knowledge and insights shared among team members during the structured decision-making process itself. In sum, the CHRT considered all of the available, relevant scientific information and appropriately took into account data limitations and uncertainty, where they existed, in determining which data comprised the best available data upon which to rely for the final determination. The determination of what constitutes the ''best scientific data available'' belongs to the agency's ''special expertise. . . .'' *San Luis & Delta-Mendota Water Authority* v. *Jewell,* 747 F.3d 581, 602 (9th Cir. 2014) (quoting *Baltimore Gas & Elec. Co.* v. *Natural Resources Def. Council,* 462 U.S. 87, 103(1983)).

Size of Critical Habitat and Consideration of Biologically Important Areas (BIAs)

Comment 33: Multiple commenters expressed concern about the expansive area proposed for designation in Southeast Alaska. Several of the commenters stated that it would not be credible to assert that every square mile of this area is essential to the conservation of the MX DPS, and multiple commenters requested that critical habitat in Southeast Alaska be limited to areas already designated by NMFS as a BIA. Another commenter requested that we exclude Southeast Alaska/Region 10, because it was designated as BIA area based on use of this area by the healthy Hawaii DPS of humpback whales.

Response: As discussed in the draft and final Biological Reports (NMFS 2019a, NMFS 2020a), BIAs were considered, along with other information, in the delineation of boundaries of our critical habitat areas as well as in our assessment of the relative conservation value of those areas. BIAs, which have no regulatory effect, were developed to supplement the quantitative habitat-density modelling efforts of the Cetacean Density and Distribution Mapping (''CetMap'') Working Group (*http://cetsound.noaa.gov*) and assist resource managers by providing additional context for marine mammal impact analyses (*https://cetsound.noaa.gov/cetsound*). BIAs are not synonymous with critical habitat under the ESA; and, as explained by the CetMap group, not everything identified as critical habitat will meet the BIA criteria and vice versa (Ferguson *et al.* 2015b). In determining which areas qualify as critical habitat under the ESA, we are required to apply the statutory definition of critical habitat and adhere to the statute's requirements and standards for designating critical habitat. Therefore, as a general matter, we are not required to restrict the critical habitat designations to areas previously recognized by NMFS as BIAs. In this particular case, this issue is no longer relevant because Southeast Alaska (Unit 10) is excluded from the critical habitat designation for the MX DPS (see response to Comment 43).

Comment 34: Several commenters stated the proposed critical habitat is overly broad because it includes areas that are merely ''habitat'' (*i.e.,* areas where the animals may be found). The commenters referred to the recent Supreme Court ruling in *Weyerhaeuser Co.* v. *U.S. Fish & Wildlife Serv.,* 139 S. Ct. 361, 368 (2018), in which the court stated that critical habitat is a subset of habitat, and stated that this indicates we cannot designate areas that are merely occupied by the species and do not contain elements required for survival. ADF&G stated that the proposed designations are inconsistent with Congressional intent and a supposed statutory requirement that the smallest possible area that contains the habitat with the highest conservation value habitat is what should be designated as critical habitat. ADF&G pointed to the critical habitat designation for North Pacific right whales as an example of a designation that they believe more closely follows the regulatory requirements for critical habitat because it was limited to specific areas where the available data indicated the presence of the essential feature. Commenters also referred to the BIAs and asserted that these smaller, specific areas meet the ESA standards for the designation of critical habitat or at least indicate that there are smaller areas that could qualify as critical habitat. In contrast, a large number of other commenters stated they supported the designation of all of the proposed areas, and one commenter asserted that the proposed critical habitats appear to be the minimum that should be considered and that science suggests the areas should be much bigger.

Response: Neither the statutory definition of critical habitat nor our implementing regulations (50 CFR 424.12) require that critical habitat be designated only within the smallest possible area that meets this statutory definition. There is simply no legal basis to support that position. We do acknowledge that critical habitat must logically be a subset of what more broadly qualifies as ''habitat'' for these particular species. *See Weyerhaeuser* v. *U.S. Fish and Wildlife Serv.,* 139 S. Ct. 361 (2018). The best available data here support that the areas being designated as critical for each of the DPSs of humpback whales at issue (the WNP, CAM, and MX DPSs) meet the elements of the definition of ''critical habitat'' and are a subset of the habitats they occupy and use, which for each DPS includes large areas outside U.S. jurisdiction. Because each of these areas meets the definition of occupied ''critical habitat'' under the ESA, the kinds of issues that arose in the matter before the Supreme Court in *Weyerhaeuser* v. *U.S. Fish and Wildlife Serv.* (139 S. Ct. 361 (2018)—which involved unoccupied habitat—are simply not presented. Areas meeting the definition for occupied critical habitat are inherently validated by the definition itself as being ''habitat,'' because the species have in fact occupied them and they contain the essential feature. Humpback whales occur widely throughout the North Pacific Ocean and occur throughout their historical range. As discussed in the proposed rule and Biological Report (NMFS 2020), humpback whales breed in tropical and semi-tropical waters and undertake long distance migrations to access highly productive feeding grounds that extend across the rim of the North Pacific Ocean, from the coast of Russia (*e.g.,* Sea of Okhotsk and Kamchatka Peninsula), to the Bering Sea, Aleutian Islands, Gulf of Alaska, Southeast Alaska, Canada (British

Columbia), and off the U.S. West Coast to southern California. The critical habitat designations thus represent only fractions of the total combined ocean habitats used by each humpback whale DPS to migrate, breed, calve, and feed.

Humpback whale feeding areas of the North Pacific have typically been divided into five or six general regions based on genetic and sightings data that indicate population structuring across these areas. NMFS, as well as the International Whaling Commission (IWC) are currently investigating stock structure and associated feeding groups of humpback whales, which may lead to some adjustments to the currently recognized stocks and feeding group boundaries (*e.g.,* Clapham *et al.* 2020). For purposes of designating critical habitat, we delineated more specific feeding areas relative to the generally recognized, broader, feeding regions in order to facilitate an assessment on a more precise spatial scale and conduct an analysis under section 4(b)(2) of the ESA to examine the benefits of designating or excluding particular areas. Specifically, we divided what are typically delineated as five to eight feeding regions within U.S. waters, into 19 specific areas or habitat ''units.'' As described in detail in the Biological Report (NMFS 2020a), we subsequently used available data, including data regarding the distribution of each DPS and quality of the prey feature, to assess the relative conservation value of each habitat unit for each particular DPS of humpback whales. The areas included in the final designations for each DPS are areas that are occupied by the particular DPS and contain humpback whale prey species, which are necessary to support the energetic needs of the whales as well as population growth and recovery of the DPSs.

As discussed previously in response to Comment 33, BIAs are not synonymous with critical habitat under the ESA; not everything identified as critical habitat will meet the BIA criteria and vice versa (Ferguson *et al.* 2015b). In determining which areas qualify as critical habitat under the ESA, we are required to apply the statutory definition of critical habitat, which states that an area qualifies as critical habitat if it is occupied by the listed species and contains one or more physical or biological feature that is essential to the conservation of the species and that may require special management considerations or protection. Specific areas are eligible for designation as critical habitat if they meet these criteria. Thus, while we agree that the BIAs identify important feeding areas for humpback whales, we do not find that it is appropriate or consistent with the ESA to restrict the critical habitat designations to these areas.

We acknowledge that the critical habitat designations for the WNP DPS, and particularly for the CAM and MX DPSs are each larger than the two discrete areas designated as critical habitat for the North Pacific right whale. However, the humpback whale designations and that for the North Pacific right whale are not directly comparable, and it is misleading to simply compare their relative sizes without putting them in context. The different designations are a reflection of the best scientific data available regarding each species and their habitats rather than an indication that the humpback whale designations do not adhere to the statutory requirements for designation of critical habitat. At the time critical habitat for North Pacific right whales was designated in 2008 (73 FR 19000, April 8, 2008), abundance of those whales in the eastern North Pacific was unknown, but was considered by most biologists to be fewer than 100 whales, and sightings were rare. The North Pacific right whale species remains extremely rare, with an estimated effective population size for the eastern North Pacific of 11.6 whales (95 percent CI: 2.9–75.0, LeDuc *et al.* 2012) and an estimated population abundance of 31 whales (95 percent CL: 23–54, Wade *et al.* 2011). Critical habitat areas were identified in 2008 for North Pacific right whales based on the available sightings data, which were used as a proxy indicator for the presence of the identified copepod essential feature. Significantly more data are available regarding the distributions and habitat uses of humpback whales within the North Pacific, and although data specific to each DPS are relatively more limited compared to humpback whales generally, the available data clearly indicate a broader distribution for humpbacks than what was documented for North Pacific right whales.

Comment 35: Multiple commenters stated that because the BIAs identify the most critical feeding areas for humpback whales (Calambokidis *et al.* 2015) and have been determined to be biologically important under a separate, thorough scientific review (Ferguson *et al.* 2015), it is illogical to expand the critical habitat beyond the BIAs. Commenters stated that while the proposed critical habitat areas may be habitat for the whales, they are not all critical habitat because they do not necessarily contain a sufficient quality or quantity of prey or are unlikely to contain the essential prey feature given the large size of the proposed critical habitat. Several commenters specifically disagreed with the use of habitat modeling results from Becker *et al* (2016) to define critical habitat boundaries, because this model does not measure or identify areas where prey may be located, or predict presence of prey, and only predicts presence of whales with in a given area (as opposed to feeding whales).

Response: In designating occupied critical habitat, we are required to apply the best scientific data available to identify specific areas within the geographical area occupied by the species on which are found (1) physical or biological features essential to the conservation of the species and (2) which may require special management considerations or protection (16 U.S.C. 1532(5)(A)). Specific areas are eligible for designation as critical habitat for the humpback whales if they meet this definition. Delineation of specific areas is done at a scale determined by the Secretary [of Commerce] to be appropriate (50 CFR 424.12(b)(1) and (2)). Regulations at 50 CFR 424.12(c) also require that each critical habitat area be shown on a map. In making decisions about the scale and boundaries for the specific areas, we considered various factors such as the scales at which biological data are available and the availability of standardized geographical data necessary to map boundaries. The ESA does not require that we identify with specificity the exact locations within each unit where the feature occurs. *See Alaska Oil and Gas Ass'n* v. *Jewell,* 815 F.3d 544, 555 (9th Cir. 2016) (district court erred in holding FWS to ''a standard of specificity that the ESA does not require''). Further, our implementing regulations allow for flexibility in determining the appropriate scale at which specific areas are drawn. Here, we have identified where the dynamic prey feature occurs with as much specificity as the best available data allows.

To determine which areas meet the statutory definition of critical habitat and delineate biologically appropriate boundaries for the specific areas of humpback whale critical habitat, we relied on multiple types of data, including humpback whale sightings data, habitat modelling, location of BIAs, and prey species distributions (NMFS 2020a). Each type of data may have relative strengths and limitations as compared to other types of data for particular uses, which we identify and discuss in these various responses to comments and the Biological Report (NMFS 2020a). Although not perfect or

free from uncertainty, taken together they form the best available scientific data, upon which we must base these designations.

Habitat model results of Becker *et al.* (2016), and to a lesser extent Becker *et al.* (2017), which apply only to areas within the CCE, were primarily used to determine an appropriate offshore boundary for specific critical habitat areas within the CCE (*i.e.,* Units 11–19). Commenters are correct that the habitat model results of Becker *et al.* (2016 and 2017) provide information on predicted occurrences of humpback whales within the CCE and do not provide information regarding predicted occurrences of humpback whale prey species. However, as indicated by the ESA definition of occupied critical habitat, both types of information are relevant—information on occupancy by the listed species and information on presence of the prey feature. Furthermore, while these models result were used to help delineate the specific critical habitat areas, they were not the exclusive determinant of whether the areas qualified as critical habitat.

Humpback whale prey species are distributed throughout the feeding grounds and the specific areas identified as critical habitat. Due to the considerable importance of euphausiids and other forage fish species to commercial fisheries and to other marine predators, as well as their role as ecosystem indicator species, extensive scientific surveys have been conducted within all marine ecosystems of the U.S. EEZ to monitor abundances, distributions, trends, as well as factors that affect these species (*e.g.,* Santora *et al.* 2018, Sigler *et al.* 2012, McGown *et al.* 2016, Simonsen *et al.* 2016, Zwolinski *et al.* 2017; See also: *www.fisheries.noaa.gov/topic/population-assessments#fish-stocks* and *www.integratedecosystemassessment.noaa.gov*). These surveys as well as other targeted research efforts, including studies examining humpback whale diet and distributions in association with prey availability, were considered when developing the critical habitat designations because such studies provide information on distributions and abundances of humpback whale prey as well as information about variations in prey targeted by the whales across and within regions (NMFS 2020). Where available, and as discussed in the Biological Report (NMFS 2020a), we also considered observational and satellite-tag derived data indicating feeding behavior of humpback whales while on the feeding grounds (*e.g.,* Wynne and Witteveen 2013, Kennedy *et al.* 2014, Mate *et al.* 2018). Given the wide distributions of the prey species for each DPS, and the spatial and temporal variability in the abundances and distributions of these prey species, we relied on information regarding the distribution of humpback whales on the feeding grounds to determine biologically appropriate boundaries of the specific critical habitat areas (*e.g.,* Becker *et al.* 2016).

Comment 36: A commenter stated that we inappropriately expanded the critical habitat areas beyond the BIAs in part by considering the area-restricted searching (''ARS'') data reported by Mate *et al.* (2018). The commenter discussed that the relevant Mate *et al.* (2018) data involves tagging results for only seven whales, and that most of those whales exhibited ARS in small, discrete areas that largely correspond to the existing BIAs. The commenter noted that only one whale was tracked across a significantly broader range.

Response: As discussed in the Biological Report (NMFS 2020a), multiple types of information were used to delineate boundaries for the occupied critical habitat areas. Each type of data may have relative strengths and limitations for particular uses as compared to other types of data, which we discuss in these various responses to comments, but taken together they form the best available scientific information. In addition to habitat modelling results, which predict expected distributions of humpback whales in the CCE (Becker *et al.* 2016 and Becker *et al.* 2017), we considered the location of BIAs, sightings data, and to a lesser extent, satellite telemetry data. This latter category of data was not a determinant of the boundaries of the specific areas but was mainly used as additional support for the selection of appropriate boundaries of applicable specific areas because it provides very explicit information on where and the areas over which humpback whales are feeding. We agree that the available telemetry data, and specifically the ARS-mode location data (which is indicative of feeding), are limited in terms of the total number of humpback whales that have been tagged. However, these data are still relevant and important to consider and constitute a part of the best available information, and they were not used to expand the specific critical habitat areas beyond areas known or predicted to be used by humpback whales. We also note that results that have since become available from satellite tagging of four additional humpback whales off the Oregon coast in 2018 indicate that the whales spent 2.0 to 49.6 percent of their time (as a percentage of days) within a BIA (Palacios *et al.* 2020), indicating that for more than half of the time they were tracked they were outside of a BIA.

Available sightings and habitat modelling data indicate that humpback whales occur more widely throughout the U.S. EEZ and in areas outside of the recognized BIAs (*e.g.,* Hamilton *et al.* 2009, Becker *et al.* 2016). Within the CCE, BIAs were delineated based predominantly on coastal (<50 nmi offshore), non-systematic small boat surveys designed to maximize whale sightings, and the areas ultimately identified as BIAs were restricted to those areas where the highest concentrations of sightings were documented in multiple years. As the BIA authors note, both sightings and annual habitat model results indicate a high degree of variation in some areas of humpback whale concentration across years (Calambokidis *et al.* 2015). Under the statutory definition, an area qualifies as critical habitat if it is occupied by the listed species and contains one or more physical or biological that is essential to the conservation of the species and that may require special management considerations or protection. Thus, specific areas are eligible for designation as critical habitat if they meet these criteria. Neither the ESA definition of critical habitat nor the joint NMFS/USFWS implementing regulations (at 50 CFR 424.12) limit critical habitat designations to only those areas of greatest concentration of the listed species or the most frequently used areas. Thus, while we agree that the BIAs identify important feeding areas for humpback whales, we do not find that it is appropriate to restrict the critical habitat designations to these areas.

Comment 37: A commenter stated that should the agency insist on expanding critical habitat beyond the boundaries of the BIAs, that the outer limits for all units other than Unit 1 be drawn along the 1,000 m isobath. The commenter noted that, as proposed, the outer limits of Unit 2 (Aleutian Islands Area) and Unit 10 (Southeastern Alaska) are drawn along the 2,000 m isobath, while the outer limits of other units (other than Unit 1, Bristol Bay) are drawn along the 1,000 m isobath. The commenter stated that given the coastal nature of humpback whale prey species, and understanding of normal dive depths, the 2,000 m isobath boundary appears to be excessive.

Response: When selecting the boundaries for the 19 critical habitat units, the CHRT adopted several decision rules to help ensure that the

areas were drawn in a reasonable and systematic fashion, grounded in the best available data, across marine regions and for each of the three DPSs. One decision rule was that the existing BIAs would remain intact unless there was a compelling reason to change or divide it because the BIAs are well described, discrete delineations of habitat based on thorough review of existing data that generally fall within larger delineations of humpback whale feeding regions. This decision rule is what led the CHRT to draw the seaward boundaries for Unit 2 (Aleutian Islands area) and Unit 10 (Southeast Alaska) along the 2,000m isobath. This isobath line corresponds most closely with the seaward edge or outermost edge of the respective BIAs in those critical habitat units. Adjusting the critical habitat boundaries shoreward to the 1,000m isobath, as recommended by the commenter, would result in removing portions of each of the BIAs from the critical habitat. Thus, we decline to make the requested change. (We also note that because Unit 10 is excluded from the final critical habitat designation for the MX DPS, the requested change to Unit 10 is no longer relevant.)

The isobath data used to delineate seaward boundary lines on the maps correspond to the aerial extent of humpback feeding habitat, which is considered to be primarily shelf and shelf-edge habitat. Per our implementing regulations at 50 CFR 424.18(a)(1), we are required to provide maps of critical habitats and provide the coordinates and/or plot points on which the map is based available to the public on our website, and per additional requirements under 50 CFR 424.12(c), ephemeral reference points are not to be used to clarify area boundaries. For marine habitats, bathymetry data are often readily available and reliable source data from which we can create maps and share the underlying spatial data in an electronic format. For the humpback whale critical habitat maps, the bathymetry data were thus not selected to correspond to humpback whale dive depths but to capture and map the seaward extent of the feeding areas.

Requests Regarding Exclusions of Particular Areas

Comment 38: A large number of commenters requested that no areas be excluded from the critical habitat designations. Some commenters noted that climate change is causing shifts in prey and may dramatically alter humpbacks whales' habitat use and thus the conservation value of specific areas as well. Commenters also expressed concerns about the ongoing threats of ship strikes and entanglement to humpback whales in the excluded areas. A group of commenters specifically stated that NMFS should include Units 7 (Kenai Fiords), 8 (Prince William Sound), 9 (Northeastern Gulf of Alaska), and 19 (California South Coast) in the final critical habitat designations or provide an adequate justification for these proposed exclusions. The commenters stated we did not individually weigh the conservation benefit of designating Units 7, 8, and 9 as required under section 4(b)(2) of the ESA. The commenters stated that these areas, which we described as ''low conservation value,'' still confer direct benefits to the species as well as indirect benefits which could outweigh a small economic impact.

Response: As discussed in the Draft Biological Report (NMFS 2019a) and the proposed critical habitat rule (84 FR 54354, October 9, 2019), climate change is expected to affect the abundance, quality, and distributions of humpback whale prey species. Ocean warming has already been documented as having significant effects on prey availability and on higher-level predators within North Pacific marine ecosystems (*e.g.,* Coyle *et al.* 2011, Brodeur *et al.* 2018, Jones *et al.* 2018, Santora *et al.* 2020), and recent analysis of humpback whales' responses to the North Pacific marine heat wave of 2014–2016 also provide clear insights into short-term response of the whales within the CCE to marine heat waves (Santora *et al.* 2020), which are predicted to increase in frequency and duration. However, the best currently available information is insufficient to allow us to determine how diet and habitat use of humpback whales may be affected over the longer-term and across all of the North Pacific feeding grounds. Thus, although we considered this available information, the CHRT's assessment of the relative conservation value of the habitat units in critical habitat designation was driven more by an understanding of the whales' current distributions and habitat use. While we agree it would be informative to have specific habitat suitability or risk exposure models to further inform this rule, we are required to complete the designations based on the best available scientific information. We are not required to develop new studies in order to complete the critical habitat designations. We also note that we have the authority to revise critical habitat designations as appropriate and in light of new information, which provides a mechanism for addressing and incorporating changing understandings of the species' use of new areas over time (16 U.S.C. 1533(a)(3)(A)(ii)).

With respect to critical habitat Unit 7 (Kenai Peninsula Area), Unit 8 (Prince William Sound), and Unit 9 (Northeastern Gulf of Alaska), we assessed the benefits of including those areas in the designation and the benefits of exclusion for each of these particular areas with respect to each relevant DPS of humpback whales. As discussed in our Final Biological Report (NMFS 2020a) and Final Economic Analysis (FEA), these assessments were revised and updated in response to public comments and new information received following publication of the proposed rule. In both the initial and final conservation rating assessments conducted by the CHRT, Units 7, 8 and 9 were rated as having low conservation value for the WNP DPS. In both the initial and final conservation rating assessments, Units 7 and 9 were rated as having low conservation value for the MX DPS; and Unit 8, which was previously rated as having high conservation value, was changed to medium conservation value (see NMFS 2020a). The estimated annualized economic impact of designating each of these three areas increased (by $1,600) based on new information regarding the rate of consultations on aquaculture and water quality management related activities, an update to 2020 dollars (from 2018 dollars), and an update of the timeframe of the analysis to 2020–2029 (previously 2019–2028). Overall, the updated assessments provided no basis to revise our previous conclusions regarding the relative weighing of the economic costs of designating these areas against the benefits of designating these areas. The benefits of designating the low value areas were still found to be outweighed by the associated economic impacts; and, for the MX DPS, the benefit of designating the medium value area of Prince William Sound was still not outweighed by the associated economic impact of designating this particular area. Thus, Units 7, 8, and 9 are excluded from the final critical habitat designation for the WNP DPS, and Units 7 and 9 are excluded from the final critical habitat designation for the MX DPS.

In conducting the weighing of benefits under section 4(b)(2), we assessed the benefits of designation and exclusion for each particular area (see NMFS 2020b). Given the relatively low forecasted costs and potential economic impacts associated with designating each of the 19 units under consideration, we determined that the benefits of designating medium, high, and very

high value areas were not outweighed by the economic benefits of exclusion. We did, however, conclude for each of the low conservation value areas that the limited benefits of designation were outweighed by the benefits of avoiding the forecasted costs and potential economic impacts of the designation. We also concluded for each of these areas that the exclusion from the designation would not result in the extinction of the particular DPS. Although the conclusion is the same for all low conservation value areas (*i.e.,* to exclude), a separate determination was made regarding each exclusion and whether such exclusion would result in the extinction of the relevant DPS. We have revised the Final Section 4(b)(2) Report to further clarify that the exclusion of each particular area was based on an assessment of that particular area.

Finally, we acknowledge that humpback whales face ongoing threats, particularly from ship strikes and entanglement, even within the areas excluded from the critical habitat designations. However, these threats, which directly impact the whales, will continue to be addressed under both the ESA and MMPA wherever applicable, regardless of whether the particular area has been designated as critical habitat under the ESA. In particular, when section 7 consultations are undertaken for Federal agency actions that may have impacts in the areas where whales or their prey are present, impacts that affect the whales will be considered as part of the analysis of whether the action is likely to jeopardize the continued existence of the listed species.

Comment 39: Multiple commenters requested that Unit 19 be included in the final critical habitat designations. Commenters expressed concerns regarding the significant threats of ship strikes and oils spills in Unit 19. Commenters also referred to the relative proportions of humpback whales as indicated by Steiger *et al.* (2017), high predicted occurrence of humpback whales as indicated by Becker *et al.* (2017), and krill hot spots as indicated by Santora *et al.* (2011) in this area, and stated that Unit 19 is therefore important to the conservation of the endangered CAM DPS of humpback whales. These commenters stated that exclusion of Unit 19 is not justified unless we analyze habitat preferences and distribution of the whales in relation to shifting environmental conditions and help identify the spatial and temporal dynamics of the species' risk exposure.

Response: We appreciate the concerns raised by the commenters regarding threats to humpback whales within Unit 19, California South Coast. However, these threats (*e.g.,* ship strikes, oil spills) do not provide sufficient justification for inclusion of this particular area in the critical habitat designation for either the CAM or the MX DPs of humpback whales. As discussed elsewhere in this final rule, the designation of critical habitat in areas within the species' occupied range is based on the presence of physical or biological features essential to their conservation of the species that may require special management considerations or protection. The existence of threats to the species, while informative, is not an appropriate basis upon which to build a designation of critical habitat under the ESA. Further, NMFS does not entirely agree with the characterization by the commenters of this particular area based on sightings, modeling, and prey distribution data. Unit 19 alone does not contain the highest 90 percent of the study area abundance predicted by the Becker *et al.* (2017) habitat model as implied by the commenters; rather it was added to capture the southernmost portion of the predicted abundances. As illustrated in Figure 18B in the Biological Report (NMFS 2020a), the highest 90 percent of predicted abundances based on the results of Becker *et al.* (2017) extend over most of Unit 16 and all of Units 17, 18, and 19. Sightings data reported in Calambokidis *et al.* (2017, Figure 5) and used in the poster by Steiger *et al.* (2017), which was referenced by the commenters, were considered and weighed heavily in our assessment of relative conservation value of critical habitat units along the coasts of Washington, Oregon, and California for the CAM and MX DPSs. These sightings data indicate that the largest proportions of CAM DPS whales do occur off of Southern California, while the largest proportions of MX DPS whales occur farther north along the coast. In terms of distribution of whales off of Southern California in particular, most of the sightings occur from Monterey Bay south to the northern Channel Islands and the Santa Barbara Chanel, and relatively few sightings occur farther south (J. Calambokidis, Cascadia Research Collective, pers. comm., May 12, 2020). This is consistent with the predicted abundances from Becker *et al.* (2016 and 2017), which indicate that the waters off southernmost portion of the California coast (*i.e.,* Unit 19) have the lowest predicted abundances of humpback whales during summer months as well as during cooler months (see Figure 17, Final Biological Report). Based on the locations of 10 krill hot spots reported in Santora *et al.* (2011), which we overlaid onto a map of the critical habitat units, only one of the 10 hotspots occurs within Unit 19, and no humpback whale BIA has been identified in Unit 19. Overall, we find that the best available data support the rating of Unit 19 as having relatively low conservation value for both the CAM and MX DPSs.

Comment 40: Multiple commenters, including the Washington Department of Fish and Wildlife, expressed opposition to the proposed exclusions of the Quinault Range Site (QRS) off the coast of Washington and the associated 10 km buffer around this area. Several commenters stated that the proposed exclusion was overly broad and not adequately justified. Several commenters stated that planned activities, such as use of sonar and explosives, can impact the whales and their prey and additional mitigation measures or restrictions on the Department of the Navy's (''Navy'') activities within the QRS should be implemented. One commenter noted that the QRS overlaps with the Olympic Coast National Marine Sanctuary, an area that requires a higher standard of resource protection. Many commenters noted that the QRS area was within a critical habitat area rated as having high conservation value for the CAM and MX DPS whales. Commenters requested we reconsider the Navy's request for this exclusion given the increased numbers of humpback whales using and moving through this area.

Response: As discussed in the Final Section 4(b)(2) Report (NMFS 2020b), to weigh the national security impacts against conservation benefits of a potential critical habitat designation, we considered the size of the requested exclusion and the amount of overlap with the specific critical habitat area; the relative conservation value of the specific area for each particular humpback whale DPS; the likelihood that the Navy's activities would destroy or adversely modify critical habitat; the likelihood that NMFS would require new or additional project modifications to reduce or avoid these impacts; and the likelihood that other Federal actions may occur in the site that would not be subject to the critical habitat provision if the particular area were excluded from the designation. In response to the public comments, we reconsidered these factors, information provided by the Navy, and also requested additional information from the Navy regarding their activities in the portion of the QRS

that also falls within the Olympic Coast National Marine Sanctuary (OCNMS).

In making our decision with respect to this particular area, we did so within the framework of our joint NMFS/USFWS policy on implementation of Section 4(b)(2) (81 FR 7226, February 11, 2016) (''Section 4(b)(2) Policy''). Specifically, when a Department of Defense (DOD) agency requests an exclusion the basis of national-security or homeland security impacts, it must provide a ''reasonably specific justification'' of a probable incremental impact on national security that would result from the designation of that specific area as critical habitat (81 FR at 7231, February 11, 2016). Where the request is substantiated with such a reasonably specific justification, we give ''great weight'' to those concerns in analyzing the benefits of exclusion. *Id.*

The proposed exclusion of the QRS and 10-km buffer comprise about 44 percent of Unit 11 (Coastal Washington), but represents only a very small portion of the total critical habitat designations for the CAM DPS (about 3 percent) and the MX DPS (about 1 percent). The QRS and associated buffer also have a significant degree of overlap with the OCNMS, where certain activities are prohibited, including oil, gas, or mineral exploration, development, or production; discharging or depositing any material or other matter; drilling into, dredging, or otherwise altering the seabed, with some exceptions (15 CFR 922.152). Because of these prohibitions, the likelihood of other Federal activities being proposed in this area of the QRS may be limited.

In response to public comments, and as described in the Final Biological Report, the CHRT completed a reassessment of the relative conservation value of each particular area under consideration for designation for each DPS. This reassessment was conducted to address multiple concerns that were raised in the comments regarding the data considered by the CHRT in rating the relative conservation of specific areas, and particularly that this initial analysis was confounded by data on non-listed humpback whales from the Hawaii breeding population (the ''Hawaii DPS''). The primary consideration in the CHRT's re-analysis of relative conservation value was the degree to which whales of a given DPS rely on each particular area for feeding. To evaluate this, the CHRT considered the best available data on migratory destinations, distribution patterns, and proportions of the DPSs using or estimated to use different feeding areas (*e.g.,* Barlow *et al.* 2011, Wade 2017, Calambokidis *et al.* 2017). Secondary considerations in assessing the relative conservation value of particular areas included the habitat quality or the consistency with which prey or high quality prey are abundant (which can be indicated by, among other data, presence of a BIA), and connectivity between feeding areas (generally as indicated by photo-identification and/or genetic data). Based on this reassessment, Unit 11 is rated as having medium conservation value for the CAM and MX DPSs. Available data from satellite-tagged humpback whales indicate the highest use areas within Unit 11 occur within the BIA as well as within the western edge of the Strait of Juan de Fuca (Mate *et al.* 2018, Palacios *et al.* 2020), which do not overlap with the QRS or associated buffer. Comparisons of the requested exclusion area with the predicted humpback whale densities from Becker *et al.* (2016, who modeled predicted densities in approximately 10 km by 10 km grid cells) also indicates that the requested exclusion area (meaning the QRS and buffer) is largely south of, but overlaps partially with, the area where the highest densities of humpback whales are predicted to occur within Unit 11.

In support of their request for exclusion of the QRS and buffer area, the Navy pointed to the extensive range of planned activities, which are described in their Final Northwest Training and Testing (NWTT) Supplemental Environmental Impact Statement (SEIS) published on September 18, 2020, and stated that any additional, future modifications to these activities to minimize impacts on humpback whale critical habitat would impact the Navy's ability to meet mission requirements. The Navy pointed to the use of explosives, in particular, as being likely to have adverse effects on humpback prey species, although not likely at the population level of the prey species. In their initial request, dated December 5, 2018, the Navy stated that if additional mitigation requirements were to result from a designation of critical habitat, they would likely need to halt, reduce in scope, or geographically or seasonally constrain testing activities to prevent adverse effects to critical habitat, and this would in turn impact their ability to test and field new systems and platforms. To avoid potential, additional, spatial restrictions on their activities within the QRS, the Navy also requested exclusion of an additional 10-km buffer around the QRS from the critical habitat designation. The Navy determined the size for this buffer using sound attenuation modeling to calculate the farthest distance at which fish would be expected to be injured from the largest explosive the Navy can reasonably foresee testing in the QRS; and, in subsequent communications, the Navy further clarified that the size of the buffer also incorporated uncertainty for updates in resource-related science, changes in oceanographic conditions that could reduce attenuation, and the evolution of military technologies that may behave differently in the environment.

We continue to conclude that the Navy has provided a reasonably specific justification to support the requested exclusion of the QRS, and consistent with our Section 4(b)(2) Policy, we gave great weight to these concerns when analyzing the benefits of exclusion. Our consideration of the multiple factors discussed, coupled with the potential delay in critical missions in order to complete adverse modification analyses, cause us to continue to find that the benefits of excluding the QRS due to national security impacts outweigh the benefits of designating this portion of Unit 11 as critical habitat for the MX and CAM DPSs. However, we are modifying our proposed exclusion of the buffer area. Specifically, we are not excluding a portion of the 10-km buffer area extending from the northeast corner of the QRS where it overlaps with the OCNMS. As discussed in the Section 4(b)(2) Report, we concluded the benefits of designating critical habitat for the MX and CAM DPSs within this portion of the buffer are not outweighed by national security impacts of including that portion at this time.

We acknowledge the concerns raised by the commenters regarding potential impacts to the whales and their prey because of certain Navy activities, such as sonar and explosives. The Biological and Conference Opinion on the Navy's Northwest Training and Testing Activities, issued by NMFS on October 19, 2020, addresses activities within the QRS and analyzed the effects of the Navy's planned activities on humpback whales as well as their prey. As discussed in that consultation, the Navy has adopted certain mitigation measures within the QRS, including the portion of the QRS that overlaps with the OCNMS, to avoid or minimize adverse impacts on marine mammals and other marine resources in this area. Exclusion of the QRS area will not impact our ability to continue to work closely with the Navy through the section 7 consultation process to minimize and mitigate impacts to the humpback whales as a result of the Navy's testing and training activities.

Comment 41: A few commenters expressed opposition to the proposed exclusion of the Navy's Southeast Alaska Acoustic Measurement Facility within Unit 10 and the Southern California Range Complex within Unit 19. One commenter stated these proposed exclusions pose too great a risk to the whales given the Navy's planned activities within these areas which have the potential to increase the risk of vessels strikes, disrupt foraging, and affect prey species. One commenter noted that the Integrated Natural Resource Management Plan (INRMP) for the Southeast Alaska Acoustic Measurement Facility (SEAFAC) had not yet been finalized and requested that NMFS revisit its decision to exclude this area once the INRMP is completed. The commenter stated we must also weigh the conservation benefit of designating this area.

Response: The SEAFAC is located in the Western Behm Canal near the city of Ketchikan and covers an area of 48 nmi^2 (164 km^2), which equates to 0.22 percent of the total area of Unit 10. We originally proposed to exclude SEAFAC under section 4(b)(2) of the ESA on the basis of substantiated national security impacts. We did not rely on any determination that the area was ineligible for designation under section 4(a)(3)(B)(i) of the ESA, which provides that certain areas cannot meet the definition of ''critical habitat'' if they are covered by a relevant INRMP that has been determined in writing to provide a benefit to the species (16 U.S.C. 1533(a)(3)(B)(i)). SEAFAC lies fully within Unit 10, which as discussed in detail in the Final Section 4(b)(2) Report (see also response to Comment 43), is excluded from the final critical habitat designation for the MX DPS under section 4(b)(2) of the ESA. (No other listed DPSs of humpback whales occur in this Unit). Therefore, because the larger area (Unit 10) is excluded on other grounds, it is not necessary for us to specifically exclude SEAFAC on either the original grounds or the alternative basis suggested in the comment. The status of the INRMP is not relevant to this determination.

The Southern California Range Complex (SOCAL), which is a portion of the Navy's Hawaii-Southern California Training and Testing Study Area (HSTT), overlaps with approximately 83 percent of critical habitat Unit 19. We agree that the activities that occur in the SOCAL range complex (*e.g.,* anti-submarine warfare, torpedo, mine countermeasure, gun, missile and rocket, and propulsion testing) have the potential to impact humpback whales, their feeding behaviors, and their prey species. The degree of any such impact depends upon the nature, timing, location, etc. of the particular activity. The Navy has concluded, and we agree, that designation of this portion of Unit 19 as critical habitat could potentially lead to requirements for additional mitigations (avoidance, area or time limitations, etc.) that could hinder Navy testing and training activities, and thereby impact military readiness and thus national security. Section 4(b)(2) requires us to consider impacts to national security, and our Section 4(b)(2) Policy directs that we accord great weight to the Navy's concern because they have provided a reasonably specific justification regarding these potential impacts. (81 FR 7226, February 11, 2016). Therefore, we stated in our proposed rule that this area should be excluded under section 4(b)(2) of the ESA. No new information was provided during the comment period to alter this conclusion, which we reaffirm in light of the great weight we assign the national security impacts consistent with our policy, and so we here affirm the exclusion of this area on the basis of national security impacts. We also note that the entire broader area of Unit 19, most of which overlaps with the SOCAL range, is excluded from the critical habitat designation based on consideration of economic impacts (see Final Section 4(b)(2) Report).

Comment 42: Several commenters expressed concern regarding the significant threat of ship strikes to humpback whales and requested that shipping lanes not be excluded from the critical habitat designation. One commenter noted that humpback whale BIAs overlap the San Francisco and Santa Barbara Channel shipping lanes, and stated that although ship strikes can be managed under existing mechanisms, ship traffic can compromise the benefit of critical habitat through disruption of surface availability, potentially resulting in physiological impacts to the whales. This commenter requested that the final rule acknowledge shipping as a potential impact to habitat quality. Another commenter requested that the shipping lanes of San Francisco or Long Beach/Los Angeles harbors not be excluded from the critical habitat designations given the extensive, cooperative efforts to address the threat of ship strikes in and around the traffic separation schemes (TSSs).

Response: We appreciate the concerns expressed by this commenter and the continued efforts being made to reduce ship strikes of humpback and other large whale species. We are not excluding any particular shipping lanes from the critical habitat designations for any of the three DPSs of humpback whales. We note, however, that the ports of Los Angeles and Long Beach lie within critical habitat Unit 19, which is excluded from the critical habitat designations for both the MX and CAM DPSs of humpback whales under section 4(b)(2) of the ESA. That particular exclusion was based on a conclusion that the relatively low conservation value of the particular area for each DPS was outweighed by national security and economic impacts and a determination that the exclusion will not result in the extinction of either DPS.

Comment 43: A large number of commenters opposed designation of Unit 10 (Southeast Alaska), and requested that NMFS remove this area from the critical habitat designation for Mexico DPS. The commenters stated that the economic impacts on Southeast Alaska were underestimated, while the conservation value was overestimated. Multiple commenters stated that economic impacts to the commercial fishing and related industry and infrastructure projects would be greater than anticipated and would impact the roughly 30 communities within this area. Some commenters noted that Southeast Alaska had the highest estimated administrative costs among all areas considered for designation. Numerous commenters also stated that Unit 10 is peripheral habitat for the threatened MX DPS of humpback whales, supporting only an estimated 2 to 4 percent of the MX DPS, and that designation of this area will provide minimal conservation benefit for this DPS while having a disproportionate and significant economic impact on Southeast Alaska. Many commenters also noted that most of the whales in this area are from the non-listed Hawaii population of humpback whales, and stated that Unit 10 should not be considered critical habitat for the listed MX DPS simply because it is biologically important feeding habitat for another population of humpback whales.

Response: As discussed previously in responses to comments on the economic analysis (see *Economic Impacts*), the FEA has been revised in response to public comments, which reflects increases in the anticipated economic impacts over what was presented in the DEA. For Unit 10 in particular, the costs have been revised upwards as a result of the information we received on the increased rate of consultations on aquaculture projects and water-quality management projects that is anticipated (as well as adjustments to the dollar-year and the timeframe applied in the

analysis). Specifically, the estimated, annualized, economic impacts to Southeast Alaska are estimated to be $26,000–$32,000, whereas the DEA had estimated an annualized impact of $12,000–$18,000. The estimated annualized cost for Unit 10 is more than double the cost estimate for any other particular area, and on average is roughly 10 times greater than the cost estimate for other particular areas within Alaska. Chapter 2 of the FEA also highlights the State of Alaska's concerns related to potential unquantified costs (*e.g.,* project delays) and discusses the potential for indirect or unquantified direct impacts related to certain activities. This discussion highlights that these added costs may affect communities such as those in Southeast Alaska more than other, more populated and economically diverse communities. Although most of the forecasted consultations for Southeast Alaska are expected to be informal consultations, the fact that the number of forecasted consultations in this particular area are an order of magnitude greater relative to other areas in Alaska indicates the potential for such impacts to result is much greater within this particular area.

Also, as discussed previously in response to Comment 30 and in further detail in the Final Biological Report, we reassessed the relative conservation value of each particular area under consideration for designation for each DPS in light of issues and concerns raised in public comments, particularly the assertion that our initial analysis was confounded by consideration of non-listed humpback whales from the Hawaii breeding population. In conducting the reassessment, the CHRT's primary consideration when rating the relative conservation value of each particular area was the degree to which whales of a specific DPS rely on each particular area for feeding. In conducting this analysis, the CHRT reviewed the best available scientific data on migratory destinations, distribution patterns, and proportions of the DPSs using or estimated to use different feeding areas (*e.g.,* Barlow *et al.* 2011, Wade 2017, Calambokidis *et al.* 2017). The CHRT did not rate the relative conservation value of areas based on whether the particular areas were important for non-listed humpback whales. In other words, whether a particular feeding area serves as important feeding habitat for the non-listed Hawaii population of whales was not used by the CHRT as a proxy indicator that the area has the same biological importance to whales of a listed DPS. Secondary considerations in assessing the relative conservation value of particular areas included indicators of habitat quality and connectivity between feeding areas that would confer conservation value in the face of environmental variability or threats (see NMFS 2020a). Based on this reassessment, Unit 10 is rated as having low conservation value for the MX DPS.

Given the results of the economic analysis that indicate Unit 10 is projected to experience the greatest probable economic impact, coupled with the relative low conservation rating of this particular area, we find that the benefits of excluding this particular area outweigh the benefits of designating it as critical habitat. We are therefore excluding this particular area from the final critical habitat designation for the MX DPS pursuant to the authority of section 4(b)(2) of the ESA.

Comment 44: A commenter stated that critical habitat will benefit the humpback whales in Southeast Alaska (Unit 10), even though only 6–8 percent of the whales using this area are known to be from the threatened MX DPS, and that the proposed critical habitat should be designated. The commenter stated that if the several hundred MX DPS whales in this area do not warrant ESA protection, then NMFS should state what number of listed whales does merit protection. The commenter also stated that the number of whales estimated to use this area is likely an underestimate.

Response: We appreciate the commenter's concern regarding designating critical habitat in areas where even a small proportion of the listed DPS is known to occur or has been estimated to occur. However, we cannot, nor are we required to, specify a threshold number of listed whales within a specific area that would warrant or not warrant a critical habitat designation. In designating critical habitat, we must first identify areas that meet the statutory definition of critical habitat based on the best scientific information available, and must then consider the economic, national security, and other relevant impacts of that designation pursuant to the first sentence of section 4(b)(2) of the ESA. When entering into an exclusion analysis, under the second sentence of section 4(b)(2), we evaluate each particular area on the basis of the set of data relevant to that particular area. In this case, after considering the best available data regarding the use and value of this area to the conservation of the MX DPS and the estimated economic impacts of including Unit 10 in the designation of critical habitat for that DPS, we determined that the benefits of designating this area are outweighed by the benefits of excluding (or, the impacts of designating) this particular area. Thus, although we determined that Southeast Alaska (Unit 10) meets the definition of critical habitat for the threatened MX DPS of humpback whales, as outlined more fully in our response to the previous comment, we are excluding this area from the final critical habitat designation for the MX DPS under the authority of section 4(b)(2) in order to ensure that the areas included in the final designation provide the most meaningful benefit to the species while minimizing undue or disproportionate costs and other impacts.

Comment 45: One commenter stated that the proposed critical habitat around the Shumagin Islands and the Stepovak Bay area is not needed, and that it will hamper local communities that are already under extreme pressure from regulatory bodies. The commenter recommend we not designate these areas as critical habitat as members of the local community very rarely or never have negative contact with the whales.

Response: The locations referred to by the commenter are within and adjacent to a Biologically Important Feeding Area (BIA, Ferguson *et al.* 2015c) for humpback whales, and a substantial amount of data from scientific surveys indicate that this area consistently serves as an important feeding habitat for humpback whales (Witteveen *et al.* 2004, Witteveen and Wynne 2013, Witteveen and Wynne 2016a). This feeding area is used by both the MX and WNP DPSs (Witteveen *et al.* 2004; Calambokidis *et al.* 2008, Barlow *et al.* 2011), where the whales target and consume krill and fish species (Nemoto 1957, 1959; Wynne and Witteveen 2013). The estimated economic impacts forecasted to occur in the particular area (Unit 3), where the Shumagin Islands and Stepovak Bay are located, are among the lowest when compared to the other nine critical habitat units in Alaska. Based on the high-end estimates of future activity in the unit and associated section 7 consultations, fewer than 10 section 7 consultations are forecasted to occur within Unit 3 over the next 10-years, and 7.5 of those consultations are expected to be informal consultations, which carry fewer costs generally (IEc 2020). Unit 3 was assessed by the CHRT as having high conservation value for the MX DPS and medium conservation value for the WNP DPS. This latter rating was associated with greater uncertainty due to almost 40 percent of the CHRT's votes

being assigned to the high conservation value category.

The ESA requires that we designate critical habitat for listed species to the maximum extent prudent and determinable, and it allows the Secretary to exclude particular areas after conducting an exclusion analysis if the benefits of including the area in the designation are outweighed by the impacts (*e.g.,* economic impacts, national security) of including the area in the designation. In this process, we must determine which factors are relevant and how much weight to assign each factor (50 CFR 424.19(c)). Here, we assign great weight to the assessment that the area provides at least medium conservation value habitat for the endangered WNP DPS and high conservation value habitat for the threatened MX DPS to support the conservation of these species, which is a significant and important benefit of including the area in the designations. It is reasonable to give great weight to this factor in light of the purpose of critical habitat under the Act (to support the conservation, or recovery, of the species) and the statutory mandate to designate critical habitat to the maximum extent prudent and determinable. After thoroughly considering the available information regarding the benefits of designation and impacts of designation, we find the benefits of including the area in the designations are not outweighed by the probable benefits of excluding the area from the designations. Thus, the standard for excluding the area under 4(b)(2) is not met, and this particular area is not excluded from the final designations.

Comment 46: A commenter requested exclusion of the Prince William Sound (Unit 8) and the Northern Gulf of Alaska (Unit 9) habitat units from the critical habitat designations. The commenter expressed concerns that the economic impacts were underestimated for Prince William Sound in particular, stating the economic analysis focused on expenses to NMFS and did not fully consider the potential economic impacts to local residents, stakeholders, and municipal governments from additional expenses and delays associated with additional regulatory requirements for hatcheries and port, harbor, and seafood processing infrastructure projects as well as direct economic impacts on the commercial fishing fleet. The commenter stated that Unit 8 is not the most biologically important area for the MX DPS and its designation is not necessary to meet the requirements of the ESA.

Response: Unit 9, which was assessed as having relatively low conservation value for both the WNP and MX DPSs was not proposed for designation, nor is it included in the final designations for either DPS. Unit 8, which was assessed as having low conservation value for the WNP DPS whales, was not proposed for designation for that DPS, nor is it included in the final designation for that DPS. Thus, we focus our response on Unit 8, the Prince William Sound area, which we proposed to include in the critical habitat designation for the MX DPS.

As discussed previously (see response to Comment 1), the costs estimated in the analysis are not exclusive to NMFS, and as shown in Exhibit 1–3 of the FEA, for each forecasted consultation, the analysis estimates administrative costs to NMFS, a Federal action agency, and a third party. A third party can be a private company (*e.g.,* an applicant for a Federal permit), a local or state government, or some other entity. In addition, the analysis also evaluates the potential for costs resulting from additional conservation efforts for the humpback whales that may be recommended through consultation, as well as the potential for indirect impacts (not related to section 7), such as project delays or regulatory uncertainty. Under our implementing regulations, we must take into account the *probable* economic, national security, and other relevant impacts (50 CFR 424.19(b)). Based on information provided during the public comment period, the FEA includes more detailed discussion of concerns related to these potential economic impacts of the designation in Alaska and discusses the likelihood of these materializing. As summarized in Section 2.2 of the FEA, the economic analysis indicates that it is most likely that the costs resulting from critical habitat designation will be largely limited to administrative costs of consultation, with the potential for some additional, unquantifiable costs to result from in-water construction and dam-related project delays that may occur following designation, which are unquantified in the analysis but presented qualitatively. Additional discussion regarding in-water construction costs is provided in response to Comment 10. Lastly, as described in the FEA and as discussed in response to Comment 3, the FEA quantifies costs of consultations on fishery management plans in Alaska, including a total of four anticipated consultations on the Fishery Management Plans for the Bering Sea/Aleutian Island groundfish fishery and Pacific halibut fishery over the next ten years. However, as described in Section 2.3.1 of the FEA, we do not presently anticipate critical habitat designation for humpback whales to generate changes to fisheries management in Alaska because the fisheries either do not target humpback whale prey species or do not take significant amounts of humpback whale prey species overall. Thus, there is no indication that the commercial fleet in this region will experience probable economic impacts as suggested by the commenter. In response to public comments and new information provided, the quantified annualized economic impact for Unit 8 was increased from $1,800 to $3,400. However, this cost estimate remains among the lowest when compared to all critical habitat units under consideration for designation for the MX DPS (Exhibit 3–3, FEA).

The relative conservation value of Unit 8 was reassessed by the CHRT in response to public comments and through this reassessment, the relative conservation value for Unit 8 was changed from high to medium. This rating was largely based on the relative level of use of this area by whales from the MX DPS and the presence of a feeding BIA. We also considered the recent information indicating that this area likely has a strong connection to Kodiak Island (Unit 5), which is considered to have very high conservation value for the MX DPS (NMFS 2020a). While we agree with the commenter that this is not the most biologically important area for the MX DPS, as reflected in the final medium conservation value rating for this area, this area meets the ESA's definition of critical habitat and is considered important to the conservation and recovery of the MX DPS. It is considered more important than the areas assessed as having ''low'' conservation value. Further, the ESA does not direct that a designation must be limited to only the ''most important'' areas. An area that meets the definition of ''critical habitat'' on the basis of the best available information is presumptively included in the designation, subject to the exclusions process of section 4(b)(2), which allows for exclusion only in particular circumstances.

Specifically, the second sentence of section 4(b)(2) of the ESA provides that the Secretary may exclude particular areas from a designation only if the Secretary finds that the benefits of excluding that particular area from the designation outweigh the benefits of including that particular area in the designation, and failure to include the area in the designation will not result in the extinction of the species (50 CFR 424.19(c)). As we explained in the

response to Comment 45, we must determine which factors are relevant and how much weight to assign each factor in carrying out the analysis (*see id.).* Here, we assign great weight to the CHRT's assessment that area provides a medium level of value to support the conservation of the MX DPS, which is a significant and important benefit of including the area in the designation. It is reasonable to give great weight to this factor in light of the purpose of critical habitat under the ESA (to support the conservation, or recovery, of the species) and the statutory mandate to designate critical habitat to the maximum extent prudent and determinable. After thoroughly considering the available information regarding the benefits of designation and impacts of designation, we find that the benefits of designating the Prince William Sound area as critical habitat are not outweighed by the relatively low forecasted, potential economic impacts. Unit 8 will therefore not be excluded from the designation for the MX DPS.

Comment 47: The Aleutians Island East Borough expressed concerns regarding how the critical habitat designation for the WNP and MX DPSs of humpback whales could inhibit project development, such as proposed kelp farms, within their jurisdiction. The comment also expressed concerns about restrictions on fishing opportunities, because the Borough is dependent upon fish tax revenue to provide important services and infrastructure. The Borough requested the exclusion of seven municipal areas: Zachary Bay on Unga Island, the city of Sand Point, the city of King Cove, the city of False Pass, the city of Akutan, and the city of Cold Bay, and waters surrounding the Community of Nelson Lagoon.

Response: In considering this request, we first evaluated the degree of spatial overlap of the seven areas identified by the Borough with areas proposed for designation as critical habitat using GIS data provided by the Borough. King Cove and Nelson Lagoon are located fully outside of the critical habitat boundaries and thus are not included in the critical habitat designation. Cold Bay and False Pass are almost entirely outside the critical habitat boundaries, with areas of overlap measuring only 0.79 nmi^2 (2.70 km^2) and 0.22 nmi^2 (0.77 km^2), respectively. The remaining areas, Akutan, Sand Point, and Zachary Bay lie within or almost entirely within the proposed critical habitat. Sand Point and Zachary Bay lie within Unit 3 of the proposed critical habitat, which was rated by the CHRT as having medium conservation value to the WNP DPS and high conservation value to the MX DPS. Akutan is located within Unit 2 of the proposed critical habitat, which was rated as having very high conservation value to both the WNP and MX DPSs. In terms of the quantified economic impacts, both Units 2 and 3 had estimated costs that were among the lowest of the Alaska units as well as overall. Based on the number of forecasted section 7 consultations for these areas, which are relatively low and are largely expected to be informal consultations, future impacts on these communities as a result of the critical habitat are expected to be limited. In addition, and as discussed previously in response to Comment 3 and in Section 2.3.1 of the FEA, we do not currently anticipate changes to fisheries management because the fisheries either do not target humpback whale prey or take significant amounts of humpback whale prey species overall. Thus, overall, we conclude that impacts on the overlapping communities as a result of the critical habitat designation will be limited and do not outweigh the conservation benefit of the critical habitat designations. After engaging in the consideration of impacts as discussed in the response to Comments 45 and 47, we therefore conclude that the standard under section 4(b)(2) is not met; the benefits of designating these areas are not outweighed by the probable benefits of exclusion of these areas, and we decline to exclude them from the final designations.

Comment 48: A commenter requested that we exclude Unit 12 and 13 from the designation for the CAM DPS, because presence of CAM DPS whales in these areas has merely been inferred, no BIA has been identified in Unit 12, and the lack of interchange of humpbacks in these units strongly suggests these units do not contain prey in sufficient quantities to be considered essential to the conservation of the species. The commenter also noted there is a strong basis to exclude these areas under section 4(b)(2).

Response: Unit 12 (Columbia River Area), which is located around the Columbia River plume system and extends from the southern Washington to northern Oregon coast, and Unit 13 (Coastal Oregon), which includes the remainder of the Oregon coast, were rated as having medium/low conservation value and medium conservation value, respectively, for the CAM DPS through both the initial and final assessments conducted by the CHRT. These relative conservation ratings were driven largely by the available data showing declining proportions of CAM DPS whales within the more northern feeding areas within the CCE (Calambokidis *et al.* 2017). (With the exception of Unit 19, all other habitat units to the south were assigned higher conservation values for this DPS.) Our understanding of distribution of CAM DPS whales is based on extensive photo-identification data as well as available genetic data. Analysis of 23,277 identifications of 3,484 humpback whales sighted in the CCE (from southern British Columbia to southern California) from 1986–2014 indicates that a low proportion of whales occurring off the coast of Washington belong to the CAM DPS, and a relatively higher proportion of CAM DPS whales occurs off the coast of Oregon (Calambokidis *et al.* 2017). Over 70 percent of the photo-identified whales from the CAM DPS matched to the Oregon-California region (Calambokidis *et al.* 2017). Consistent with this finding, is the very high estimated probability (0.926, Wade 2017) of whales from the CAM DPS moving into the larger Oregon-California feeding region, which extends into Unit 13 and a significant portion of Unit 12. Photo-identified CAM DPS whales have also been observed in feeding areas adjacent to and directly to the north and south of the area covered by Units 12 and 13.

While two feeding groups of whales are currently recognized along this portion of the CCE (*i.e.,* Southern British Columbia/Northern Washington and Oregon/California; Carretta *et al.* 2017 and 2020), analysis of available satellite tracks indicates overlap in the movements and feeding ranges of whales from Washington and Oregon, and from Oregon and California (but not between Washington and California; Palacios *et al.* 2020). Preliminary results from an ongoing, large-scale assessment of photo-identification data also suggest potentially significant rates of movement of humpback whales between the southern British Columbia/Washington and Oregon/northern California regions and the Oregon/northern California and southern California regions (Clapham *et al.* 2020). Individual assignment tests have indicated that two whales (of nine) sampled in 2016 and 2017 and one (of six) sampled in 2018 off the coast of Oregon (Unit 13) have the highest likelihood of being assigned to the CAM DPS (Mate *et al.* 2018, Palacios *et al.* 2020). Overall, these available data provide strong support for CAM DPS whales' use of both Units 12 and 13 as well as interchange with adjacent feeding areas.

Multiple krill hotspots in association with submarine canyons have been

identified in Units 12 and 13 (Santora *et al.* 2018), across which variable abundances and distributions of northern anchovy, Pacific herring, and Pacific sardine have also been documented (*e.g.,* Litz *et al.* 2008, Zwolinski *et al.* 2012, Hill *et al.* 2019). The best available data indicate that these areas contain sufficient abundances of prey to support humpback whale feeding. Area-restricted search data (ARS, indicative of feeding behavior) derived from satellite tracks for 19 humpbacks tagged in 2004–2005 and in 2017 indicate that whales were feeding within Units 12 and 13 (Mate *et al.* 2018). Satellite-monitored tracks for 11 humpback whales tagged off the coast of Oregon in 2015–2018 also indicate that the area off the Columbia River mouth was one of the highest use areas (Palacios *et al.* 2020). In addition, a comprehensive analysis of a total of 56 tracks from humpback whales tagged during 2004–2018 off California, Oregon, and Washington indicates that of two behavioral modes, ''transiting'' or ''ARS,'' about 60–75 percent of the location data within the areas of Unit 12 and 13 were in the ARS behavioral mode, while less than 25 percent of the location data were classified as transiting and remaining data classified as ''uncertain'' (Palacios *et al.* 2020).

The annualized economic impact of designating these areas was estimated to be $6,900 for Unit 12 and $9,500 to $10,000 for Unit 13, which are not considered particularly high or significant costs. The whales in the DPS for which these units would be designated are endangered and considered to have relatively low abundance, and we find that the habitat in both Units 12 and 13 is important to support the recovery of this DPS. After engaging in the consideration of impacts as discussed in the response to Comments 45 and 47, we therefore conclude that the standard under section 4(b)(2) is not met; the benefits of designating these areas is not outweighed by the estimated probable economic impacts associated with each of these habitat units. Therefore, we are not excluding these specific areas from the final critical habitat designation for the CAM DPS.

Comment 49: A commenter requested we exclude Unit 6 (Cook Inlet Area) from the final critical habitat designation for the MX DPS. The commenter stated that fewer humpback whales have been observed during monitoring surveys in lower Cook Inlet in recent years (Kendall *et al.* 2015, Lomac-McNair *et al.* 2014) than during the SPLASH surveys, and asserted that because this area does not contain a BIA, it cannot logically contain the essential feature. The commenter also stated that whales using lower Cook Inlet have always been considered part of the Central North Pacific Stock, which is considered to be part of the non-listed ''Hawaii DPS.'' Lastly, the commenter asserts that designation of Cook Inlet as critical habitat would create a regulatory burden with very little conservation value to the listed DPS, and that if Unit 6 is considered to contain the essential feature for the MX DPS, NMFS should exclude this area from the designation pursuant to section 4(b)(2) of the ESA.

Response: Unit 6, which consist of the lower portion of Cook Inlet north to Kalgin Island, was proposed for designation as critical habitat for the MX DPS. Humpback whales are routinely sighted in the lower portions of the inlet but in fairly low numbers within a given year (National Marine Mammal Laboratory (NMML), unpubl. data, 1994–2016). Inter-annual movements of whales between lower Cook Inlet, the Barren Islands, and waters adjacent to northeast Kodiak Island (Witteveen *et al.* 2011) strongly suggest this is not a discrete feeding area. Photo-identification data collected during the SPLASH study demonstrates that MX DPS whales occur in this particular area, but the level of site fidelity of humpback whales to this feeding area has not been established.

As discussed previously (see response to Comment 33), BIAs, are not necessarily synonymous with critical habitat and vice versa, and while BIAs were an important consideration in the CHRT's assessments, lack of a BIA does not disqualify areas from consideration as critical habitat under the ESA. While non-listed humpback whales from the Hawaii breeding population are more abundant within the larger Gulf of Alaska region relative to whales from the threatened MX DPS, this region is part of the occupied range of the MX DPS. Humpback whale ''stocks'' identified under the MMPA are not synonymous with DPSs under the ESA, and the currently recognized MMPA stocks, which consist of multiple DPSs, are currently being reviewed by NMFS (Muto *et al.* 2020, Carretta *et al.* 2020). Both the estimated proportion of MX DPS whales using Unit 6 as well as the lack of a BIA in this particular area were among the relevant factors considered by the CHRT in assessing the relative conservation value of this area.

Based on the CHRT's reassessment of the relative conservation values of all specific areas, the conservation value of Unit 6 to the MX DPS was changed from the initial medium rating to low conservation value (NMFS 2020a). This rating was largely influenced by the low percentage of MX DPS whales identified in this area during the SPLASH study (5 of 301 MX DPS whales), the low to moderate predicted movement probability of MX DPS whales into the larger Gulf of Alaska region (*i.e.,* 0.111; Wade 2017), and the lack of a BIA in this Unit. Available sightings data, which indicate that only about 103 humpback whales have been observed within Unit 6 during beluga whale aerial surveys conducted in 17 summers during 1994–2016 (NMML, unpubl. data, 1994–2016; Sheldon *et al.* 2017), suggest that the number of humpback whales using this area is low.

Based on the analysis in the FEA, the estimated annualized economic impacts of designating Unit 6 as critical habitat was increased to $5,200–$5,600 from the previous estimate in the draft analysis of $3,400–$3,700 (IEc 2020). This increase was the result of new information regarding the increased rate of consultation on aquaculture and hatchery projects in future years per data from ADF&G, the increased rate of consultations on water quality management activities per data from ADEC, an update to 2020 dollars (from 2018 dollars), and an update to the analysis timeframe to 2020–2029 (previously, 2019–2029). Although the estimated economic impacts are still considered relatively low, we conclude that the benefits of excluding Unit 6 outweigh the relatively low conservation value of including Unit 6 in the critical habitat designation for the threatened MX DPS. We also conclude that this exclusion will not result in the extinction of the MX DPS. Thus, Unit 6 is excluded from the final critical habitat designation (NMFS 2020b).

Comment 50: The Alaska Department of Transportation and Public Facilities (DOT&PF) requested that we exclude developed areas from the critical habitat designations for the WNP and MX DPSs because such areas do not contain high quality habitat. The DOT&PF specifically requested exclusion of existing and planned ferry terminals in the Alaska Marine Highway System, harbors, seaplane facilities, ports, and harbor facilities under the control of local governments. The DOT&PF referenced the critical habitat designations for the Southwest Alaska DPS of the northern sea otter and Cook Inlet beluga whales as examples where similar provisions were included in the critical habitat rules. The DOT&PF also requested exclusion of a 500 foot zone around ferry, harbor and seaplane facilities or structures because such

areas receive the most intense use as boats and seaplanes enter and exit the facilities, and routine maintenance and facility upgrades frequently require large barges and boats to maneuver in and around these structures.

Response: The Southwest Alaska northern sea otter and Cook Inlet Beluga whale critical habitat designations (74 FR 51988, October 8, 2009; 76 FR 20180, April 11, 2011) include regulatory language indicating that manmade structures are not included in the critical habitat. For instance, the sea otter designation states: Critical habitat does not include manmade structures (including, but not limited to, docks, seawalls, pipelines, or other structures) and the land on which they are located existing within the boundaries on the effective date of this rule (50 CFR 17.95(a)(3)). The Cook Inlet beluga whale critical habitat regulation contains the following, similar, regulatory language: Critical habitat does not include manmade structures and the land on which they rest within the designated boundaries that were in existence as of May 11, 2011 (50 CFR 226.220). NMFS has also included similar regulatory language in other previous critical habitat designations (*e.g.,* Northwest Atlantic Ocean DPS of loggerhead sea turtle (50 CFR 226.223(c)(2)), Atlantic sturgeon DPSs (50 CFR 226.225(a)(6)), Hawaiian monk seal (50 CFR 226.201(c)(1))). In these previous cases, the rationale for this regulatory language was that the manmade structures themselves do not contain or provide the essential physical or biological features identified as being essential to the listed species. Although we are not required to establish with perfect specificity exactly where the essential feature is located within the specific areas, we find that here it is also appropriate to denote that structures are not included within the designation because they do not, by definition, have the essential feature. We therefore agree with the commenter that the inclusion of such language in the critical habitat designations for the WNP, MX, and CAM DPSs of humpback whales is an appropriate clarification. Therefore, we have added regulatory language that is applicable to all three of the critical habitat designations that indicates that existing manmade structures (*e.g.,* docks, sea plane facilities) are not part of the critical habitat because they do not contain the essential prey feature for any of the DPSs.

Similar to previous critical habitat designations, this clarification regarding manmade structures will apply only to those structures in place by the effective date of this rule. We conclude that it would be an unwarranted departure from agency practice and inappropriate to include planned or future facilities in this clarification. The construction of facilities in the future within the critical habitat may pose adverse effects to the physical or biological feature or to the area, and there would be a benefit to review of such projects through interagency consultation applying the requirements of section 7 of the ESA. In such cases, we find it appropriate that those construction activities be carried out in a manner that is required to consider and avoid adverse destruction or modification of the critical habitat. We also note that this clarification in the critical habitat regulatory language does not constitute an exclusion to the critical habitat designations under section 4(b)(2) of the ESA, but rather it is a clarification regarding what is considered critical habitat to ensure consistency with the standards of the statutory definition.

However, we note that the commenter appeared to go further than previous practice to include harbors and ports in this exclusion request. Such areas are not generally excluded from the referenced critical habitat designations that the commenter cited in support. Rather, the regulatory clarification in both the sea otter and Cook Inlet beluga whale critical habitat designations is specific to manmade structures. The Cook Inlet beluga whale critical habitat designation's exclusion of the Port of Anchorage is inapposite. There, the exclusion of the port was not limited to the manmade structures within the port and was not for the purpose of mere clarification. Rather, that particular port, which is designated by the Department of Defense (DOD) as a Strategic Port, was excluded from Cook Inlet beluga whale critical habitat under section 4(b)(2) based on consideration of national security impacts. No information regarding impacts to national security were provided by the commenter, and we have received no such exclusion request from DOD. Thus, the ports will not be excluded from this final designation.

Consistent with the critical habitat designations cited by the commenter, we are also not excluding an additional 500 foot zone or buffer around manmade structures. The justification put forward by the commenter to support the requested 500 foot buffer is the high degree of vessel and seaplane presence and traffic around the ferry, harbor, and seaplane structure and facilities. While it is clear these are areas have a relatively high level of routine vessel and plane activity, this does not necessarily indicate that there would be significant costs from including the area in the designation. There is no obvious Federal nexus with many of these identified activities, and likely only a small subset of these activities would be subject to the requirements of section 7 of the ESA. In addition, the impact of these types of activities will largely be direct impacts on the whales themselves (*e.g.,* vessel strikes, harassment), potential adverse effects that would independently trigger the need for section 7 consultation to consider impacts to the species. Thus, in the subset of cases where there is a Federal nexus—for example, in instances where the vessel activity is associated with construction or maintenance of a ferry terminal—the requirement to consult under section 7 of the ESA would be triggered even in the absence of humpback whale critical habitat and would likely be focused on direct impacts to the ESA-listed whales. Furthermore, the protections for humpback whales and other marine mammals under the MMPA would also apply within this buffer area. As indicated in the FEA (IEc 2020), no additional conservation measures are likely to result from the forecasted consultations on in-water construction activities, largely due to the existing baseline protections in place; and, the associated administrative costs for the relevant areas of Alaska are relatively low, especially relative to Unit 10 (Southeast Alaska). In addition, non-quantified economic impacts, such as project delays, are also unlikely (and therefore do not constitute probable impacts) because, as confirmed by the State of Alaska, there are no specific examples of such in-water construction projects having been halted or delayed due to a new critical habitat designation and resulting need for reinitiation of an existing consultation in Alaska.

In conclusion, after engaging in the consideration of impacts under section 4(b)(2), we find there is no clear basis to establish a meaningful benefit from excluding a 500 foot buffer around these structures from the critical habitat designations. We therefore conclude that the standard under section 4(b)(2) is not met; the benefits of including the buffer area in the designation are not outweighed by any benefit of exclusion. Therefore, we are not making this additional exclusion.

Comment 51: A commenter requested that we focus the critical habitat designation within Southeast Alaska on waters that have been routinely shown to be highly important for humpback whale feeding. The comment states that it is common knowledge that humpback whales only rarely traverse through

Wrangell Narrows and Duncan Canal, both of which they state contain developed areas and do not contain the essential prey feature. Thus, the commenter concludes, it is reasonable to exclude these areas from the critical designation. Other areas were identified as supporting high densities of feeding humpback whales at certain times of year—specifically Sitka Sound, Seymour Canal, the Petersburg area, and Frederick Sound north of Kupreanof Island to Stephens Passage and west past Big Creek. The commenter also requested a certain distance buffer of communities and other human development in general, or a buffer of non-Federal lands to allay concerns of the public.

Response: We appreciate the commenter providing this information regarding seasonal use patterns of humpback whales within Southeast Alaska. However, as discussed previously in our response to Comment 43, based on our analysis of the benefits of excluding this area as compared to the benefits of including the area, Southeast Alaska (Unit 10) is excluded from the final critical habitat designation for the MX DPS. The exclusion of this particular area was based on the finding that the economic impacts of designation outweigh the benefits of designation, and the conclusion that this exclusion will not result in the extinction of the species.

Requests To Designate Particular Areas

Comment 52: A commenter provided information and results of recent studies regarding the abundance, identity, and spatial and temporal use patterns of humpback whales in San Francisco Bay. The commenter stated that these data indicate a recent influx of humpback whales into the bay, where they feed on northern anchovy. The commenter specifically noted that peak daily numbers reached 24 whales in the outer strait west of the Golden Gate Bridge, and 15 whales inside the bay east of the bridge. The commenter stated that whale presence and locations was correlated with tidal state, with whales moving inshore with the rising tide and offshore with the ebbing tide. Based on a total of 502 photo-documented sightings, the commenter stated that 61 individual whales have been cataloged, of which 18 have visited the bay in multiple years, and 44 percent (n=27) of which have been matched to whales on the breeding grounds on the West Coast of Mexico. To promote the recovery and conservation of the Mexico DPS, the commenter recommended that the inshore boundary of Unit 16 within San Francisco Bay be set as a northsouth line running from Bluff Point in Marin County through Angel Island and Alcatraz Island to San Francisco's Aquatic Park Pier, which would extend the current boundary approximately 5.25 km east of the Golden Gate Bridge. The commenter stated that whales in the bay face increased exposure to the threat of ship strike, harassment (through vessel noise), and entanglement, and noted the lack of vessel speed restrictions within the bay.

Response: We appreciate the detailed information provided by this commenter. The proposed inshore boundary of Unit 16 was delineated by the 15-m isobath except where it was drawn farther inshore into San Francisco Bay east to the Golden Gate Bridge. The boundary was extended into the mouth of the San Francisco Bay to capture what had recently been recognized as important foraging habitat for humpback whales (Calambokidis *et al.* 2017), but only up to where the highest numbers of whales had been observed (*i.e.,* near the entrance to San Francisco Bay; J. Calambokidis, Cascadia Research Collective, pers. comm., May 23, 2018). Both sightings and telemetry data indicate that humpback whales are concentrated and mainly forage outside the bay on the shelf and especially within the area encompassed by the nearby BIA (Calambokidis *et al.* 2015, Mate *et al.* 2018). Study results provided by the commenters support a hypothesis that the whales' presence in the bay is tidally-influenced, with the whales following prey into the bay on rising tide, and departing on falling tide. Specifically, the results provided by the commenter demonstrate the shift in sightings from Point Bonita (outside the bay) eastward to and under the Golden Gate Bridge over the course of rising tides. Because the majority of these sightings did not extend farther into the bay, we find that the boundary, as initially proposed, appropriately captures the general distribution of humpback whales and the vast majority of whale sightings within this portion of their feeding habitat. Therefore, we conclude on the basis of the best available scientific data that the boundary as proposed remains the appropriate boundary for critical habitat for both the CAM and MX DPSs.

Although we are not extending the critical habitat boundary as recommended by this commenter, we will continue to address the threats raised by this commenter as being particular concerns in this area. Specifically, ''take'' of these listed whales as a result of ship strikes, harassment, and entanglement will continue to be addressed as appropriate under sections 7, 9, and 10 of the ESA and under the MMPA. We also look forward to continued results from this study, including information on future trends in humpback whale occurrences within the bay and the DPS identity of whales in this area.

Comment 53: Multiple commenters requested that the critical habitat designations be expanded to include the Salish Sea, including areas around the San Juan Islands, Admiralty Inlet, and Puget Sound. Several of these commenters noted their personal observations of humpback whales in Puget Sound. Another commenter referred to the Center for Whale Research, Humpbacks of the Salish Sea catalogue, and the Orca Network's Whale Sighting Network data and stated that over 400 individual humpback whales have been documented in the Salish Sea, including individuals from both the threatened Mexico DPS and endangered Central America DPS. This commenter stated that these waters are becoming increasingly important to humpback whales and should be designated as critical habitat.

Response: We agree with these commenters that available data clearly indicate humpback whales are increasingly being observed within the Salish Sea. However, data referenced by the commenter in support of extending critical habitat into the Salish Sea are photographs that are not associated with location data (Center for Whale Research catalogue and Humpbacks of the Salish Sea catalogue), and public reports of humpback whale sightings that cannot be attributed to unique whales (Orca Network's database). Sightings data without corresponding location data or a means of determining counts of individual whales prevents us from applying these data to determine habitat use patterns or determine the extent to which the sightings may be biased by areas of greater human concentrations.

Within the Salish Sea, scientific survey data indicate that the highest densities of humpback whales occur within the Strait of Juan de Fuca up to Port Angeles, especially on the British Columbia side of the strait, with only intermittent use of the waters deeper within Puget Sound (pers. comm., John Calambokidis, Cascadia Research Collective, February 26, 2020). Satellite tagging data for 42 humpback whales that were tagged off the coast of Washington and tracked during mid-summer and early fall of 2018 and 2019 indicate a consistent habitat use pattern, with whales showing a preference for continental shelf and shelf-edge habitat

and use of the western portion of the Salish Sea (Mate *et al.* 2020, Palacios *et al.* 2020). Within the Salish Sea, whale tracks generally extended as far east as Pillar Point; however, three whales travelled into Canadian waters off Vancouver Island. No whales were tracked into Puget Sound (Mate *et al.* 2020, Palacios *et al.* 2020). Overall, we find that the proposed boundary at Port Angeles is an appropriate boundary and captures the portion of U.S. waters known to be occupied and consistently used by whales from the MX and CAM DPSs. Ongoing research efforts will continue to provide information regarding trends in humpback whale use of the Salish Sea as well information regarding the extent to which ESA-listed humpback whales are using this area as feeding habitat. We will follow those results as they will inform our management efforts under the ESA and could inform future revision to the critical habitat designations.

Comment 54: A group of organizations stated that the critical habitat designation should include confirmed breeding areas for the WNP DPS. The commenters assert that we overlooked research in the Draft Biological Report that shows humpback breeding locations near Guam and the Northern Mariana Islands. These commenters stated that we provided an inadequate explanation for excluding the WNP breeding areas in the Northern Mariana Islands/Guam from critical habitat consideration and must correct this error.

Response: In developing the proposed rule, we considered all available data regarding the occupied range of the WNP DPS, including the location of confirmed breeding areas. At the time of listing, the WNP DPS was described as those humpback whales that that breed or winter in the area of Okinawa and the Philippines in the Kuroshio Current (as well as unknown breeding grounds in the Western North Pacific Ocean), transit the Ogasawara area, or feed in the North Pacific Ocean, primarily in the West Bering Sea and off the Russian coast and the Aleutian Islands (50 CFR 224.101(h)). WNP DPS humpback whales breed in waters around southern Japan from about December to June (Darling and Mori 1993), off the Philippines in the Kuroshio Current from about November to May (Acebes *et al.* 2007), and in an additional unknown breeding ground in the Western North Pacific (Bettridge *et al.*2015). Both the Draft Biological Report (NMFS 2019a) and proposed critical habitat rule (84 FR 54354, October 9, 2019) discuss the unresolved breeding range of this DPS as well as ongoing research suggesting that some WNP DPS whales may be using areas around the Mariana Islands as a breeding ground. As discussed in the Draft Biological Report and summarized in the proposed rule, we concluded that while this work suggests that an area off Saipan may be part of the hypothesized ''missing'' breeding area for the WNP DPS, additional data would be needed to fully resolve the extent to which whales from the WNP DPS are using areas around the Mariana Islands as a breeding/calving habitat and to determine the essential physical and/or biological features of these areas. Although the results of that research have since been published (*i.e.,* Hill *et al.* 2020), we find that it does not resolve the questions we would need to answer in order to include this area in the critical habitat designation. We continue to find available data insufficient to determine the physical or biological features essential to support breeding and that may require special management considerations or protection, as required to meet the statutory definition of critical habitat within the species' occupied range (16 U.S.C. 1532(5)(A)(i)). The commenters did not provide any relevant literature or data regarding essential features of breeding habitat or the spatial extent of the specific areas containing essential features around the Mariana Islands or Guam.

The commenter points to Figure 2 in the Draft Biological Report to support their assertion that the proposed rule overlooked research that shows humpback breeding locations near Guam and the Northern Mariana Islands. This particular figure was taken from a 2015 IWC report (Ivashchenko *et al.* 2015) regarding the status and pre-exploitation abundance of humpback whales in the North Pacific. This IWC report does not describe research on breeding areas. The report authors discuss how, for purposes of their analysis, they adopted the locations of humpback whale breeding and feeding areas that were used during the SPLASH study (*e.g.,* Barlow *et al.* 2011), and they specifically state: ''Currently four breeding populations have been identified: the Western NP (Okinawa and Philippines), Hawai'i, Mexico (mainland and the offshore waters of the Revillagigedo Islands), and Central America. Relatively low match rates between whales feeding in the Aleutian Islands and these four breeding areas indicate the likely existence of a fifth breeding population whose location is presently unknown; for the purpose of management, the U.S. National Marine Fisheries Service recently lumped this unidentified stock with the Western North Pacific'' (Ivashchenko *et al.* 2015). Therefore, this particular figure does not refer to or provide information to support the designation of breeding habitat for the WNP DPS of humpback whales.

Because endangered WNP DPS whales have been documented to occur off some of the Mariana Islands, we have assessed the impacts of Federal actions in this area on the WNP DPS in relevant ESA section 7 consultations. Thus, despite the lack of sufficient data to support the designation of breeding areas as critical habitat, we will continue to address potential impacts from Federal actions on these whales through section 7 of the ESA. We will also continue to monitor results of humpback whale research being conducted in waters off the Mariana Islands and other hypothesized breeding areas (*e.g.,* Northwest Hawaiian Islands) to determine the extent to which WNP DPS whales are using these areas as breeding habitat and whether and when it may be appropriate to revise critical habitat for the WNP DPS.

Essential Features

Comment 55: Multiple commenters agreed with the identification of the single, ''prey'' essential feature but requested that the regulatory definition of this feature be modified. A few commenters stated that the proposed prey feature is too vague and requested that we identify specific species and life stages that fall under the definition of prey species. The commenters noted that the proposed rule discusses how, in addition to euphausiids, northern anchovy, Pacific herring, Pacific sardine, and capelin, humpback whales also consume other fish species in Alaska, including Atka mackerel, and juvenile walleye pollock, and expressed concern that NMFS may subsequently interpret the definition to include these other fish species. The commenters stated additional clarification on species and life stages of prey is necessary to inform future section 7 consultations. Another commenter stated that the essential feature was not defined with the required specificity for each unique DPS, and that we must perform an assessment of the specific prey features applicable to each of the unique DPSs. ADF&G requested that we include the concept of ''regular aggregations of prey'' in the definition of the prey feature if that is an ''essential'' aspect of the prey feature as was discussed in the Draft Biological Report.

Response: Humpback whales are generalists, consuming a variety of prey while foraging. To meet their energetic

requirements, humpback whales can shift their diet during the feeding season to target prey that happens at that time to be of greater abundance or higher quality (Witteveen *et al.* 2012 and 2015, Fleming *et al.* 2016, Moran and Straley 2018). Humpback whale prey species are also dynamic in terms of their relative distributions and abundances and are influenced by ecological (*e.g.,* spawning seasonality) and environmental factors (*e.g.,* ocean conditions, climate change), and potentially by anthropogenic factors (*e.g.,* commercial fisheries). As a result of these multiple variables, the precise array of prey species targeted and consumed by the whales of each DPS varies both spatially and temporally. Despite this variability, however, substantial data indicate that the humpback whales' diet commonly includes euphausiid species (*e.g.,* of genera *Euphausia, Thysanoessa, Nyctiphanes,* and *Nematoscelis*) and small pelagic fishes, such as northern anchovy (*Engraulis mordax*), Pacific sardine (*Sardinops sagax*), Pacific herring (*Clupea pallasii*), sand lance (*Ammodytes personatus*), juvenile walleye pollock (*Gadus chalcogrammus*), and capelin (*Mallotus villosus;* Nemoto 1957 and 1959, Rice 1963, Klumov 1965, Krieger and Wing 1984, Baker *et al.* 1985, Kieckhefer 1992, Clapham *et al.* 1997, Witteveen *et al.* 2012, Neilson *et al.* 2013).

The diet of humpback whales has been studied and described using multiple techniques, including examination of stomach contents (typically for commercially harvested whales), stable isotope analyses, and direct observations of feeding whales. The Biological Report (NMFS 2020) contains a discussion of humpback whale diet information by geographic region and includes appended tables listing prey items, locations and methods of the study, and associated references. We are not aware of any additional diet information not already reviewed in the Biological Report that is specific to any DPS (nor was any provided by the commenter).

These diet studies were used to identify the prey species that are common or most prevalent in the diet of humpback whales within the relevant geographic regions. In response to the public comments, these prey (at the genus or species level) have been expressly incorporated into the essential feature description for each humpback whale DPS. We relied on information regarding the distribution of the prey species as well as location of the various diet studies to identify appropriate prey items specific to each DPS of humpback whales. Specifically, we identified euphausiids from genus *Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*), as well as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), and Pacific herring (*Clupea pallasii*) as primary prey species for the CAM DPS. We identified euphausiids of genus *Thysanoessa and Euphuasia,* Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), juvenile walleye pollock (*Gadus chalcogrammus*), and sand lance (*Ammodytes personatus*) as primary prey species for the WNP DPS. Lastly, the primary prey identified for the MX DPS include all of the prey identified for the CAM and WNP DPSs, because the MX DPS whales feed in areas that overlap with both of the other DPSs.

We also examined the available diet information to identify what specific age-classes of prey species consumed by humpback whales have been reported. For example, humpback whales have been reported to consume all age classes of Pacific herring (Moran and Straley 2018), and post-larval euphausiids (Nemoto 1957, 1959). Studies focusing around Kodiak Island indicate that humpback whales consume juvenile walleye pollock (*i.e.,* age-0, young-of-year, and age-1) and capelin age-0 and older (Witteveen *et al.* 2008 and 2012, Witteveen and Wynne 2016, Wright *et al.* 2016). Therefore, in response to the comment received, where the available data indicate that only certain age-classes of fish species are consumed (rather than all age classes), we have also provided the relevant age-class information as part of the prey feature definition (*i.e.,* juvenile walleye pollock).

Although many other prey items have been reported as being taken by humpback whales, these reports are rare, spatially or temporally limited, or are historical observations that have not been further substantiated with more recent evidence. For example, copepods were often reported by Nemoto (1957, 1959, 1977) in the stomachs of humpback whales taken during whaling, but characterized as ''incidental'' given their low number in the stomach relative to their abundance in the sea and the distribution of the whales relative to the more offshore distributions of copepods. Kieckhefer (1992) observed surface-feeding humpback whales at Cordell Bank feeding on schooling fish that were ''tentatively identified'' as juvenile rockfish (*Sebastes* spp.). A few studies report that salmon were observed near foraging humpback whales (*e.g.,* Moran and Straley 2018 in Prince William Sound, and Neilson *et al.* 2013 in southeast Alaska). Other anecdotal reports as well as evidence from studies conducted during hatchery release of salmon (Chenoweth *et al.* 2017, Kosma *et al.* 2019), indicate that humpback whales will consume salmon; however, evidence of predation on wild salmon is limited, especially given their abundance in the inshore and coastal waters of southeast Alaska. Nemoto (1957 and 1959) reported Atka mackerel in 58 of 392 humpback whale stomachs examined; however, the whales were reported to feed on Atka mackerel in waters west of Attu and south of Amchitka, locations that are well west of the critical habitat boundaries for the MX and WNP DPSs. Pacific eulachon has been reported as a prey item, but results from a stable isotope analysis found that in no summer of a three-summer study conducted off Kodiak Island were contributions of eulachon significant in the humpback whale diet, while both euphausiids and pollock were found to be predominant prey sources (Witteveen *et al.* 2012). Overall, the available data regarding occurrence of other potential prey species such as these in the humpback whale diet are not sufficient to support a conclusion that they are essential components of the humpback whale diet such that they should be considered part of the essential biological feature within the specific feeding areas identified as critical habitat for the listed humpback whale DPSs.

Because there are limitations to the available studies and data, including seasonal, spatial, and temporal limitations that affect the resulting diet information, and because changes in ocean conditions can alter the relative importance of some prey species within the humpback whale diet at a particular point in time, it is not possible to identify an exhaustive list of prey species as part of the essential feature for each DPS. We therefore applied the best available scientific data to identify a non-exhaustive list of the predominant prey species for each DPS. We find that this is the level of specificity supported by the best available data, which provides adequate notice to the public of the species that are most likely to constitute prey for each DPS, and is appropriate for defining the essential feature. As more data become available regarding the particular diets of each DPS, that data should be considered as part of the best available scientific and commercial information to inform particular section 7 consultations.

We further find that the essential prey feature may require special management considerations or protection either now or in the future. Most of the prey

identified in the revised essential feature are also defined as ''forage fish'' in several Federal regional Fisheries Management Plans (FMPs) as well as state management plans. These FMPs specifically acknowledge the importance of the primary prey species we have identified as essential for the conservation of humpback whale by including an objective of preserving the food web and/or providing adequate forage for dependent species along with identifying regulations to conserve these essential forage fish species. For example, Amendment 36 to the Bering Sea/Aleutian Islands Groundfish FMP and Amendment 39 to the Gulf of Alaska Groundfish FMP enacted by the North Pacific Fishery Management Council in 1998 created a forage fish species category (50 CFR 679.2) and associated regulations prohibiting directed fishing for forage fish at all times, as well as the sale, barter, trade and processing of forage fish (50 CFR 679.20). These forage fish are noted to be a critical food source for many marine mammal, seabird and fish species. These FMPs also set fishery limits on herring and walleye pollock and describe essential fish habitat (EFH)—those waters and substrate necessary for spawning, breeding, feeding or maturity—for 5 age-classes of walleye pollock (eggs, larvae, early juvenile, late juvenile and adults). This EFH designation ensures fishing and non-fishing impacts to these habitats are periodically reviewed. The Coastal Pelagic Species (CPS) FMP, enacted by the Pacific Fishery Management Council (PFMC), includes similar recognition and various restrictions on harvest for important ecosystem component species and forage fishes. Most significantly, in 2006, the PFMC adopted CPS FMP Amendment 12, which prohibited harvest of all species of krill throughout the entire U.S. West Coast EEZ (50 CFR 660.505). The PFMC also adopted an EFH designation for all species of krill that extends the length of the U.S. West Coast from the shoreline to the 1,000 fathom isobath and to a depth of 400 meters.

As we discussed in the proposed rule (84 FR 54354, October 9, 2019), humpback whales within the North Pacific feeding areas are usually observed in association with, or specifically targeting, dense aggregations of prey (*e.g.,* Bryant *et al.* 1981, Krieger and Wing 1986, Goldbogen *et al.* 2008, Sigler *et al.* 2012, Witteveen *et al.* 2015). Threshold levels of prey required to support feeding have been investigated for humpback whales, but the best available scientific data do not provide a precise understanding of the foraging behavior of humpback whales relative to multiple relevant variables such as prey densities, patch size, and biomass (Piatt and Methven 1992, Burrows *et al.* 2016, Walder 2018). Humpback whales are also known to use a variety of feeding techniques, many of which are intended to aggregate or concentrate prey (*e.g.,* herding, bubble net feeding, trap feeding), and different techniques are likely used with different prey species, prey densities, and prey depth. Thus, although humpback whale prey may not be present in ''regular aggregations'' in a particular feeding area, they may still support feeding. Overall, we find it more appropriate to focus the description of the prey feature on whether prey are available in sufficient quality, abundance, and accessibility to support feeding, rather than also including the concept of prey aggregations or a temporal aspect of ''regular aggregations.'' We can discern, based on the best available data regarding humpback whale feeding grounds, that these areas host a sufficient quantity, quality, and accessibility of prey at various times to support feeding. Lastly, we note that the ESA contains ''no statutory command that the Service provide exhaustive notice to the public concerning all'' of the essential features. *Arizona Cattle Growers' Ass'n* v. *Kempthorne,* 534 F.Supp.2d 1013, 1025 n. 2 (D. Ariz. 2008).

In conclusion, we find that the essential prey feature as revised for each DPS is described at an appropriate level of specificity in light of the best available scientific data about the humpback whale diet and prey species. We also note that section 7 consultations must be based on the best, currently available scientific and commercial data at the time of consultation and should address the particular set of facts relevant to that consultation (the nature of the project and its effects on the critical habitat; the location, timing, and duration of the effects, etc.).

Comment 56: One commenter expressed the belief and concerns that the prey feature is overly broad and will result in litigation. They requested that NMFS make a definitive statement that existing management measures are sufficient. The commenter referred to the existing prohibition on krill harvest put in place through the Coastal Pelagic Species Fishery Management Plan and noted that NMFS data indicate the CAM DPS has increased in abundance in the presence of an active CPS fishery.

Response: As discussed in response to Comment 55, we have added additional specificity to the definition of the prey feature for each DPS to address comments regarding the vagueness of the proposed feature. Our final rule and FEA reiterate statements made in the proposed rule and DEA that the existing baseline protections are relatively high with respect to humpback whale prey species. We decline, however, to make more definitive statements as suggested by the commenter with respect to this issue. The directed commercial Pacific sardine fishery has been closed for the past three years and will remain closed for the upcoming July 1, 2020–June 30, 2021 season. NMFS has not completed a section 7 consultation on the effects of the anchovy harvest on listed humpback whales, so any statements in this rule as to the existence or absence of a need for changes in management practice would be predecisional. Rather, each action must be reviewed on the basis of the best available scientific and commercial data at the time it is undertaken. Therefore, while we continue to find that baseline protections are high, we cannot prejudge the outcome of a section 7 analysis.

Comment 57: Numerous commenters requested that a sound or soundscape essential feature be included in the critical habitat designations to provide for the protection of their habitat from noise degradation that would interfere with their use and occupancy of these areas, as well as communication and other behaviors. A group of commenters provided multiple references on ocean noise and impacts of noise on marine mammals, and asserted that we had ignored studies that indicate impacts of sound on humpback whales. These commenters stated that the ESA requires the agency to view scientific uncertainty in favor of conservation of the endangered species, and that we should apply the precautionary principle in the face of inadequate or conflicting data to treat this feature as essential to support the life needs of the species. One commenter stated that if a specific numeric standard cannot be determined, we should still include a noise-related essential feature in the critical habitat designation and make it clear that critical habitat for humpback whales must not contain levels of noise that impede or prevent the whales use of this important habitat. The commenter noted that such a qualitative sound feature has been included in other critical habitat designations for whales, such as the Main Hawaiian Islands insular false killer whale. Several other commenters, however, agreed with our determination

not to include a sound-related essential feature. One commenter referred to ongoing research being conducted by NOAA, in collaboration with several partners, to monitor ''soundscapes'' within national marine sanctuaries, and noted this work could be considered in any future revisions to critical habitat for humpback whales. The Marine Mammal Commission stated that they supported the proposed determination based on available information, but stated that we should review and reconsider this conclusion periodically as better scientific data become available concerning the acoustic ecology of humpback whales.

Response: As discussed in the Biological Report (NMFS 2020a) and proposed critical habitat rule, the CHRT thoroughly considered the best available scientific information on humpback whales' use of sound and impacts of anthropogenic noise on humpback whales and concluded that the best available scientific data do not support identifying a sound-related essential habitat feature. After considering the comments and information received, we continue to find that identification of a sound-related habitat feature as an ''essential feature'' for humpback whales, whether such feature would be specifically and quantitatively described or only generally and qualitatively described, is not supported by the best available science. We will, however, consider results of ongoing and future studies and will review and reconsider this conclusion as our scientific understanding of the acoustic ecology of humpback whales advances.

Although anthropogenic noise was rated as posing a low level threat to the humpback whales at the time of listing (Bettridge *et al.* 2015), we acknowledge that noise can have impacts on the whales and that these impacts are likely to increase in the future due to increases in commercial shipping and other human activities within marine environments. Most of the available studies regarding noise impacts on humpback and other baleen whales provide evidence of direct responses by the whales, such as changes in acoustic communications or changes in signaling strategies. Effects of anthropogenic noise that result in ''take'' or harm to individual whales can be addressed under section 7 of the ESA (pursuant to the standard for considering whether a proposed Federal action would jeopardize the continued existence of the species) for listed humpback whales and under the MMPA for all humpback whales. If data indicate that anthropogenic noise from a particular Federal action is preventing or impeding access to prey or preventing or impeding successful feeding within designated critical habitat, then such effects would likely constitute an adverse effect on the prey essential feature as well as the designated area of critical habitat itself and for that reason should likely also be addressed under section 7 of the ESA (pursuant to the standard for considering whether an action poses destruction or adverse modification to critical habitat). Thus, the critical habitat as defined in this rule will provide a measure of protection from noise degradation to the extent that an action might cause such noise that would interfere with the whales' ability to use and successfully feed within the critical habitat. Furthermore, and of potentially greater conservation benefit, the critical habitat designations as finalized in this rule will result in the added requirement that Federal agencies explicitly analyze any relevant impacts of noise on humpback whale prey species (which previously could only be analyzed as an indirect effect on the listed whales).

It is correct that a qualitatively defined sound feature has been included in two previous critical habitat designations for whale species, Main Hawaiian Islands insular false killer whales (83 FR 35062, July 24, 2018) and Cook Inlet beluga whales (76 FR 20180, April 11, 2011). However, those species differ in material ways from the humpback whale. Both of those species are toothed whale species (not baleen) and rely on sound to navigate and locate prey and have limited ranges or areas of occupancy. The occupied range of insular false killer whales is restricted to the waters surrounding the main Hawaiian Islands, and like other odontocetes, they rely on their ability to send and receive sounds to navigate, communicate, and detect predators and prey within their environment. The listed beluga whales have a restricted range in the highly turbid waters of Cook Inlet and rely on sound rather than sight for many important functions. In contrast, no qualitative sound-related feature has been identified for the more migratory Southern Resident killer whales (71 FR 69054, November 29, 2006) or for any baleen whales (*i.e.,* North Atlantic right whales (81 FR 4838, January 27, 2016) and North Pacific right whales (68 FR 19000, April 8, 2008)). Additionally, for Southern Resident killer whales, in part due to their more migratory behavior and broader range (unlike insular false killer whales and Cook Inlet beluga whales), effects of sound on navigation, communication, and foraging of Southern Residents are assessed through a prey essential feature similar to humpback whales, as well as a passage essential feature.

We must base our designations of critical habitat on the best available science for a particular species. What is considered ''essential to conservation'' and thus qualifies as an essential feature necessarily depends on the particular species' biology and the available science regarding that species' habitat needs. Thus, habitat features that are considered essential to conservation of one species may not necessarily be essential to a different species. Few studies have examined the effects of noise, especially ship noise, on habitat use and feeding behavior of baleen whales. At this time, given the current limited scientific understanding and because humpback whales occupy a wide range of soundscapes, use highly diverse and spatially broad areas, and demonstrate mixed responses to noise, we do not find that identification of a sound-related habitat feature as an ''essential'' habitat feature is appropriate in this case.

We disagree with the commenter that the ESA requires that we apply a ''precautionary principle'' at the stage of determining critical habitat such that we must resolve scientific uncertainty in favor of conserving listed species. Although it is appropriate to give the species the ''benefit of the doubt'' of significant uncertainty in the context of a section 7 consultation, that concept does not generally apply to determinations under section 4 of the ESA. *Trout Unlimited* v. *Lohn,* 645 F. Supp. 2d 929, 946 (D. Or. 2007). There is no basis in the statute to require that we identify a noise or sound-related essential feature where it is not supported by our review of the best available information for these particular species and their habitat. Rather, section 4 of the ESA requires that we designate critical habitat on the basis of the best scientific data available, and we do not agree that ''essential features'' must be identified to correspond to every possible threat to the listed species. In addition, as discussed previously, we will continue to address the effects of noise on humpback whales and their habitat under section 7 of the ESA (pursuant to the requirement that a proposed action must not be likely to jeopardize the continued existence of a listed species) and under the MMPA.

Comment 58: A group of commenters stated that pollution in different forms threatens all three humpback whale DPSs. The commenters identified toxic pollution and forms of marine debris,

including derelict fishing gear, plastic, and any solid material from man-made origin, as types of pollution that can degrade humpback whale habitat. The commenters requested that, similar to the Main Hawaiian Islands insular false killer whale critical habitat, we include an essential feature like ''waters free of pollution of a type and amount harmful to humpback whales'' and that would also interfere with whales' use and occupancy of the habitat. Another group of commenters requested that we include a water quality or water free of toxins as an essential feature.

Response: We acknowledge the concerns raised by the commenters and the fact that various forms of marine pollution may pose threats to the listed humpback whales. However, as noted previously, the ESA does not require that we identify all potential threats or issues that may be addressed through section 7 consultations as ''essential features'' of critical habitat. Rather, the definition and process established under the ESA require that we affirmatively identify the physical or biological features of the habitat that occur in specific areas and that are essential to support the life-history needs of a particular species based on the best available scientific information for that species. We also note that the concerns raised by the commenters can continue to be addressed, as appropriate, through existing protections afforded through the listing of the three DPSs of humpback whales under the ESA.

Specifically, entanglement of whales in marine debris, which is a direct impact on the whales and constitutes ''take,'' is already prohibited under section 9 of the ESA for endangered whales and by the rule issued under section 4(d) (50 CFR 223.213) for threatened whales. Such impacts can already be addressed through section 7 consultations on the listed whales (when relevant). In addition, when pollution in the form of plastics is associated with a Federal action and is degrading the quality of the prey feature or harming the whales, we will address these impacts through section 7 consultations.

With respect to water contaminants and toxins, which we acknowledged is a management concern for the identified prey essential feature (84 FR 54354, October 9, 2019), we will address this threat through consideration of prey ''quality'' during consultations on the critical habitat. Humpback whales can bioaccumulate organic contaminants, and elevated levels of certain contaminants have been observed in humpback whales feeding off southern California (Elfes *et al.* 2010). However, the levels observed are not expected to have a significant effect on population growth (Elfes *et al.* 2010), and this was not identified as a significant threat at the time of listing (Bettridge *et al.* 2015). We note that in contrast, bioaccumulation of contaminants was identified as a particular concern for certain listed Odontocetes (toothed whales; *e.g.,* Southern resident killer whales, Main Hawaiian Islands insular false killer whales), which consume higher-trophic level fishes and may bioaccumulate significant contaminant loads that can impair the whales' health and reproduction. In contrast to humpback whales, these other cetacean species also have restricted ranges that include nearshore areas adjacent to urban centers where contaminant exposure is increased. Given the elevated concerns regarding contaminants for those species, we did identify a separate water quality feature of the critical habitats.

Comment 59: Several groups of commenters stated that the critical habitat should also provide for safe passage and an ocean freer from potential entanglement, which has been on the rise in recent years. The commenters specifically pointed to entanglement in trap lines or other gear as well as ship strikes as limiting the whales' ability to have safe passage between feeding and breeding grounds. Another group of commenters stated we overlooked the precedent of the Southern Resident killer whale proposed critical habitat revision, which identifies passage conditions to allow for migration, resting, and foraging as an essential feature in waters off the U.S. West Coast. These commenters stated that the final critical habitat rule for humpback whales must include migratory corridors and passage free of entanglement as a physical or biological feature or provide adequate justification if not including it in the final rule. The Marine Mammal Commission, as well as several other commenters, stated they supported our proposed determination to not include a passage or migration-related feature in the critical habitat designations.

Response: We agree with the commenters that both ship strikes and entanglement are significant threats to humpback whales. However, as discussed in our responses to Comments 57 and 58, the ESA does not require us to identify an essential physical or biological feature of critical habitat to correspond to all management concerns or threats to the listed species. We did not overlook these management concerns or the fact that a ''safe passage'' feature has been included in previous critical habitat designations for other listed cetaceans. Rather, we carefully considered the available data regarding a potential passage feature or migratory corridor for the three DPSs of humpback whales and concluded that identification of such a feature was not supported in this case on the basis of the best available scientific data. The limited, available data do not allow us to spatially identify any consistently used or specific migratory corridors or define any physical, essential migratory or passage conditions for whales transiting between or within habitats used by the humpback whale DPSs. Unlike previous critical habitat designations for listed cetaceans that include a type of passage or space feature (*i.e.,* Southern resident killer whales (71 FR 69054, November 29, 2006), Main Hawaiian Islands insular false killer whales (83 FR 35062, July 24, 2018), and Cook Inlet beluga whales (76 FR 20180, April 11, 2011)), humpback whales do not occupy a geographically constricted area or have a restricted range in which blockage of passage from in-water structures or vessels has been identified as a significant management concern. Our conclusion in this case is more appropriately compared to our previous critical habitat designations for other large, migratory species, such as Pacific leatherback sea turtles (77 FR 4170, January 26, 2012) and North Atlantic right whales (81 FR 4837, January 27, 2016), which do not include migratory corridors or passage-related features.

Entanglements and ship strikes are direct effects on humpback whales, and they will continue to be managed to the extent possible under the ESA and MMPA. Take of humpback whales in particular by either of these threats is prohibited under section 9 of the ESA (as to the endangered DPSs) and the rule at 50 CFR 223.213 issued under section 4(d) (as to threatened DPSs), and when relevant to particular Federal actions, they are considered in section 7 consultations on the listed whales (under the jeopardy standard). In addition, in cases where a Federal action has the potential to obstruct the whales' movement and thereby prevent or impede the whales' ability to access prey, we would consider that as constituting a negative impact on the area of designated habitat itself in addition to the defined prey feature, which expressly incorporates consideration of ''accessibility.'' In other words, the whales' ability to move freely to access their prey while on the feeding grounds is inherent in the prey essential

feature. Given this and our consideration of the best available data, we disagree that the critical habitat designations for the humpback whale DPSs must include a physical or biological feature describing migratory corridors or passage conditions as a feature essential to the conservation of the species. Rather, we find that designations built around the prey feature we have identified for each DPS is a more appropriate fulfillment of our statutory duty to identify areas that contain the essential physical or biological feature to support the conservation of each DPS and will result in robust designations of habitat that will support the recovery of these humpback whales.

Coordination and Input on the Proposed Rule

Comment 60: Multiple commenters expressed concerns that NMFS had not sought sufficient input from communities or local experts in Alaska or from ADF&G. ADF&G expressed concerns about the limited degree of communication, coordination, and cooperation with the State by NMFS during the rulemaking process. ADF&G as well as other several other commenters asserted that NMFS had violated section 6 of the ESA and the Revised Policy on Interagency Cooperation by failing to ''cooperate to the maximum extent practicable'' with the State of Alaska in the development of the proposed rule and by denying ADF&G's request to conduct an inter-agency partner review of the Draft Biological Report, which they indicated would be similar to reviews they regularly conduct for the USFWS. ADEC expressed concerns about the lack of outreach to ADEC regarding potential economic impacts despite outreach to agencies with similar roles in other states.

Response: We recognize that State agencies often possess relevant scientific data and valuable expertise on endangered and threatened species and their habitats, and we often coordinate and consult with our state partners when compiling and reviewing scientific data to inform a critical habitat rule, particularly when the state has an active program for the relevant listed species. The Revised Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities Policy discusses such coordination in terms of developing the scientific foundation upon which we base our determinations for proposed and final critical habitat designations (81 FR 8663, 8664, February 22, 2016). Consistent with our standard practice and this policy, we reached out to ADF&G during July and August of 2018 to inquire whether the State could provide relevant scientific data on humpback whales and appropriate contacts who could assist us. Throughout September and October 2018, our consulting economists at IEc also reached out to the State to request appropriate contacts and to discuss the potential economic impacts to the State. Although the State was not able to provide scientific data on humpback whales or their habitat use in Alaska, they provided contact information for other researchers within Alaska who could potentially assist us. ADF&G also provided information regarding types of economic impacts to the State, and this information was considered in the development of the DEA (IEc 2019). Additional information regarding aquatic farming and hatcheries in Alaska was also provided by ADF&G in June 2019. However, given that the proposed rule had already been completed and was undergoing internal review and clearance by NMFS, and the need to publish the rule by a court-ordered deadline, we were unable to incorporate this information into the draft economic report. As discussed in the FEA (IEc 2020), additional information provided by the State has now been incorporated into the final analysis.

We did not contact ADEC directly in the course of gathering information to inform our economic impact analysis. Based on communications with ADF&G, it was our understanding that comments from all state agencies would be coordinated and provided through ADF&G. In response to this concern and to ensure relevant data and information from ADEC were considered in the final economic impact analysis, we had subsequent discussions directly with representatives from ADEC (see FEA, IEc 2020).

We understand the concerns expressed by ADF&G regarding communication and coordination with respect to the humpback whale critical habitat designation and have endeavored to improve communications with ADF&G as we have moved forward on other ESA actions. However, there is no basis for the assertion that we have violated section 6 of the ESA or the terms of the Section 6 Agreement with the State of Alaska. Section 6 of the ESA acknowledges the important role of States in furthering the purpose of the ESA and specifically addresses State programs that have been established for the conservation of endangered and threatened species (16 U.S.C. 1535). If the State's program meets the criteria set forth in section 6(c) of the ESA, then the State and NMFS may enter into a cooperative agreement (a ''Section 6 Agreement''). Under Alaska's Section 6 Agreement with NMFS, both parties have agreed to ''cooperate for the common purpose of planning, developing, and conducting programs to protect, manage, and enhance populations of all resident endangered and threatened species'' covered by the agreement. Through this agreement, NMFS is also authorized to assist in, and provide Federal funding for, implementation of the State's conservation program. Since Alaska entered into a Section 6 Agreement with NMFS on December 3, 2009, the State has received funding from NMFS to support work on Steller sea lions, ringed seals, bearded seals, and Cook Inlet beluga whales. The designation of critical habitat is not considered a ''program'' under section 6 of the ESA or the Section 6 Agreement and is instead a rulemaking under section 4 of the ESA, the authority for which is specifically delegated to the Secretaries of Commerce and Interior. Neither section 6 nor any other section of the ESA provides any basis to share decision-making authority with a state entity.

Section 4(b)(2) requires that critical habitat be designated on the basis of the best scientific data available. As is our consistent practice, the best available data in support of the critical habitat designations for humpback whales was summarized in a draft supporting report—the Draft Biological Report (NMFS 2019a). Because the Draft Biological Report was developed specifically to inform a rulemaking, it was categorized as ''influential scientific information'' (ISI) under the Information Quality Act (IQA) (Pub. L. 106–554, Section 515) and subject to the peer review requirements outlined in OMB's Final Information Quality Bulletin for Peer Review (''Bulletin,'' December 16, 2004). Therefore, in accordance with the IQA, the Bulletin, and NOAA Information Quality Guidelines (*www.noaa.gov/organization/information-technology/information-quality*), the Draft Biological Report was subjected to peer review in accordance with our peer review plan. We invited ADF&G to nominate an appropriate biologist to peer review this report. In addition to the State's biologist, the report was also independently peer-reviewed by four other scientists with relevant expertise and experience with humpback whales. Prior to publication of the proposed rule, we reviewed the peer reviewer comments and made

certain revisions to the Draft Biological Report as appropriate in response. The peer review plan, charge statement to reviewers, and peer review report were also made publicly available (see: *www.noaa.gov/organization/information-technology/peer-review-plans*). It would not be consistent with the guidance on the application of the IQA, and is not our practice, to invite peer reviewers to provide advice on policy or the application of the standards and requirements of the ESA. *See* NMFS Policy Directive PD 04–108–4, ''OMB Peer Review Bulletin Guidance,'' App. A, section II.1 (June 2012). Per the Peer Review Bulletin, with the exception of the National Academy of Sciences or other alternative procedures approved by OMB, we also do not invite agency-wide reviews by external agencies prior to dissemination by NMFS of ISI products.

In developing the proposed rule, we gathered and reviewed the best available scientific literature and reports, and we engaged the expertise of a team of scientists and managers from across NOAA as members of the CHRT. During the course of compiling data and information, we consulted with numerous scientists from Federal, academic, and non-academic organizations in Alaska and elsewhere (*e.g.,* National Marine Mammal Laboratory, Glacier Bay National Park and Preserve, University of Alaska Southeast, University of Alaska Fairbanks, Oregon State University, Moss Landing Marine Laboratories, LGL Alaska Research Associates, Cascadia Research Collective) who have expertise in humpback whale biology, ecology, behavior, acoustics, or genetics. We also reached out to local communities and Alaska native organizations before and throughout the public comment period. We extended the public comment period from the typical 60 days to 115 days, and held six public hearings—three of which were in Alaska. Through these efforts, we are confident that we have been able to compile the best available scientific data and provide for a rigorous public comment process.

Comment 61: The North Pacific Fishery Management Council requested that we specify that any additional section 7 consultations following designation of critical habitat be conducted in accordance with NOAA Fisheries Policy 01–117, which suggests collaboration with the fishery management councils. The Council, as well as several other commenters, expressed concern about the lack of engagement with the Council prior to publication of the proposed rule. They requested that in the future we consult with and include the Council in discussions prior to publication of a proposed rule to designate critical habitat for ESA listed species (*e.g.,* bearded seals, ringed seals), and they requested that the NOAA Fisheries Policy 01–117 be revised to include ''section 4 consultations.''

Response: The NMFS Alaska Region works closely with the North Pacific Fishery Management Council. When ESA section 7 consultation is required for fishery management actions, NMFS will keep the Council informed regarding the consultation and provide opportunities for Council input in accordance with NMFS Policy 01–117, Integration of Endangered Species Act Section 7 with Magnuson-Stevens Act Processes.

Section 4(b)(2) of the ESA authorizes the Secretary of Commerce to designate critical habitat on the basis of the best available scientific data after taking into consideration the economic, national security, and other relevant impacts of the designation. The ESA, implementing regulations in 50 CFR part 424, and existing agency policy do not establish a consultation process or role for other entities (with the exception of federally recognized tribes) in the development of regulations under section 4 of the ESA. While we do coordinate with other organizations when gathering the best available scientific data relevant to a particular rulemaking under section 4 and solicit input from other organizations and partners on proposed rules during public comment periods, we do not consult on the development of the proposed rule itself, as this role is reserved for the Secretary of Commerce and his designees. NOAA Fisheries Policy 01–117 applies to ESA section 7 consultations that are conducted on fishery management activities governed by fishery management plans developed by the Councils pursuant to the Magnuson-Stevens Act; therefore, this policy is directly relevant to Council actions and authorities but does not apply to NMFS' decisions to implement section 4 of the ESA. Although we regret that the Council feels there was a lack of coordination prior to the publication of the proposed critical habitat rule for humpback whales, we do not find it appropriate or necessary to revise Policy 01–117 to establish a consultation process regarding ESA section 4 rulemaking.

Sufficiency and Application of the Available Data

Comment 62: Several commenters stated that we inappropriately used data that are mainly applicable to the non-listed ''Hawaii DPS'' of humpback whales when identifying critical habitat for the listed DPSs. The commenters asserted that, as a result, we proposed to designate areas that are minimally occupied by and not essential to each of the listed DPSs, in particular Southeast Alaska and the Gulf of Alaska, where they assert the SPLASH data are almost entirely relevant to the ''Hawaii DPS.'' One commenter stated that this flaw has resulted in a particularly erroneous designation of critical habitat for the Mexico DPS, which includes substantial areas in which animals from the Mexico DPS have never been observed (and should therefore be deemed unoccupied by that DPS) or minimally occupied but lacking features essential to this DPS.

Response: We acknowledge that many of the humpback whales observed on the feeding grounds, particularly within Alaska, are from the non-listed Hawaii breeding population (*e.g.,* Barlow *et al.* 2011). With an estimated abundance of over 11,000 whales (Wade *et al.* 2017), those non-listed whales are far more abundant than whales of the ESA-listed DPSs. However, in determining which specific areas are occupied by whales of the listed DPSs, the CHRT relied on the best available scientific data regarding the distribution of the particular DPS, taking into account the relative strengths and limitations of each of the different sources of data available. In assessing the relative conservation value of each specific area, the CHRT also relied heavily on data that is specifically applicable to the particular DPS. During both the initial and second assessment, when considering and applying data that apply to humpback whales generally (*e.g.,* the BIAs, unmatched sightings), the CHRT did so in light of the available data regarding the distribution of the particular DPS. During their second assessment, in response to comments and as discussed previously, the CHRT placed greater emphasis on data that are specific to the particular DPS (versus humpback whales generally). We acknowledge that available data regarding which feeding areas are used by each listed DPS are limited, and for areas in Alaska in particular, are largely limited to the SPLASH study, which was conducted in 2004–2006. However, we are required to designate critical habitat based on the best scientific data available even if those data are not perfect or contain some uncertainty (as discussed previously in in section, Critical Habitat Definition and Process).

Comment 63: Several commenters stated that our rule was confusing because it applied different data than what NMFS has been using in its ESA

section 7 consultations with respect to the distribution of listed humpback whales in U.S. waters. These commenters requested that we make consistent use of the best available data. ADF&G stated that NMFS had failed to explain or provide clear information that its view of the distribution of ESA-listed DPSs had changed dramatically from the analysis used in the 2016 status review and listing revision. They stated that this appears to be a failure to adequately inform those who may wish to comment on the proposed rule as to what NMFS considers the best available scientific information and raises questions about compliance with the Administrative Procedure Act (APA) and the ESA. ADF&G also stated that, since neither the 2016 report used to inform section 7 consultations nor the subsequent 2017 analysis by Wade (2017) is cited in the draft economic report prepared for the proposed rule, it is unclear which analysis serves as the basis for the economic report.

Response: Section 4(b)(2) of the ESA requires that critical habitat designations be based on the best scientific data available. The results presented in Wade (2017), a report submitted to the IWC Scientific Committee, presents a corrected analysis of the SPLASH study data and provides abundance estimates for humpback whales in the sampled areas and estimated movement probabilities between seasonal habitats. As stated in that 2017 report, the results presented are an update and revision to a previous version of this analysis that was presented in an earlier report to the IWC (*i.e.,* Wade *et al.* 2016). Because the ESA requires us to rely on the best available scientific data, we considered the Wade (2017) results when evaluating areas and making our critical habitat determinations. Because those results are updated and revised as compared to the earlier Wade *et al.* (2016) data, we find that they are part of the best available scientific data. Therefore, relying on the results presented in Wade (2017) to inform certain aspects of our analysis fulfills the requirements in the ESA.

The results presented in Wade (2017) are significant data that informed the biologically based aspects of our critical habitat determinations. They were not relevant to, and therefore not used to evaluate, the economic impacts of designating critical habitat; thus, neither the 2016 nor the 2017 report were cited in the Draft Economic Analysis (IEc 2019a). The Wade (2017) report was discussed and cited in the proposed rule (84 FR 54354, October 9, 2019) and the Draft Biological Report (NMFS 2019a), and was included in the separate list of references that was also made publicly available on *www.regulations.gov* and as part of the 2019 Draft Biological Report. Thus, the public was given express notice of our consideration of these data. To the extent the commenter intends to suggest that we are required to notify the public *prior to* publication of a proposed rule that a more recent or a revised scientific paper or report has become available, we disagree. We are aware of no such requirement under the ESA, the APA, or other law. Scientific understanding is continually evolving as new information becomes available, and the ESA requires that each agency decision be based on the best information available at that time and for that particular purpose.

The 2017 IWC report was not available at the time the humpback whale status review was completed in 2015 (Bettridge *et al.* 2015) or when the humpback whale listing was revised in 2016 (81 FR 62260, September 8, 2016). The report was also not available at the time the NMFS Alaska Regional Office and the West Coast Regional Office developed section 7 guidance in 2016 regarding the distributions of listed humpback whale DPSs. Since release of the 2017 report, NMFS has been aware that further work was planned that could result in a further update of this analysis. As a result, both NMFS Regional Offices decided to await those results before updating their related section 7 guidance documents. However, the additional analysis, which was to be completed through an IWC working group, has since been delayed. Because of the change in timing of this effort, the regional offices are likely to move ahead with updating their consultation guidance to reflect the analytical results provided in Wade (2017). In any event, that is a separate issue that is beyond the scope of these designations which are based on the best scientific information available to us now.

Comment 64: A few commenters stated that the SPLASH study referred to in the supporting documents indicates that less than two percent of the Mexican DPS uses the proposed critical habitat in Southeast Alaska (Unit 10). One commenter stated that the data used to designate this area actually applies to a larger area that extends beyond Unit 10 and includes data from Northern Vancouver Island to Yakutat, Alaska. The commenters stated that Unit 10 represents only 60 percent of the area over which the data were collected, and yet the entire numerical data set has been attributed to Unit 10. The commenters stated this is misleading and constitutes an improper use of data.

Response: This comment refers to results presented in a report to the IWC by Wade (2017). The report presents an analysis of data collected during the SPLASH study and provides estimated probabilities of movements of whales from breeding areas into feeding areas, and vice versa. The analysis groups the SPLASH data (matches of photo-identified humpback whales) by the four breeding (or wintering) areas (*i.e.,* Asia, Hawaii, Mexico, and Central America), and by six feeding (or summer) areas (Kamchatka, Aleutian Islands/Bering Sea, Gulf of Alaska, Southeast Alaska/Northern British Columbia, Southern British Columbia/Washington, Oregon/California). The CHRT was aware that these estimated movement probabilities apply to the particular geographic units used in the analysis (*e.g.,* Southeast Alaska/Northern British Columbia). In other words, the CHRT was aware that the 0.020 movement probability estimate provided in Wade (2017) represents the probability of a whale from the Mexico region moving into the Southeast Alaska/Northern British Columbia region. The CHRT discussed both the SPLASH survey areas as well as the geographic regions applied in the analysis presented in Wade (2017). As mentioned previously (see response to Comment 30), to help clarify that these probabilities extend over certain regions, the CHRT reformatted the relevant data tables presented in the updated Biological Report (see Appendix C, NMFS 2020a). In addition, we note that Unit 10 (Southeast Alaska) is excluded from the final designation for the MX DPS under section 4(b)(2) of the ESA based on consideration of economic impacts.

Comment 65: Several commenters stated that the available data are too old and requested that additional research be completed before we finalize the critical habitat designations. One commenter requested that NMFS not complete the final rule until migration tracks and whale presence of the three DPS units in Southwest Alaska are gathered using satellite and other sophisticated tracking methods. Another stated that more research is needed to better understand the health, feeding habitats, and migration paths of the humpbacks that spend their summers in Alaska before NMFS issues a critical habitat designation. One commenter stated that long-term monitoring data are essential in understanding and identifying appropriate critical habitat, and another commenter stated more data are needed before we designate

critical habitat because a regime change is taking place in the North Pacific Ocean and is affecting prey distributions.

Response: The ESA generally requires that we designate critical habitat for species at the time they are listed on the basis of the best scientific data available. Section 4(b)(6)(C)(ii) allowed us to extend the statutory deadline for publishing a final critical habitat regulation by one year because critical habitat was found to be not determinable at the time of listing of the three DPSs. A lawsuit was filed in Federal court because we did not meet that statutory deadline, and our designation is now governed by court order (as discussed previously, see Background). We are not authorized to further delay the statutory requirement to designate critical habitat so that additional research may be completed.

Moreover, as explained previously (in section, Critical Habitat Definition and Process), the ESA expressly requires that we base our critical habitat determination on the best scientific data available, not the best scientific data possible. We must proceed with a designation where the best available scientific data provides a sufficient basis to determine that the ESA's standards are met for the specific areas proposed. The standard requires ''not only that data be attainable, but that researchers in fact have conducted the tests;'' we are not required to conduct new research or studies. *Am. Wildlands* v. *Kempthorne,* 530 F.3d 991, 999 (D.C. Cir. 2008). *See also San Luis & Delta-Mendota Water Auth.* v. *Locke,* 776 F.3d 971, 995 (9th Cir. 2014); *Southwest Ctr. for Biological Diversity* v. *Babbitt,* 215 F.3d 58, 60 (D.C. Cir. 2000); *Oceana, Inc.* v. *Ross,* 321 F. Supp. 3d 128, 142 (D.D.C. 2018). Thus, although we agree that additional research and long-term monitoring would be beneficial, in that it would continue to contribute to scientific understanding of these whales, there is neither a need nor the authority under the ESA to delay the designation process to await further data.

General Comments

Comment 66: ADF&G requested a 6-month extension for completion of the final critical habitat rule to allow time for NMFS to redo the analyses to rectify what they perceived to be informational and analytical flaws. They state that these multiple flaws constitute ''substantial disagreement regarding the sufficiency or accuracy of the available data.''

Response: The ESA provides that if, after publishing a proposed rule to revise a critical habitat designation, we find that there is ''substantial disagreement regarding the sufficiency or accuracy of the available data relevant to the determination,'' we may extend the statutory one-year period to develop and publish the final rule (that runs from publication of a proposed rule) for 6 months to solicit additional data (see 16 U.S.C. 1533(b)(6)(B)(i), referencing proposed rules described in 1533(b)(6)(A)(i) only, whereas initial designations of critical habitat are described in (b)(6)(A)(ii)). Because we are not revising critical habitat in this instance, this particular provision of the ESA does not apply. There is also no other provision in the ESA that would allow us to further delay this final rule.

Comment 67: A commenter stated that the critical habitat designation was primarily being compelled by crab pot gear entanglement and ship strikes and expressed concern regarding the inability to attribute the original source of gear entanglements of the whales. The commenter pointed out that, in the Southwest Region of Alaska, the pot gear fisheries is prosecuted in the late fall and winter months, when the whales are not in Alaska.

Response: The ESA requires we designate critical habitat for species at the time of listing. We determine which specific areas qualify as critical habitat by applying the best available scientific data. The ESA defines occupied critical habitat as 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 that are essential to the conservation of the species and which may require special management considerations or protection. While we acknowledge that entanglement and ship strikes are ongoing threats to humpback whales, identifying threats to the species is not an appropriate approach to identifying areas that meet the statutory standards for designation as critical habitat. We have followed the correct procedure under the ESA and our regulations, by identifying areas within the geographical area occupied by the species that contain the essential feature, which we have determined may require special management considerations or protection.

Comment 68: Numerous commenters stated that humpback whales do not need critical habitat in Alaska because the whales are already flourishing in Alaska. Many of these commenters provided personal accounts of having witnessed a steady increase in the number of whales observed over decades as commercial fishermen, and some stated that current abundances exceed pre-whaling abundance estimates according to NMFS's own estimates. Most of these commenters referred to Southeast Alaska in particular, and pointed to the return of the whales as well as other marine mammals, and the removal of the Southeast Alaskan population of humpback whales from the ESA as evidence that existing regulations and protections are working well in the absence of critical habitat and that this rule is not necessary. Another commenter stated that while most of the observed whales seen in Southeast Alaska waters are part of the non-listed Hawaiian sub-populations, numbers and calving rates of humpback whales in this group have been in a drastic decline in recent years, possibly as the result of climate driven disruptions of food available in Alaska waters, particularly in the years following the strong El Nino event in 2016. The commenter noted that many whales observed in the 2016–2018 seasons were in poor body condition. The commenter stated that the proposed critical habitat designations protect Alaska waters for those populations that are already listed as endangered and threatened, and that recent fluctuations already documented in the more abundant Hawaii stock will affect the listed whales to the same extent, if they are using the same resources.

Response: The abundance of humpback whales in the North Pacific has increased over the past several decades, largely as a result of prohibitions on commercial whaling but also as a result of conservation efforts and protection of the whales under the ESA and MMPA. In part, the increased abundance of whales in the ''Hawaii DPS'' led to the removal of ESA protections for this population of humpback whales in 2016 and replacement of the former, global listing with the current DPS listings (81 FR 62260, September 8, 2016). The recovery of the Hawaii population is particularly apparent in areas of Alaska, especially Southeast Alaska, where the majority of humpback whales are from the Hawaii population (Barlow *et al.* 2011, Wade 2017). We also agree that this non-listed Hawaii population has experienced significant declines in recent years and that a possible contributor to this decline was the poor ocean conditions and resulting reduction in prey resources for humpback whales during the marine heat wave of 2014–2016 (Cartwright *et al.* 2019, Neilson and Gabriele 2019).

We are required to designate critical habitat to the maximum extent prudent and determinable at the time a species is listed under the ESA. The fact that

another DPS of humpback whales was found to not warrant listing under the ESA (*i.e.,* the ''Hawaii DPS''), or that humpback whale stocks in Alaska may be increasing (Muto *et al.* 2020) does not affect the requirement under the ESA to designate critical habitat for the listed DPSs of humpback whales. Because whales from the endangered WNP DPS and the threatened Mexico DPS use areas off the coast of Alaska area as feeding habitat, those areas were considered for critical habitat designation and several of these areas are included in the critical habitat designations with this final rule.

Comment 69: One commenter expressed concern that more area was proposed for exclusion from the proposed critical habitat designation for the endangered WNP DPS relative to the area proposed for exclusion from the designation for the threatened and much larger MX DPS. The commenter suggested that the critical habitat determinations be subjected to peer review.

Response: We acknowledge that a larger area was proposed for exclusion from the critical habitat designation for the WNP DPS relative the area proposed for exclusion for the MX DPS (44,119 nmi^2 versus 30,527 nmi^2). However, the total areas proposed for designation and proposed for exclusion for each of these DPSs has changed in this final rule in response to public comments as reflected in the revised section 4(b)(2) analysis. Specifically, the final designation for the WNP DPS covers about 59,411 nmi^2 of marine habitat following the decision to exclude about 63,398 nmi^2 of marine habitat under section 4(b)(2) of the ESA. The final designation for the MX DPS includes about 116,098 nmi^2 and excludes a total of about 91,811 nmi^2 under section 4(b)(2) of the ESA.

The smaller size of the critical habitat designation for the WNP DPS is largely a reflection of the distribution of these whales, which primarily use feeding areas outside of U.S. waters, which cannot be included in a designation (50 CFR 424.12(g)). Whales from the MX DPS are more broadly distributed within U.S. waters and feed in more regions within U.S. waters than whales from the WNP DPS. Therefore, more areas met the definition of critical habitat for the MX DPS, and a larger total area is included in the critical habitat designation for this DPS.

The Biological Report, which summarizes relevant scientific information that informed the identification of critical habitat areas and the assessment of the relative conservation value of these areas, was subjected to peer review per requirements outlined in OMB's Final Information Quality Bulletin for Peer Review (''Bulletin,'' December 16, 2004) and NOAA Information Quality Guidelines (*www.noaa.gov/organization/information-technology/information-quality*). In addition, we solicited comment on the proposed rule through a 115-day public comment period and at six public hearings. The process applied in this rulemaking thus complies with or exceeds the requirements for review by the public and scientific peers.

Comment 70: One commenter stated that ocean commercial fisheries are already tightly controlled by the Fishery Management Councils under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 *et seq.*) and by various states, and that humpback whales are already well protected against adverse fishery impacts under the various Pacific Fishery Management Council (PFMC)-adopted Fishery Management Plans (FMPs) for which NMFS provides Biological Opinions to the PFMC. The commenter stated that fishery impacts on humpback whales are best controlled through the PFMC's existing FMP process by way of NMFS Biological Opinions that provide specific and detailed mitigation measures to minimize potential impacts on humpback whales from fisheries. The commenter recommended that the final critical habitat rule state clearly that properly controlled ocean commercial fisheries pursued in accordance with the PFMC's FMP as approved by the most recent NMFS Biological Opinion are not actions that destroy or adversely modify critical habitat in that they do not directly or indirectly alter critical habitat such that the value of the critical habitat for either the survival or the recovery of humpback whales is appreciably diminished.

Response: We agree with the commenter that the appropriate mechanism for addressing impacts of federally managed fisheries on humpback whales is through the FMP process and the associated section 7 consultations under the ESA and that existing management measures provide strong protections for humpback whales and their prey. Once the humpback whale critical habitat designations becomes effective, any future section 7 consultations on relevant FMPs will be required to assess the effects of the particular fishery actions on the humpback whale critical habitat to ensure that those actions do not adversely modify or destroy the humpback whale critical habitat. Because critical habitat has not previously been designated for humpback whales, completed section 7 consultations do not include such an analysis. While we acknowledge that there are strong protections for humpback whale prey species through the existing PFMC's Coastal Pelagic Species (CPS) FMP and the associated regulations, these existing management measures do not remove the requirement to consult under section 7(a)(2) of the ESA. We cannot circumvent this responsibility by making conclusions in this rule regarding previously completed section 7 consultation, nor can we prejudge the outcome of potential future consultations on the CPS or any other FMP. Therefore, we decline to include a statement in this final rule such as the one requested by the commenter.

Comment 71: A commenter requested that we indicate in the final rule that the absence of a migratory corridor or passage feature in the critical habitat precludes the consideration of fishing activity or the use of fishing gear as an adverse modification of the physical attributes of the critical habitat. The commenter recommended that the proposed rule be amended to explicitly state that fixed-gear fisheries will not be considered as actions that destroy or adversely modify humpback whale critical habitat.

Response: Lack of a specific passage or migratory essential feature in the critical habitat designations does not preclude consideration of effects of fishing gear within or upon the critical habitat. Entanglement of humpback whales is a significant and ongoing management concern, and we will continue to manage this threat wherever it has impacts on individual whales, which may rise to a form of ''take'' of the individual whales. Moreover, as we discussed in the proposed rule, access to the prey and the whales' ability to move freely to successfully feed while on the feeding grounds are inherent in the definition of the prey essential feature. Humpback whales feed using a variety of behaviors, which requires a high degree of maneuverability. Where the use of fishing gear or other physical alterations of the critical habitat (*e.g.,* large-scale aquaculture), either independently or in combination, prevent or impede the whales' ability to undertake their normal feeding behaviors and access their prey, that may constitute a negative impact on the defined prey feature. Such determination cannot be made in advance, however, as each consultation must be based on the best available

scientific and commercial information for the particular Federal agency action.

Comment 72: The Oregon Department of Fish and Wildlife (ODFW) noted how the marine environment off the U.S. West Coast has been experiencing unprecedented changes, affecting both humpback whale prey species and humpback whale behaviors—*e.g.,* the timing of migration patterns from breeding grounds to the feeding grounds, foraging in rarely or never-before used locations, and switching targeted prey species. ODFW stated that as a result, information underlying the critical habitat designation is likely changing even as it is being applied, and may continue to change in new and potentially unexpected ways in the decades to come. As a consequence, ODFW urged that during implementation of this critical habitat rule, that NMFS allocate resources to conduct surveys of humpback whale DPS distributions, conduct spatially-explicit stock assessment surveys for finfish forage species (*e.g.,* anchovy, sardine, and herring), and review the critical habitat location and the assumptions underlying its spatial location on a frequent basis.

Response: We agree with the points and recommendations from ODFW. Understanding how changing ocean conditions are affecting humpback whale prey species and humpback whales is critical to effectively carrying-out our management responsibilities under the ESA and the MMPA and to the overall goal of recovering the listed humpback whales. NMFS is currently engaged in multiple research efforts, including planning a ''SPLASH–2'' study, which is a collaborative effort that will take advantage of automated photo-identification matching capabilities to examine photo-identification data collected since the original SPLASH study. Goals of ''SPLASH-2'' include, for example, estimating current abundances, estimating growth rates, and examining any changes in migration patterns since SPLASH. NMFS has also been involved in the development of habitat models and exploring their use in forecasting the distributions of humpback whales and other cetaceans (see Becket *et al.* 2019), and NMFS is participating in the comprehensive assessment being conducted by the IWC to better understand the effect of whaling on current and historical humpback whale populations in the North Pacific Ocean. We will continue to engage in and/or support these and other efforts to the maximum extent possible in light of available annual appropriations. In addition, although we are required to designate critical habitat based on the best, currently available, scientific data, if additional data become available to support a revision to these critical habitat designations, we can consider using the authority provided under section 4(a)(3)(A) of the ESA to revise the designations.

Comment 73: A commenter encouraged us to expand our discussion in the Biological Report to include more relevant studies about ocean acidification, deoxygenation, and both humpback whale and prey movement as a result of climate change. The commenter cited multiple references regarding changes in the North Pacific as a result of climate changes and noted how these changes are likely to affect availability of prey species, type of prey targeted by the whales, and the distribution of the whales. The commenter stated that we should include climate change and environmental variation as part of the special management considerations for humpback prey.

Response: We appreciate the comments and references provided by the commenter. We have considered this information and have added some additional information to the Biological Report where applicable and relevant to this designation. Both the Draft Biological Report and proposed rule presented climate change as a special management consideration that may affect the identified essential prey feature. The information provided by the commenter does not alter our previous conclusion that climate change poses a management concern for the prey essential features identified in this rule.

Humpback Whale Distribution and Habitat Use in the North Pacific

Humpback whales breed and calve in tropical and subtropical waters in the winter months, typically during January–May in the Northern hemisphere. They exhibit a high degree of fidelity to particular breeding areas, a pattern which contributed to how DPSs were delineated and listed under the ESA (Bettridge *et al.* 2015). While on their breeding grounds, humpback whales rarely feed (Baraff *et al.* 1991, Rasmussen *et al.* 2012). Around springtime, the whales typically migrate to temperate, higher latitude regions to feed and build up fat and energy reserves for the return migration, lactation, and breeding. Humpback whales primarily feed on euphausiids (krill) and small pelagic fishes (Nemoto 1957, 1959; Klumov 1963; Rice 1963; Krieger and Wing 1984; Baker 1985; Kieckhefer 1992; Clapham *et al.* 1997).

In the North Pacific Ocean, humpback whales feed in biologically productive waters along the coasts of California, Oregon, Washington, and Alaska; British Columbia, Canada; and in waters off of Russia (*e.g.,* Kamchatka, Commander Islands). Although these feeding areas are broadly distributed and range widely in terms of latitude, they are usually over the continental shelf or near the shelf edge at shallow (~10 m) to moderate water depths (~50–200 m) and in cooler waters (Zerbini *et al.* 2016, Becker *et al.* 2016 and 2017). Often, feeding areas are associated with oceanographic (*e.g.,* upwelling, fronts), bathymetric (*e.g.,* submarine canyons, banks), and/or biological features (*e.g.,* spawning areas for fish) that serve to concentrate or aggregate prey (*e.g.,* Tynan *et al.* 2005, Dalla Rosa *et al.* 2012, Thompson *et al.* 2012, Friday *et al.* 2013, Chenoweth *et al.* 2017, Straley *et al.* 2018, Santora *et al.* 2018). Distributions and abundances of prey species are also influenced by other physical oceanographic and biological mechanisms that can result in significant variations in prey availability on seasonal (*e.g.,* spawning periods), inter-annual (*e.g.,* El Niño), and decadal time-scales (*e.g.,* Pacific Decadal Oscillation cycles; Barber and Chavez 1983, McGowan *et al.* 1998, 2003, Chavez *et al.* 2003, Fleming *et al.* 2016, Moran and Straley 2018). Given the complexity and variability in the multiple physical and biological drivers of prey species abundance across the occupied ranges of each DPS, and the anticipation of continued climate change-induced changes in oceanographic processes and food web dynamics within North Pacific marine ecosystems, we concluded it was not possible to pinpoint or reliably describe which of these other factors are essential to the conservation of the humpback whale DPSs based on the best available scientific data.

Although these feeding areas have an almost continuous distribution around the North Pacific basin, multiple studies have indicated fairly high levels of fidelity of humpback whales to particular areas and limited movements of whales among the broader feeding regions (*e.g.,* Waite *et al.* 1999, Calambokidis *et al.* 2001, Calambokidis *et al.* 2008, Witteveen *et al.* 2011, Witteveen and Wynne 2016a, Gabriele *et al.* 2017). Our understanding of how humpback whale populations are spatially structured while in these feeding areas has been informed by numerous studies, and probably most notably by the results of the SPLASH study. As noted previously, this study

was a significant effort undertaken across the North Pacific and involved the collection of both photographic and genetic data over three breeding seasons (2004, 2005, and 2006) and over two feeding seasons (2004, 2005) in known breeding and feeding areas (Calambokidis *et al.* 2008). Through this effort, a total of 7,971 unique whales were photo-identified (Calambokidis *et al.* 2008). For most analyses, photo-identification data were grouped into six broad feeding regions: Kamchatka (Russia), Aleutian Islands/Bering Sea, Gulf of Alaska, Southeast Alaska/Northern British Columbia, Southern British Columbia/Northern Washington, and California/Oregon (Calambokidis *et al.* 2008, Barlow *et al.* 2011, Wade *et al.* 2016). Analysis of the photo-identification data indicated that both within-season and between-season movements of whales between these six feeding areas were infrequent and any such exchanges were mainly to adjacent areas (Calambokidis *et al.* 2008), which is consistent with previous findings from earlier region-wide studies (*e.g.,* Calambokidis *et al.* 1996, Calambokidis *et al.* 2001).

Genetic analyses of skin samples collected during the SPLASH study provide additional insight into the structuring of humpback whale populations across the feeding areas (Baker *et al.* 2013). Analysis of maternally inherited mitochondrial DNA (mtDNA) from 1,010 unique whales indicated highly significant differences in mtDNA haplotype frequencies among the feeding regions overall (overall F_{ST} = 0.121, Φ_{ST} = 0.178, p <0.0001), and pairwise comparisons were also significant (at p <0.05) for 32 of 36 possible comparisons (excluding the western Aleutians due to low sample size, Baker *et al.* 2013). Comparisons of bi-parentally inherited microsatellite DNA indicated very weak but significant differentiation of microsatellite allele frequencies among feeding areas, suggesting male-biased gene flow (overall F_{ST} = 0.0034, p <0.001, Baker *et al.* 2013). The high degree of differentiation in mtDNA among feeding areas reflects the influence of maternal fidelity to feeding areas. This result is consistent with findings of previous but more spatially-limited studies (*e.g.,* Baker *et al.* 1998, Witteveen *et al.* 2004). This effect likely stems from the close dependency of calves on their mothers during their first year of life, during which they travel with their mothers and thereby inherit information from their mothers about feeding destinations (Baker *et al.* 1987, Pierszalowski *et al.* 2016).

Overall, while the available photo-identification data indicate varying degrees of mixing of populations across the feeding areas, the overall pattern of structuring of populations among the feeding areas, as well as the pattern of migratory connections between particular feeding areas and breeding areas, contributed to how the various DPSs are described in the listing rule (81 FR 62260, September 8, 2016). In particular, the threatened MX DPS, which has previously been estimated to include about 2,806 whales (CV = 0.055, Wade 2017), is described as including whales that feed primarily off California-Oregon, northern Washington-southern British Columbia, in the Gulf of Alaska and East Bering Sea (50 CFR 223.102). The endangered CAM DPS, which has previously been estimated to include about 783 whales (CV = 0.170, Wade 2017), is described as including whales that feed along the West Coast of the United States and southern British Columbia (50 CFR 224.101) and thus individuals from that DPS co-occur with MX DPS whales while in their feeding areas. The endangered WNP DPS, which has been estimated as including about 1,066 whales (CV = 0.079, Wade 2017), is described as including whales that feed primarily in the West Bering Sea and off the Russian coast and the Aleutian Islands (50 CFR 224.101) and thus individuals from this DPS also co-occur with MX DPS whales while in their feeding areas. Our understanding of these patterns may change as new data become available, and the patterns themselves may changes if the whales shift their distributions in response to changing ocean conditions, or as the listed DPSs undergo recovery and expand their feeding ranges.

All three of these listed DPSs overlap spatially to varying degrees with the ''Hawaii DPS'' of humpback whales, which was found to not warrant listing under the ESA in 2016 (81 FR 62260, September 8, 2016). The ''Hawaii DPS,'' which has an estimated abundance of about 11,571 whales (Wade 2017), breeds in waters around the Hawaiian Islands and has been observed on most of the known feeding grounds within the North Pacific (Bettridge *et al.* 2015). While these whales are no longer protected under the ESA (and critical habitat is not being designated for them), they continue to be managed under the MMPA.

Diet and Feeding Behaviors

Humpback whales are filter feeders, gulping large volumes of prey and water during discrete lunges (Goldbogen *et al.* 2015). In general, humpback whales will lunge feed, both towards the surface and at depths, and can execute multiple lunges in one dive (Goldbogen *et al.* 2008, Simon *et al.* 2012). Humpback whales are also capable of employing multiple techniques to herd or aggregate their prey while feeding, including the use of bubble structures, such as bubble nets, columns, clouds, and curtains (Jurasz and Jurasz 1979, Hain *et al.*1982). Other techniques include pectoral herding (Kosma *et al.* 2019), ''blaze feeding'' (flashing the white side of pectoral flipper at prey; Tomilin 1957 cited in Brodie 1977, Sharpe 2001), flick feeding (lashing tail at the surface, Jurasz and Jurasz 1979), vertical rise and subsidence (creates a reduced pressure zone in the water column, Hays *et al.* 1985), ''roiling'' the surface with flippers and flukes (Hain *et al.* 1982), and trap-feeding (McMillan *et al.* 2019). Humpback whales may also work cooperatively in groups to herd and capture prey (Jurasz and Jurasz 1979, Baker 1985, D'Vincent *et al.* 1985). Foraging behaviors of the whales and use of various feeding strategies may vary depending on multiple factors, such as the particular target prey species, prey density, prey depth, and whether other whales are present (*e.g.,* Simon *et al.* 2012, Witteveen *et al.* 2015, Szesciorka 2015, Burrows *et al.* 2016, Akiyama *et al.* 2019).

Satellite tagging efforts have provided some insights into the fine-scale movements of the whales while on the foraging grounds, indicating the duration, area, and variability in the areas over which the whales feed. For instance, in the summers of 2007 to 2011, Kennedy *et al.* (2014) deployed satellite tags on eight adult humpback whales in Unalaska Bay, Alaska, and tracked the whales for an average of 28 days (range = 8–67 days). Position data were then analyzed and categorized into one of three possible behavioral modes: Transiting; area-restricted searching (ARS), or unclassified. The slower speeds and higher turning angles during ARS behavior are considered to be indicative of active foraging (Kennedy *et al.* 2014, citing Kareiva and Odell 1987, Mayo and Marx 1990). Results indicated that whales mainly stayed over shelf and slope habitat (1,000 m or shallower) while in ARS mode, and all but one whale remained relatively close to Unalaska Bay during the tracking period. One whale, however, left Unalaska Bay 3 days after being tagged, traveling along the Bering Sea shelf towards Russia and covering almost 3,000 km in 26 days, indicating that the whales may in fact travel long distances during the feeding season (Kennedy *et*

al. 2014). Satellite tags deployed on whales tagged off central California in the summer/fall of 2004–2005 and in summer of 2017 and that were tracked for a minimum of 30 days, exhibited feeding behavior (as detected by ARS data) over an area that averaged 20,435.6 km² (n=8, SE = 7322.8) and 17,684.4 km² (n=7, SE = 13,927.6 km²), respectively (Mate *et al.* 2018). In the latter case, this average area extended from the Channel Islands in southern California to central Oregon. Similar tagging work off the Oregon coast in September/October in 2017 indicated the whales actively fed over areas of comparable size (average area = 17,215.6 km²; n=4; SE = 8,430.6), and for the few whales tagged, the feeding area extended from Point Arena, central California, to the southwest corner of Vancouver Island, British Columbia (Mate *et al.* 2018). The area over which whales actively feed (as indicated by ARS data over a minimum of 30-days) appears to be somewhat smaller in Southeast Alaska, where the average ARS area for whales tagged in summer of 1997 and in fall of 2014–2015 was 4,904.3 km² (n=3, SE = 1,728.8) and 2,862.7 km² (n=4, SE = 1,834.2), respectively (Mate *et al.* 2018). Differences in the area over which the whales feed between years likely reflects a seasonal shift in target prey and prey distributions (Mate *et al.* 2018, Straley *et al.* 2018).

Geographical Area Occupied by the Species

The phrase ''geographical area occupied by the species,'' which appears in the statutory definition of critical habitat, is defined by regulation as an area that may generally be delineated around species' occurrences, as determined by the Secretary (*i.e.,* range) (50 CFR 424.02). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (*e.g.,* migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals) (*Id.*). Below, we summarize information regarding the geographical area occupied by each of the three DPSs of humpback whales, each of which is a ''species'' as defined in the ESA. *See* 16 U.S.C. 1532(16) (defining ''species'' to include any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature). Additional details on the range of each DPS are provided in the Final Biological Report (NMFS 2020a).

Central America DPS

The endangered CAM DPS is described as humpback whales that breed in waters off Central America in the North Pacific Ocean and feed along the West Coast of the United States and southern British Columbia (50 CFR 224.101(h)). The breeding range of this DPS includes waters off the Pacific coast of Central America, from Panama north to Guatemala, and possibly into southern Mexico (Bettridge *et al.* 2015, Calambokidis *et al.* 2017). Whales from this DPS have been observed within foraging grounds along the coasts of California, Oregon, and Washington (Barlow *et al.* 2011).

In terms of distribution across their foraging range, CAM DPS whales are significantly more common in waters of southern California and occur in progressively decreasing numbers up the coast towards Washington and Southern British Columbia (Steiger *et al.* 1991; Rasmussen *et al.* 2001; Calambokidis *et al.* 2000, 2008, 2017). Of the humpback whales identified off the coast of Central America (n=31) in a photo-identification study conducted between 1981 and 1992, 84 percent were re-sighted off California (Calambokidis *et al.* 2000). This distribution pattern was also confirmed by the results of the SPLASH study, which indicated that out of 29 between-season photo-identification matches of whales from the Central America breeding areas, 26 occurred within the California/Oregon feeding region and 3 occurred within the northern Washington/southern British Columbia region (Barlow *et al.* 2011). Use of the Salish Sea by this DPS may be extremely limited, as suggested by the single re-sighting reported in Calambokidis *et al.* (2017), and no observations of these whales have been reported for waters off Alaska or in the Bering Sea.

Mexico DPS

The threatened MX DPS of humpback whales is defined as humpback whales that breed or winter in the area of mainland Mexico and the Revillagigedo Islands, transit Baja California, or feed in the North Pacific Ocean, primarily off California-Oregon, northern Washington/southern British Columbia, northern and western Gulf of Alaska, and East Bering Sea (50 CFR 223.102(e)). Of the three DPSs addressed in this proposed rule, the MX DPS has the broadest distribution within the U.S. portion of their range. Through the SPLASH study, photo-identified MX DPS whales were matched in all five of the major feeding areas in, or partially in, U.S. waters—*i.e.,* California/Oregon (n=105 whales), northern Washington/southern British Columbia (n=27 whales), southeast Alaska/northern British Columbia (n=35 whales), the Gulf of Alaska (n=97 whales), and the Aleutian Islands/Bering Sea (n=27 whales, Barlow *et al.* 2011).

In terms of their distribution across this range, whales using different portions of the MX DPS breeding area appear to target different feeding destinations. During SPLASH surveys, whales that had been photo-identified along the Pacific coast of mainland Mexico were sighted in highest numbers off the coast of California and Oregon (97 of 164 total matches), suggesting that this is their primary foraging destination (Calambokidis *et al.* 2008, Barlow *et al.* 2011). Although whales sighted off mainland Mexico also travel to the more northern latitude feeding areas, the MX DPS whales sighted around the Revillagigedo Archipeligo had more matches overall to Alaska feeding areas and had higher match rates to the northern Gulf of Alaska feeding area in particular (44 of 87 matches; Calambokidis *et al.* 2008).

Multiple studies have reported sightings of a small number of whales in both the Mexico and Hawaii breeding areas (*e.g.,* n=1, Darling and McSweeney 1985; n=5, Calambokidis *et al.* 2001; n=17, Calambokidis *et al.* 2008). Detections of shared song composition among whales from different breeding locations along with presence of whales in mid-ocean tropical waters during the breeding season also suggest some form of contact between whales from different breeding populations (Darling *et al.* 2019a and 2019b). Overall, interchange among breeding areas appears to be rare, and remains poorly understood in terms of its biological significance.

Western North Pacific DPS

Humpback whales of the endangered WNP DPS are listed as humpback whales that breed or winter in the area of Okinawa and the Philippines in the Kuroshio Current (as well as unknown breeding grounds in the Western North Pacific Ocean), transit the Ogasawara area, or feed in the North Pacific Ocean, primarily in the West Bering Sea and off the Russian coast and the Aleutian Islands (50 CFR 224.101(h)). Whales from this DPS have been sighted in foraging areas off the coast of Russia, primarily Kamchatka, the Aleutian Islands, as well as in the Bering Sea and Gulf of Alaska, and off northern and southern British Columbia (Darling *et al.* 1996, Calambokidis *et al.* 2001, Barlow *et al.* 2011). Although some

genetic data suggest WNP DPS whales may infrequently occur off the coast of Washington (Palacios *et al.* 2020), this DPS is generally not thought to use the feeding areas off Washington, Oregon, and California.

Several studies have reported sightings of a small number of photo-identified whales in both the Asia (off Japan or the Philippines) and Hawaii breeding areas (*e.g.,* n=1, Darling and Cerchio 1993; n=3, Salden *et al.* 1999; n=4, Calambokidis *et al.* 2001; n=2, Calambokidis *et al.* 2008); however, the significance of these movement to either the WNP DPS or the non-listed population of humpback whales that breed around Hawaii has not been established.

In terms of their distribution across the U.S. portion of their range, whales of the WNP DPS are most likely to be found off the Aleutian Islands and in the Bering Sea (Wade *et al.* 2016, Wade 2017). Although very limited in number, photo-identified whales from the breeding areas of this DPS have also been sighted in the Kodiak and Shumagin Island regions of Alaska (Calambokidis *et al.* 2001, Witteveen *et al.* 2004, Calambokidis *et al.* 2008). During the SPLASH study (2004–2006), photo-identified individuals from this DPS were matched to the Gulf of Alaska (n=3), the Aleutian Islands/Bering Sea (n=7), and the Russia feeding regions (n=25, Calambokidis *et al.* 2008). The WNP DPS whales had the lowest match rates during the SPLASH study, with less than 10 percent of whales from the sampled Asian breeding locations observed in a feeding area (Calambokidis *et al.* 2008). Likely explanations for the low proportion of matches of whales from the WNP DPS include under-sampling of their feeding destinations (*e.g.,* western Aleutian Islands, Bering Sea) and the existence of unknown, unsampled breeding grounds (Calambokidis *et al.* 2008, Barlow *et al.* 2011).

The regulatory definition of the WNP DPS reflects that the breeding range of the WNP DPS is not yet fully resolved. At the time of listing, the breeding range of this DPS was known to include the waters off Okinawa and the Philippines in the area of the Babuyan Islands (Barlow *et al.* 2011, Bettridge *et al.* 2015, Wade *et al.* 2016), but additional breeding areas were suspected due to the very low percentage of matches for whales from feeding areas used by this DPS (Calambokidis *et al.* 2008). Recent evidence suggests that an additional breeding area for the WNP DPS is located off the Mariana Islands. Humpback whale song has been detected on passive acoustic recorders within the Mariana Archipelago in winter months (December–April; Fulling *et al.* 2011, Oleson *et al.* 2015). Humpback whales have also been infrequently sighted near the Mariana Islands, mainly off of Saipan (Fulling *et al.* 2011; Hill *et al.* 2016, 2017); and, although no humpback whales were sighted in this area between 2009–2013 (Fulling *et al.* 2011, Hill *et al.* 2014, Ligon *et al.* 2013), a total of 14 mother-calf pairs and 27 non-calf whales were observed in the southern portion of the archipelago during February and March of 2015–2018 (Hill *et al.* 2020). Photo-identification and genetic data for whales sampled off Saipan within the Mariana Archipelago in February–March 2015–2018, provide evidence that some of these whales belong to the WNP DPS (Hill *et al.* 2020). Specifically, comparisons with existing WNP humpback whale photo-identification catalogs showed that 11 of 43 (26 percent) whales within the Mariana Archipelago humpback whale catalog were previously sighted in WNP breeding areas (Japan and Philippines) and/or in a WNP feeding area (Commander Islands; Hill *et al.* 2020). Mitochondrial DNA analyses comparing 24 individual humpback whales sampled within the Mariana Archipelago to ones sampled in known breeding areas throughout the Pacific demonstrated significant differentiation from the Philippines, Okinawa, Hawai'i, and Central America (Hill *et al.* 2020). No population structure was demonstrated between the Mariana Archipelago and Ogasawara or Mexico breeding areas (Hill *et al.* 2020). Comparisons of samples from the Mariana Archipelago to known foraging areas demonstrated significant differentiation from foraging areas in Northern British Columbia, the Bering Sea, California/Oregon, Southeast Alaska, and the Northern Gulf of Alaska; no population structure was demonstrated between the Mariana Archipelago and foraging areas in Russia, the Aleutian Islands, Western Gulf of Alaska, and Southern British Columbia/Washington (Hill *et al.* 2020). While the available data suggest that the Mariana Archipelago may serve as humpback whale breeding habitat, and that at least some of these whales likely belong to the endangered WNP DPS, additional data are needed to fully resolve the extent to which WNP DPS whales are relying on areas around the Mariana Islands as a breeding/calving habitat and the essential features of the specific area(s) being used for breeding and calving. Thus, at this time, the best available scientific information does not support designating these areas as critical habitat for the WNP DPS.

Physical and Biological Features Essential to the Conservation of the Species

The statutory definition of occupied critical habitat refers to ''physical or biological features essential to the conservation of the species,'' but the ESA does not specifically define or further describe these features. ESA-implementing regulations, however, define such features as the features that occur in specific areas and that are essential to support the life-history needs of the species, including but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic, or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity (50 CFR 424.02).

To assess habitat features that may qualify as ''essential to the conservation'' of humpback whales, the CHRT discussed physical and biological features that are essential to support the life history needs of humpback whales within the areas they occupy within U.S. waters (see 50 CFR 424.02 (defining ''physical or biological features essential to the conservation of the species'')). The CHRT considered and evaluated various features of humpback whale habitat, such as prey, migratory corridors or conditions, and sound/soundscape. Significant considerations, CHRT discussions, and conclusions are summarized in the proposed rule (84 FR 54354, October 9, 2019) and the Final Biological Report. Ultimately, as discussed in the following paragraphs, the CHRT identified humpback whale prey as an essential biological feature of the occupied critical habitat and found that the best available scientific information does not currently support recognizing additional essential features. In our responses to comments, above, we explained our reasoning in greater detail. In response to public comments requesting that additional specificity be added to the proposed prey feature, we reviewed and reconsidered the available literature regarding humpback whale prey and, as discussed in the following section, have revised the single, general prey feature that was originally proposed so that a tailored essential feature is presented

separately for each humpback whale DPS to include a non-exhaustive list of key prey species for each DPS.

Prey as an Essential Feature

Although written for the taxonomic species and thus now outdated, the 1991 NMFS Recovery Plan for humpback whales identified four major recovery objectives, the first of which was, ''maintain and enhance habitats used by humpback whales currently or historically'' (NMFS 1991). As part of that objective, we had identified multiple recommended actions to further the species' recovery, including ''providing adequate nutrition'' and ''monitoring levels of prey abundance'' (NMFS 1991). The Recovery Plan stated that adequate nutrition is needed for the recovery of the species, and emphasized the need to maintain and optimize levels of, and access to, prey (NMFS 1991). The Recovery Plan also noted that humpback whales require access to prey over a sufficiently widespread feeding range to buffer them from local fluctuations in productivity or fisheries removals (NMFS 1991). These considerations regarding adequate nutrition and prey abundance and availability are still relevant today for the MX, CAM, and WNP DPSs of humpback whales.

Whales from each of these three DPSs travel to U.S. coastal waters specifically to access energy-rich feeding areas, and the high degree of loyalty to specific locations indicates the importance of these feeding areas. Because humpback whales only rarely feed on breeding grounds and during migrations, humpback whales must have access to adequate prey resources within their feeding areas to build up their fat stores and meet the nutritional and energy demands associated with individual survival, growth, reproduction, lactation, seasonal migrations, and other normal life functions. Essentially, while on feeding grounds, the whales must finance the energetic costs associated with migration to breeding areas, reproductive activities, as well as the energetic costs associated with their return migration to high-latitude feeding areas. Fat storage has been linked to reproductive efficiency in other species of large, migratory, baleen whales (Lockyer 2007), and some evidence suggests that variation in prey availability during summer is directly connected to variation in annual reproductive rates for humpback whales in the following year (Clapham 1993). Calf condition has also been significantly correlated with female body condition (low calf body condition with lower female condition) for humpback whales in Australia (Christiansen *et al.* 2016), and, of all life stages, lactating females have the highest energy demands (McMillan 2014). Thus, it is essential that the whales have reliable access to quality prey within their feeding areas, and that prey are sufficiently abundant to support feeding and ultimately, population growth.

Humpback whales are generalists, consuming a variety of prey while foraging and also switching between target prey depending on what is most abundant or, potentially, of highest quality in the system (Witteveen *et al.* 2008, Witteveen *et al.* 2015, Fleming *et al.* 2016, Moran and Straley 2018). Relative abundance and distribution of humpback whale prey species are also temporally and spatially dynamic on multiple scales due to the influences of various ecological (*e.g.,* spawning seasonality), physical (*e.g.,* upwelling), environmental (*e.g.,* ocean conditions, climate change), and, potentially, anthropogenic factors (*e.g.,* commercial fisheries). Despite these sources of variability, substantial data indicate that the humpback whales' diet is consistently dominated by euphausiids and small pelagic fishes (Nemoto 1957, Nemoto 1959, Klumov 1963, Rice Krieger and Wing 1984, Baker 1985, Kieckhefer 1992, Clapham *et al.* 1997, Witteveen *et al.* 2011, Neilson *et al.* 2015).

Within CCE, the highly productive coastal system that extends from British Columbia, Canada to the southern Baja California Peninsula, humpback whales feed on euphausiids (specifically *Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*), Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), and Pacific herring (*Clupea pallasii;* Rice 1963, Kieckhefer 1992, Clapham *et al.* 1997; Fleming *et al.* 2016). That these species consistently occur in the humpback whale diet and are targeted by humpback whales in this region is supported by stomach content analyses, fecal sample analyses, direct observations, and stable isotope analyses (NMFS 2020a). Significant fluctuations in the abundances of these prey species in the CCE has also been reflected in their relative contributions to the humpback whale diet over time (*e.g.,* Clapham *et al.* 1997, Fleming *et al.* 2016).

Other diet items reported for humpback whales in the CCE include copepods (species not indicated), sand lance (*Ammodytes hexapterus*), and juvenile rockfish (*Sebastes;* Kieckhefer 1992). Copepods and squid were identified in only a small number of stomachs (12 and 1, respectively, out of 287 total), from whales captured off of British Columbia, Canada, during 1949-1965; whereas, euphausiids occurred in 263 (of 287) stomachs, (Ford *et al.* 2009). Ford *et al.* (2009) also report observing humpback whales consuming sand lance (along with euphausiids, herring, and sardine) during studies conducted off British Columbia in 2002–2007, but data are not provided to further evaluate this statement. (The researchers also state that their observations and prey sampling indicated that euphausiids were the primary prey of the humpback whales (Ford *et al.* 2009).) Information on juvenile rockfish as prey is similarly limited. Specifically, Kieckhefer (1992) reported that, on one occasion, surface-feeding humpback whales were observed feeding on what was tentatively identified as juvenile rockfish (*Sebastes* spp.). Overall, the available data are not sufficient to indicate these other species are essential prey for humpback whales, especially within the U.S. portion of the CCE.

In the waters off Alaska, including in the Gulf of Alaska, around the eastern Aleutian Islands, and in the eastern Bering Sea, humpback whales feed primarily on euphausiids (*Thysanoessa* and *Euphausia*) and small fishes, including capelin (*Mallotus villosus*), Pacific herring (*Clupea pallasii),* juvenile walleye pollock (*Gadus chalcogrammus;* formerly, *Theragra chalcogramm*a), and Pacific sand lance (*Ammodytes personatus)* (*e.g.,* Nemoto 1959, Klumov 1965, Jurasz and Jurasz 1979, Kawamura 1980, Krieger and Wing 1984, Witteveen *et al.* 2008, Witteveen *et al.* 2012, Neilson *et al.* 2015, Wright *et al.* 2016, Moran and Straley 2018). Evidence indicating that these species regularly occur in the humpback whale diet comes from stomach content analyses, stable isotope analyses, and direct observations coupled with prey sampling (NMFS 2020a). These species are broadly distributed within the Gulf of Alaska and eastern Bering Sea systems (*e.g.,* Simonsen *et al.* 2016, Ormseth 2014, Ormseth *et al.* 2016, Ormseth 2017), and serve as important prey for other upper-trophic level predators including sea birds, seals, other whales, and commercially valuable fishes.

Other fish species that have been reported as part of the humpback whale diet for the Gulf of Alaska and/or Bering Sea regions but not ultimately determined to be significant or essential prey include eulachon (*Thaleichthys pacificus*), Pacific sandfish (*Trichodon trichodon*), surf smelt (*Hypomesus pretious*), Atka mackerel (*Pleurogrammus monopterygius*),

Pacific cod (*Gadus macrocephalus*), saffron cod (*Eleginus gracilis*), Arctic cod (*Boreogadus saida*), rockfish (*Sebastes*), juvenile salmon (SPP), and myctophids (primarily *Stenobrachius leucopsarus;* Thompson 1940, Nemoto 1959, Klumov 1965, Tomilin 1967, Neilson and Gabriele 2008, Witteveen *et al.* 2008, Wright *et al.* 2016, Moran and Straley 2018). The available data regarding the occurrence of these species in the diet are limited however. For instance, most observations of humpback whales feeding on salmon are anecdotal or unquantified (Klumov 1967, Neilson *et al.* 2013); and where quantitative information is available, predation on salmon appears to be rare (Moran and Straley 2018). Anecdotal observations of humpback whales feeding on hatchery released salmon have also been reported, but results of a study at five release sites in Southeast Alaska over a 6-year period (2010-2015), indicated that in the majority of instances where humpback whale were observed near release sites (100 of 124 sightings), only a single whale was sighted (Chenoweth *et al.* 2017). In many cases, quantitative data on consumption of certain fish species, such as eulachon and sand fish, are lacking or do not otherwise indicate that the particular species are important in the diet. For example, stable isotope analyses for samples collected from humpback whales in the Kodiak region during summers from 2004- 2013 indicate that sand fish and eulachon were among the least important prey sources or made insignificant contributions to the diet, which results indicated was mainly comprised of krill, capelin, and age-0 pollock (Witteveen *et al.* 2012, Wright *et al.* 2016). Other data substantiating the importance or prevalence of sandfish and eulachon in the humpback whale diet are not available. Based on analysis of stomach contents of whales taken by Japanese whaling expeditions from 1952–1958, Nemoto (1957, 1959) reported that humpback whales preferentially fed on Atka mackerel in waters west of Attu Island and south of Amchitka Island, in the western Aleutians and far to the west of the areas proposed as critical habitat. We are not aware of other data or records of Atka mackerel being taken by humpback whales within U.S. waters or in any areas that were proposed for designation as critical habitat. Thompson (1940) reported that a high percentage of stomachs from whales harvested in 1937 from waters southeast of Kodiak contained surf smelt (78 percent, 21 of 27 stomachs), but occurrence of surf smelt in the diet has not been supported by other studies. Possible explanations for the lack of surf smelt in more recent diet studies include a dramatic change in relative abundance of surf smelt, species misidentification, or inadvertent omission of species in the stomach samples examined by Thompson (1940) (Witteveen *et al.* 2006).

Data are even more limited for other reported diet items, such as rockfish, cod species, and various invertebrates (*e.g.,* copepods, mysids, amphipods, pteropods, shrimps; NMFS 2020a). Many of these diet items were recorded in older studies based on observations or evaluation of stomach contents, and in many instances for whales taken in Russian waters (*e.g.,* Klumov 1965). In some cases, available information suggests that these other species are unimportant in the humpback whale diet (NMFS 2020a). For example, copepods were often reported by Nemoto (1957, 1959, 1977) in the stomachs of humpback but were not considered intentional targets given the distribution of humpback whales relative to copepods and their low number in the stomachs relative to their abundance (Nemoto 1959). In other cases, the prey have very limited or non-quantified occurrence in the diet, so conclusions regarding their importance as prey are not possible (*e.g.,* cods, Thompson 1940, Nemoto 1957, Klumov 1965). The Final Biological Report (NMFS 202a) provides additional information and references for other documented and possible prey species of humpback whales in different feeding regions. Overall, there is insufficient information to clearly establish that each of these previously documented or reported prey species is important to the humpback whale diet in U.S. waters, and that each of these species can therefore be considered essential the conservation of the listed DPSs.

Humpback whales are not known to limit their selection of prey to particular age classes of the majority of their prey species; however, humpback whales have been documented to consume fish ≤30 cm in length (Nemoto 1959). Available data also suggest that humpback whales consume age-0, young-of-year, and age-1 walleye pollock (Krieger and Wing 1986, Witteveen *et al.* 2008 and 2012, Wright *et al.* 2016). Therefore, we have specified ''juvenile'' walleye pollock in the revised prey feature description for the two DPSs occurring in waters off Alaska where walleye pollock occur within the humpback whale diet.

Based on the best scientific data available, we have now identified the following biological features essential to the conservation of each particular DPS.

CAM DPS: Prey species, primarily euphausiids (*Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*) and small pelagic schooling fishes, such as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), and Pacific herring (*Clupea pallasii*), of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

WNP DPS: Prey species, primarily euphausiids (*Thysanoessa and Euphausia*) and small pelagic schooling fishes, such as Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), juvenile walleye pollock (*Gadus chalcogrammus)* and Pacific sand lance (*Ammodytes personatus*) of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

MX DPS: Prey species, primarily euphausiids (*Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*) and small pelagic schooling fishes, such as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), juvenile walleye pollock (*Gadus chalcogrammus*), and Pacific sand lance (*Ammodytes personatus*) of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

As generalist predators that may opportunistically switch which prey they are targeting, humpback whales will consume other prey in addition to those we identify here in the description of the essential biological features, and those other prey species may in fact be essential to the conservation of the listed humpback whales. However, the best available data do not allow us to provide an exhaustive list of all prey species that may be essential to the whales' conservation. Given the dynamic nature of the prey populations, it is also not possible to specify which of the identified common prey species will form the majority of the humpback whale diet at a particular location or point in time. However, to provide the most possible notice to the public of the features that are essential to the conservation of humpback whales, we are providing the most detailed description that current data allow. The three essential prey features identify those prey species that commonly occur within the humpback whale diet and that are known to occur within the feeding areas of the listed humpback whale DPSs. These species are thus examples of prey that can be essential

to the conservation of the particular DPS within the specific areas of U.S. waters where the DPS occurs. Because the feeding ranges and primary prey within those feeding ranges are not the same for each of the DPSs, a separate prey essential feature is described for each humpback whale DPS. We note, however, that there is considerable overlap in terms of the prey species identified for each DPS, which is a reflection of the fact that the feeding ranges of the DPSs also overlap to varying extents. Specifically, both the MX and CAM DPSs feed within the CCE on euphausiids, anchovy, sardine, and herring; and within feeding areas off of Alaska, both the WNP and MX DPSs feed on euphausiids, herring, capelin, juvenile walleye pollock, and sand lance. When Federal agency actions undergo section 7 consultation, the analysis will be based on the best available scientific and commercial data at that time.

Special Management Considerations or Protection

A specific area within the geographic area occupied by a species may only be designated as critical habitat if the areas contains one or more essential physical or biological features that ''may require special management considerations or protection'' (16 U.S.C. 1532(5)(A)(ii); 50 CFR 424.12(b)(iv)). ''Special management considerations or protection'' is defined as methods or procedures useful in protecting the physical or biological features essential to the conservation of listed species (50 CFR 424.02). As discussed previously, courts have made clear that the ''may require'' standard requires that NMFS determine that special management considerations or protection of the features might be required either now or in the future; such considerations or protection need not be immediately required (see Critical Habitat Definition and Process). Four broad categories of actions, or threats, were identified as having the potential to negatively impact the essential prey features and the ability of feeding areas to support the conservation of listed humpback whales in the North Pacific: Climate change, direct harvest of the prey by fisheries, marine pollution, and underwater noise. Each of these threats could independently or in combination result in the need for special management or protections of the essential prey feature. The ''may require'' standard is met or exceeded with respect to management of the essential prey feature. We do not speculate as to what specific conservation measures might be required in the future through section 7 consultations on particular proposed Federal actions. However, we can point, for example, to our authorities to manage Federal fisheries under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801, *et seq.*) to demonstrate that management of the prey feature is not only possible but is ongoing. We find that many of the other threats identified are of a type that could also be ameliorated through specific measures now or in the future. We therefore conclude that the prey feature may require special management considerations or protection. These threat categories are summarized here and discussed in more detail in the Final Biological Report.

Climate Change

Multiple studies have detected changes in the abundance, quality, and distribution of species that serve as prey for humpback whales in association with climate shifts, particularly with ocean warming. The nature and extent of impacts have varied across study areas and species; however, in many cases, ocean warming has led to negative impacts on humpback whale prey species. For instance, in the CCE, during the anomalous warming of the upper ocean and weak upwelling from 2013—2016, often referred to as the ''blob'' or the ''warm blob,'' sharp decreases in euphausiid biomass were observed, as evidenced by declines in both abundance and body length (Harvey *et al.* 2017, Peterson *et al.* 2017). Comparisons of samples collected in the Northern California Current region during years of cool (2011, 2012), average (2000, 2002), and warm (2015, 2016) conditions, also indicated that body condition of northern anchovy, Pacific herring, and Pacific sardine were better in cool years compared to warm years, and significantly so for anchovy and herring (Brodeur *et al.* 2018). Climate change may also alter the spatial and temporal distributions of humpback prey species (Bakun *et al.* 2015, Auth *et al.* 2018), which may lead to corresponding shifts in marine mammal distributions as well as other changes in the ecology of the whales (King *et al.* 2011, Moore *et al.* 2019).

Consequences of climate-driven and climate-related reductions in the quality and abundance of prey species can cascade upwardly through ecosystems by decreasing energy transfers to higher trophic levels and potentially causing reproductive failures and die-offs of some predators (Coyle *et al.* 2011, Woodworth-Jefcoats *et al.* 2017, Zador and Yasumiishi 2017 and 2018, Bordeur *et al.* 2018, Jones *et al.* 2018). Observations of whales with poor body condition, called ''skinny whales'' due to their emaciated appearance, have been reported in recent years in Prince William Sound and Glacier Bay, Alaska (Straley *et al.* 2018; and see *https://irma.nps.gov/DataStore/DownloadFile/620535*). The lowest calving rates on record (since 1985) have also been observed in recent years (2016–2018, *https://irma.nps.gov/DataStore/DownloadFile/620535*) in Southeast Alaska, and juvenile return rates to the area are also low (Gabriele and Neilson 2018; see also Cartwright *et al.* 2019). It is not yet clear whether nutritional stress or some other factor (*e.g.,* parasites, disease) is the cause of the poor body condition and observed low calving rates of these whales, but some researchers hypothesize that reduced prey availability and/or quality driven by the marine heat wave of 2013–2016 and other climate factors is the likely cause (Gabriele and Neilson 2018).

Additional discussion on the potential impacts of climate change on humpback whale prey, including the related effects of eutrophication, harmful algal blooms, and ocean acidification is provided in the Final Biological Report (NMFS 2020a).

Direct Harvest

Within the areas under consideration for designation, a few fisheries directly target prey species that form a major part of the humpback whale diet (*e.g.,* Pacific herring, Pacific sardine, northern anchovy), and other fisheries can incidentally capture important prey species. This creates the potential for direct competition between humpback whales and certain fisheries (Trites *et al.* 1997). In fact, current management of key forage species like Pacific sardine and northern anchovy under their associated Federal fishery management plan includes a specific objective of providing adequate forage for dependent species, like whales and other higher trophic level species (PFMC 2019). Consequences of prey depletion as a result of fishing activities are also likely to be exacerbated in years when alternative humpback whale prey species are naturally low in abundance due to climate or environmental factors. Sufficient depletion of prey on the feeding grounds can lead to nutritional stress, which in turn can lead to decreases in body condition, size, reproductive output, and survival (as in Steller sea lions, Trites and Donnelly 2003; gray whales, Bradford *et al.* 2012; right whales, Seyboth *et al.* 2016). For humpback whales in the Atlantic

Ocean, there is some evidence that variation in prey availability during the summer may be connected to variation in annual reproductive rates in the following year (Clapham 1993).

Marine Pollution

Although pollution was not identified as a significant threat to any of the North Pacific DPSs of humpback whales in the recent status review (Bettridge *et al.* 2015), consumption of contaminated or low quality prey may negatively affect the health, population growth, and ultimately the recovery of listed humpback whales. Humpback whales are susceptible to bioaccumulation of lipophilic contaminants because they have long lifespans and large fat deposits in their tissues. Some contaminants may also be passed to young whales during gestation and lactation (as in fin whales, Aguilar and Borrell 1994). In comparisons of samples collected from Northern Hemisphere feeding grounds, Elfes *et al.* (2010) reported that concentrations of contaminants within humpback whale blubber were high in southern California and in the Northern Gulf of Maine. Marine pollution in the form of plastics is also a concern for marine systems worldwide, and microplastics in particular have entered into marine systems and food webs. Microplastics could be consumed via contaminated prey or ingested directly by whales when microplastics co-occur in the water column with target prey.

Marine pollution may also lead to secondary impacts on the whales' habitat. For instance, pollution from untreated industrial and domestic wastewater may be contributing to the occurrences of algal blooms. During some algal blooms, toxins (*e.g.,* saxitoxin, domoic acid) can become increasingly concentrated as they move up the food chain. Although much of the humpback whales' prey are lower trophic-level species, several unusual mortality events have been documented in the Atlantic Ocean, indicating that such toxins can pose a concern for humpback whales (Geraci *et al.* 1989, Gulland 2006).

Ocean Noise

Effects of noise on fish and zooplankton species, which is a topic of increasing research attention, may range from health and fitness consequences to mortality and reductions in abundance (Popper and Hastings 2009, Kight and Swaddle 2011, Radford *et al.* 2014). For instance, there is evidence that marine seismic surveys can result in behavioral effects as well as significant injury and mortality of fishes and zooplankton (McCauley *et al.* 2017, Carroll *et al.* 2017); however, such impacts may be relatively short in duration and spatially limited (to within the survey footprint and extending out ~15 km) and may be minimized by ocean circulation (Richardson *et al.* 2017). Available research also suggests that other noises in the marine environment from sources such as impact pile driving and underwater explosives may have negative consequences on certain species of fish and invertebrates such as trauma or tissue damage, mortality (of various life stages), stress, disruptions of schooling, or reduced foraging success (Popper and Hastings 2009, Weilgart 2017). Whether and how specific humpback whale prey are currently being impacted by various noise sources and levels is not yet clear, but the available information is sufficient to indicate that ocean noise poses a management concern for many fish and invertebrate species such that they may require management considerations or protection (Hawkins and Popper 2017).

Unoccupied Areas

Section 3(5)(A)(ii) of the ESA authorizes the designation of specific areas outside the geographical area occupied by the species if those areas are determined to be essential for the conservation of the species. Implementing regulations require that we first evaluate areas occupied by the species and only consider unoccupied areas where a critical habitat designation limited to geographical areas occupied would be inadequate to ensure the conservation of the species (50 CFR 424.12(b)(2)). An occupied area can only be considered essential if there is a reasonable certainty both that it contains one or more of the essential physical or biological features and that it will in fact contribute to the conservation of the species (*Id.*).

Although humpback whale abundances were greatly reduced throughout their range by commercial whaling (Rice 1978, Rice and Wolman 1982, Johnson and Wolman 1984), they still occur in areas where they were once targeted by commercial whaling operations (*e.g.,* Zerbini *et al.* 2006), and the NMFS 2017 Marine Mammal Stock Assessments for the Western and Central North Pacific regions concluded that humpback whales are currently found throughout their historical feeding range (Muto *et al.* 2018). As indicated in the proposed rule (84 FR 54354, October 9, 2019), we find that a designation limited to geographical areas occupied by humpback whales at the time of listing would be adequate to conserve the three listed DPSs and that there are no unoccupied areas that are essential to the recovery of the listed humpback whale DPSs.

Specific Areas Containing the Essential Feature

To determine what areas qualify as critical habitat within the geographical area occupied by the species, we are required to identify ''specific areas'' that contain the physical or biological features essential to the conservation of the species (50 CFR 424.12(b)(1)(iii)). Delineation of the specific areas is done ''at a scale determined by the Secretary [of Commerce] to be appropriate'' (50 CFR 424.12(b)(1)). Regulations at 50 CFR 424.12(c) also require that each critical habitat area be shown on a map. To create maps of the specific areas meeting the definition of critical habitat for each DPS, the CHRT considered, among other things, the scales at which biological data are available and the availability of standardized geographical data necessary to map boundaries. As noted previously, the ESA implementing regulations allow for flexibility in determining the appropriate scale at which specific areas are drawn (50 CFR 424.12(b)(1)).

Based on a review of the best available data, the CHRT delineated specific areas along the coasts of Alaska, Washington, Oregon, and California that meet the definition of critical habitat for one or more of the three DPSs of whales (Figure 1). Specific areas were also further delineated into 19 particular areas or units to facilitate subsequent analyses for each humpback whale DPS under section 4(b)(2) of the ESA (*e.g.,* consideration of economic impacts). *See* 16 U.S.C. 1533(b)(2). Each of these areas meets the definition of ''critical habitat'' because the best available scientific data indicate that the area is occupied by the particular DPS and the essential feature is present, as evidenced by documented feeding behavior of the whales in these areas, humpback whale sightings data, and/or presence of humpback whale prey.

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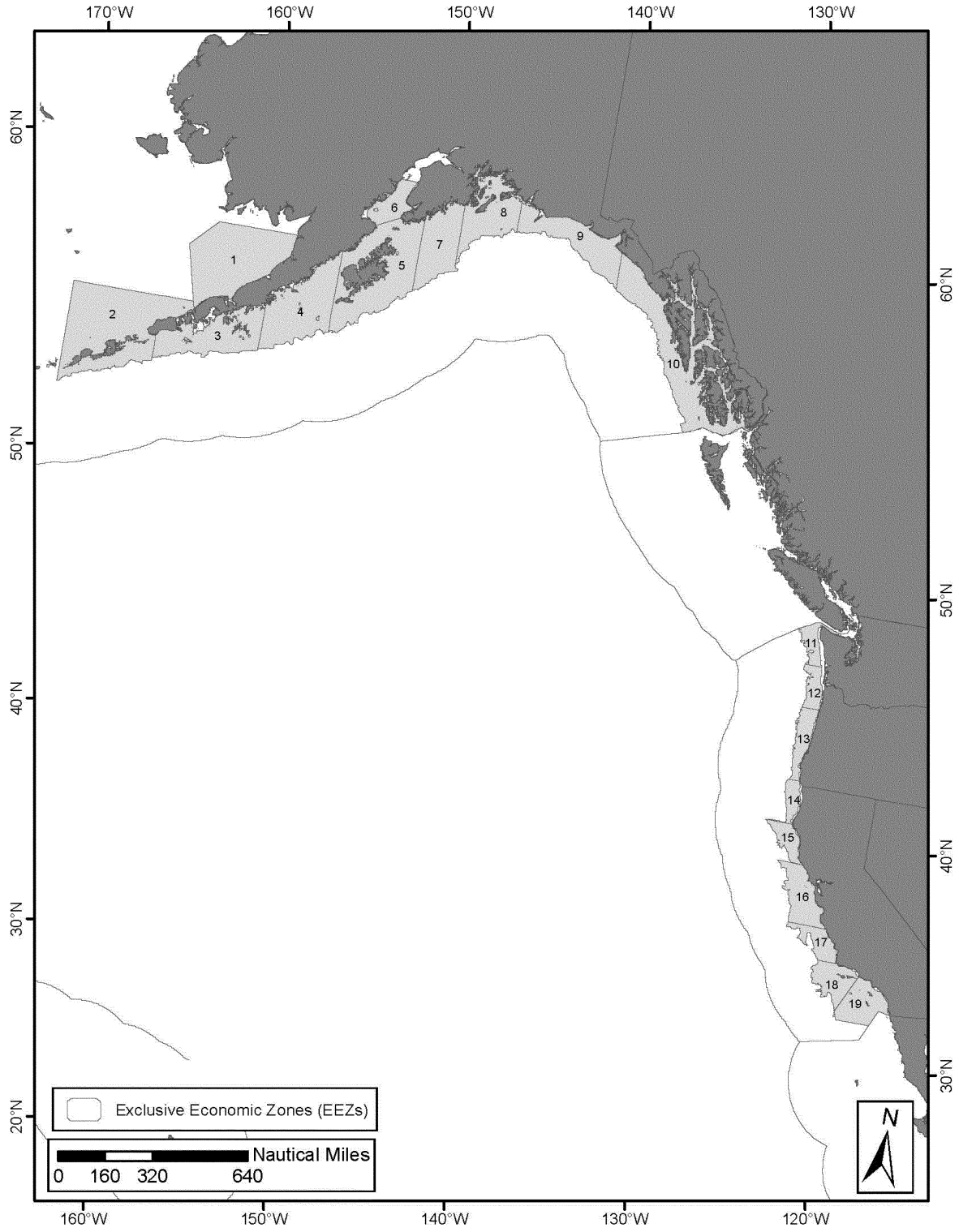

Figure 1. Specific areas (Units 1-19) occupied by one or more of the listed humpback whales DPSs. Units 1-9 are occupied by the WNP DPS; Units 1-19 are occupied by the MX DPSs; and Units 11-19 are occupied by the CAM DPS.

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In delineating and mapping the specific areas, the CHRT applied identified datasets in a systematic way across regions and DPSs to ensure consistency in how boundaries were determined. The approach and data used by the CHRT, which we summarize here, were described in the proposed rule (84 FR 54354, October 9, 2019) and are also discussed in further detail in the Final Biological Report (NMFS 2020a), which describes their updated assessment in response to public comments.

Although the humpback whale feeding BIAs as delineated by Ferguson *et al.* (2015a and 2015c) and

Calambokidis *et al.* (2015) were not intended to be synonymous with critical habitat under the ESA, they were regarded by the CHRT as an important source of information and very informative to their review of areas that meet the definition of critical habitat for humpback whales. In delineating the specific critical habitat areas, the CHRT considered the humpback whale BIAs and the underlying sources used to help delineate the BIAs. In some instances, BIA boundaries were used to determine the boundaries for critical habitat areas. The CHRT also decided that the BIAs should remain intact within a given specific critical habitat area unless there was a compelling reason to change or divide it, because the BIAs are well described, discrete delineations of habitat based on thorough review of existing data that generally fall within larger delineations of humpback whale feeding regions.

For U.S. West Coast areas (Washington, Oregon, and California), the CHRT applied the results of a habitat model for the CCE that incorporated 275 humpback whale sightings from seven systematic line-transect cetacean surveys conducted in summer and fall (July–December) between 1991–2009 (Becker *et al.* 2016) and a habitat model for southern California (*i.e.,* Units 16–19) that incorporated 53 humpback whale sightings from 20 surveys conducted between 2005 and 2015 during winter and spring (January–April, Becker *et al.* 2017). Predictions from the summer/fall models were made for the entire U.S. West Coast from the coast to 300 nmi offshore (the study area was approximately 1,141,800 km^2). Predictions from the winter/spring models were made in a subset of this region: South of 38° N and east of 125° W (the study areas was approximately 385,460 km^2). The Becker *et al.* 2016 and 2017 models summarize expected humpback whale distributions in the CCE over a long time-period and incorporate oceanographic variability observed during the surveys.

The Becker *et al.* (2016 and 2017) models predicted humpback whale abundance in approximately 10 by 10 km grid cells. Cells containing the highest 90 percent of the predicted study area abundance were used to help delineate the offshore extent of the specific areas. (All or 100 percent of the predicted abundance had a distribution that extended out to and even beyond the U.S. EEZ.) The Becker *et al.* (2016 and 2017) predictions also contributed to delineating the north/south boundaries between particular habitat units. As no such coast-wide habitat model is available for Alaska, the CHRT relied on published surveys and available sightings data. Where available, humpback whale sightings data were mapped and overlaid with the BIAs to inform selection of boundaries between specific areas.

For applicable habitat units, the CHRT also considered the polygons derived from ARS data from satellite-tagged whales (Mate *et al.* 2018). These polygons provided information regarding where and the area over which the whales may feed, and thus these data provided additional support for the delineation of relevant specific critical habitat areas.

To determine appropriate nearshore boundaries for the specific areas, the CHRT used humpback whale sightings data from multiple studies (*e.g.,* Calambokidis *et al.* 2008, Zerbini *et al.* 2006, Baker *et al.* 2016). Collectively, the sightings datasets represent results of different types of sampling efforts (*e.g.,* targeted small boat surveys, systematic line-transect surveys), different time-periods (2001–2003, 2004, 2005), and different study locations. The CHRT generated depth frequency histograms from all these sightings in Alaska and for all sightings off of Washington, Oregon, and California to delineate the shoreward boundary for critical habitat units in each of those respective regions. Based on these data, the 1-m depth contour (relative to mean lower low water (MLLW)) or a BIA boundary, whichever was closer to shore, was selected as the nearshore boundary for the habitat units in Alaska. Humpback whales in Alaska have frequently been observed feeding extremely close to shore during high tide (J. Moran, AFSC, pers. comm., May 23, 2018), which comports with the CHRT's selection of the 1-m depth contour (or isobath). Based on the available data for the U.S. West Coast, the CHRT selected the 50-m isobaths as the shoreward boundary for each specific area except in cases where doing so would clip out a portion of a BIA. Cases where this occurred (*i.e.,* Units 16 and 17) and how it was addressed are discussed in more detail in the descriptions of each specific area below and in the Final Biological Report.

In the following sections, we provide additional details regarding the boundaries of each of the 19 specific areas and briefly describe humpback whales' use of the specific area. We note that these delineations of specific units of habitat do not necessarily represent discrete feeding aggregations or populations of humpback whales—individual whales generally move across many of these boundaries. More detailed information regarding whale and prey distributions is provided in the Final Biological Report (NMFS 2020a).

Unit 1—Bristol Bay

This unit is bounded along the northern edge by a line extending due west from Egegik (at 58°14′ N, 157°28′ W) to encompass the humpback whale BIA within Bristol Bay. The boundary then extends southwest and then southward tangentially along the BIA to the coastline at Moffet Point (55°27′ N, 162°35′ W). The nearshore boundary of this unit follows the 1-m isobath (relative to MLLW). This unit covers about 19,279 nmi^2 and includes waters off Bristol Bay and Lake and Peninsula Boroughs, and a small portion of Aleutians East Borough.

Unit 1 boundaries were drawn based largely on the location of a humpback whale feeding BIA (see Ferguson *et al.* 2015c), which was in turn identified largely based on results of systematic surveys reported in Clapham *et al.* (2012), Friday *et al.* (2012), and Friday *et al.* (2013). Unit 1 was also extended farther into Bristol Bay relative to the BIA to reflect sightings from 1999 aerial surveys of Bristol Bay (Friday *et al.* 2012) and sightings from the 2017 IWC Pacific Ocean Whale and Ecosystem Research Program (POWER) survey (Matsuoka *et al.* 2018) indicating that humpback whales may also be common in these waters. The southern, nearshore boundary was drawn to accommodate the nearshore areas (around the 50 m isobath) indicated by sightings reported in Friday *et al.* (2013).

Surveys conducted during 2004 and 2006–2010 within the eastern Bering Sea and that overlapped with a portion of Unit 1, indicated widespread and persistent concentrations of euphausiids in the survey area (Sigler *et al.* 2012). Humpback whales may also feed on various species of schooling fish, such as juvenile pollock, capelin, herring, and sand lance that occur in this region (Nemoto 1959, Nemoto 1970, Sigler *et al.* 2012, Ormseth 2015, Andrews *et al.* 2016).

Photo-identification data are not available to validate occurrences of particular DPSs within this unit; however, the available data suggest this area is a destination for whales from the Hawaii (HI, which are not listed), WNP, and MX DPSs (Baker *et al.* 2013). Five marked whales are also documented to have moved between the WNP breeding grounds and the broader eastern Bering Sea region (Omura and Ohsumi 1964).

Unit 2—Aleutian Island Area

This unit includes waters along the northern side of Unimak Island, waters around Umnak and Unalaska Islands, and waters within Umnak and Unimak Pass. At its eastern edge, the northern boundary of this area extends from 55°41′ N/162°41′ W, tangentially along the northern edge of a humpback whale BIA west out to 169°30′ W. The western boundary extends southward through Samalga Pass to the BIA boundary on the south side of the islands, which corresponds closely to a line drawn along the 2,000-m isobath. This southern boundary follows the edge of the BIA and extends eastward to 164°25′ W. The nearshore boundary of this unit is the 1-m isobath (relative to MLLW). This unit includes waters off the Aleutian East and Aleutian West Boroughs. Unit 2 covers about 28,829 nmi^2 of marine habitat.

This area encompasses a humpback whale feeding BIA, which was drawn to include high density sightings of humpback whales as reported in Zerbini *et al.* (2006), Clapham *et al.* (2012), Friday *et al.* (2012), and Friday *et al.* (2013; see Ferguson *et al.* 2015c). Telemetry and sightings data indicate that humpback whales use the coastal waters to the north and south of the islands as well as within the passes (Zerbini *et al.* 2006, Sigler *et al.* 2012, Kennedy *et al.* 2014). The western edge of Unit 2, however, does not include the small portion of the BIA that extends west of Samalga Pass. This pass coincides with an abrupt oceanographic break, west of which the frequency of humpback whale sightings have been very low or absent (Zerbini *et al.* 2006; P. Wade, pers. comm., May 23, 2018). The northwestern edge of Unit 2 also extends slightly north of the BIA, because available sightings data indicate humpback whales use waters north of Unimak Pass and along the middle and outer Bering Sea shelf and slope (Calambokidis *et al.* 2008, Friday *et al.* 2012, Friday *et al.* 2013, Matsuoka *et al.* 2018).

Surveys conducted during 2004 and 2006–2010 within the eastern Bering Sea indicated widespread and persistent concentrations of euphausiids in this area (Sigler *et al.* 2012), and general additive models using environmental datasets from summers 2008–2010 for the Eastern Bering Sea also predict relatively high levels of euphausiid biomass occurring within this area (Zerbini *et al.* 2016). In addition to targeting euphausiids, humpback whales may also consume multiple fish species occurring in this region such as herring, capelin, and juvenile walleye pollock (Nemoto 1959, Nemoto 1970, Andrews *et al.* 2016, Ormseth 2015, 2017).

Photo-identification data indicate this area is a destination for whales from the HI, WNP, and MX DPSs (Calambokidis *et al.* 2008).

Unit 3—Shumagin Islands Area

This area extends from 164°25′ W eastward to 158°39′ W and encompasses the feeding BIA around the Shumagin Islands. The area is bounded on its southern (offshore) edge by a line drawn along the 1,000-m isobath, which also runs along the southern boundary of the BIA. The nearshore boundary of this unit follows the 1-m isobath (relative to MLLW). This unit is mainly within the Aleutians East Borough but includes a small portion of the Lake and Peninsula Borough. Unit 3 covers about 13,162 nmi^2 of marine habitat.

This area was drawn from the boundary of Unit 2 eastward and encompasses an identified BIA (Ferguson *et al.* 2015a). This BIA is within the 1,000-m isobath, which was selected as the offshore boundary for this unit. As evidenced by acoustic trawl surveys, krill occur in high abundance in this area (Simonsen *et al.* 2016). Surveys conducted within this area also indicate that feeding aggregations of humpback whales consistently occur in coastal areas south of these islands and around the Shumagin Islands (Waite *et al.* 1999, Witteveen *et al.* 2004, Zerbini *et al.* 2006, Wynne and Witteveen 2013), where the whales have been observed targeting dense schools of krill (Wynne and Witteveen 2013). During the University of Alaska's Gulf Apex Predator-Prey (GAP) Study surveys within this area, conducted across 14 feeding seasons, 654 individual humpback whales were identified out of 1,437 total sightings. Analyses of these sightings indicate a fairly high degree of site fidelity to this area, with an average annual rate of return of 37 percent (SD = 11.8 percent; Witteveen and Wynne 2016a). Surveys conducted in 1985 indicated that humpback whales were widely distributed throughout this area but were typically observed near island complexes, the shelf break, and banks, such as Sanak Bank, Shumagin Bank, and an additional unnamed bank, with repeated observations of whales at both Shumagin Bank and the unnamed bank (Brueggeman *et al.* 1987).

Photo-identification data indicate this area is a destination for whales from the HI, MX, and WNP DPSs (Witteveen *et al.* 2004, Calambokidis *et al.* 2008).

Unit 4—Central Peninsula Area

The western edge of this area extends along 158°39′ out to a line corresponding to the 1,000-m isobath, which marks the offshore boundary. The eastern boundary is at 154°54′ W, just east of the Shumagin Islands. The nearshore boundary of this unit follows the 1-m isobath (relative to MLLW). This unit is within the Lake and Peninsula Borough. Unit 4 covers about 15,026 nmi^2 of marine habitat.

This area captures the waters between two identified feeding BIAs. Survey data indicate that humpback whales are consistently found in these waters (Brueggeman *et al.* 1989, Zerbini *et al.* 2006) and at least occasionally transit between the Shumagin Island area and Kodiak Island (5 of 171 whales; Witteveen *et al.* 2004). Results of systematic surveys conducted in the summers of 2001, 2002, and 2003, indicate that fin whales occurred in high densities in Unit 4, and in particular around the Semidi Islands, relative to the adjacent areas (Units 3 and 5); while humpback whales had the opposite distribution pattern (Zerbini *et al.* 2006). Brueggeman *et al.* (1989) report a fairly similar pattern based on their aerial and shipboard surveys conducted in 1985 and 1987, respectively. Although these two whale species are often sympatric and have overlapping diets, previous surveys and isotope analyses have provided evidence of trophic niche partitioning between fin and humpback whales, with the latter being more piscivorous (Wynne and Witteveen 2013, Gavrilchuk *et al.* 2014, Witteveen *et al.* 2015, Witteveen *et al.* 2016). Various fish prey species as well as high abundances of euphausiids occur in this area (Ormseth 2014, Simonsen *et al.* 2016).

Photo-identification data demonstrate that this area is a destination for whales from the HI and MX DPSs (Calambokidis *et al.* 2008). WNP DPSs whales have not been photo-identified in this area but their presence has been inferred based on documented occurrences in both of the adjacent units (*i.e.,* Units 3 and 5).

Unit 5—Kodiak Island Area

This area includes the waters around Kodiak Island and the Barren Islands. The western boundary runs southward along 154°54′ W to a line that follows the 1,000-m isobath, and then extends eastward to a boundary at 150°40′ W. The area also extends northward to the inner mouth of Cook Inlet where it is bounded by a line that extends from Cape Douglas across the inlet to Cape

Adam. The nearshore boundary of this unit follows the 1-m isobath (relative to MLLW). This unit is within the Kodiak Island Borough but includes a small portion of the Kenai Peninsula Borough. Unit 5 covers about 17,420 nmi² of marine habitat.

This area was drawn to capture the Kodiak Island BIA, as well as documented aggregations of humpback whales around the Barren Islands and in waters to the east of Kodiak (Rice and Wolman 1982, Zerbini *et al.* 2006, Ferguson *et al.* 2015a, Rone *et al.* 2017). Waters around Kodiak Islands have been surveyed extensively since 1999 as part of the GAP study. Over 17 years of GAP surveys in this area, 1,187 unique humpback whales were identified in the Kodiak region (out of 2,173 total sightings), with an average annual rate of return of 35 percent (SD = 15.2 percent, Witteveen and Wynn 2016), indicating a high degree of site fidelity to this area. Some inter-annual movement of whales has also been observed between this area and lower Cook Inlet and Prince William Sound (Waite *et al.* 1999, Witteveen *et al.* 2011). Waite *et al.* (1999) estimated that only 3 to 6 percent of the Kodiak whales also visit Prince William Sound, and the two areas have been viewed as supporting largely separate feeding groups (Waite *et al.* 1999, Witteveen *et al.* 2011); however, new, preliminary analyses of photo-identification data suggest a strong connection between the two areas (Moran and Straley 2019). Humpback whales were also historically common in this area and were taken in a commercial whale fishery that operated out of Port Hobron, off the southeastern coast of Kodiak Island (Witteveen *et al.* 2007). Relative proportions of prey items within the humpback diet have been shown to vary between years, but key prey targeted by the whales within this unit include krill, capelin, juvenile pollock, and sand lance (Witteveen *et al.* 2012, Wright *et al.* 2016), which occur in high abundances in this area (Simonsen *et al.* 2016, Ormseth 2014, 2016).

Photo-identification data demonstrate this area is a destination for whales from the HI, MX, and WNP DPSs (Calambokidis *et al.* 2008).

Unit 6—Cook Inlet

This area extends from the mouth of Cook Inlet where it is bounded by a line that extends from Cape Douglas across the inlet to Cape Adam. The northern boundary is the 60°20′ N latitude line, just south of Kalgin Island. The nearshore boundary of this unit is the 1-m isobath (relative to MLLW). This area borders the Kenai Peninsula Borough. This unit covers about 3,366 nmi² of marine habitat.

The southern boundary of this area approximates the ecological shift between the Kodiak Island Area (Unit 5) and Cook Inlet. Unit 6 does not include the upper portions of Cook Inlet, because humpback sightings are rare north of Kalgin Island despite extensive, routine aerial surveys of this area for Cook Inlet beluga whales (K. Sheldon, NMML, pers. comm., August 2, 2018). North of the Forelands, the inlet becomes shallow and highly turbid due to deposition of glacial silt. With its extreme tidal range and mudflats, the upper inlet does not provide suitable feeding habitat for humpback whales despite the presence of prey species (*e.g.,* eulachon). Humpback whales are routinely sighted in the lower portions of the inlet (NMML, unpubl. data, 1994–2018), but given the limited survey data, the density of whales and level of site fidelity of humpback whales to this feeding area has not been established. Inter-annual movements of humpback whales between lower Cook Inlet and the Kodiak Island area (Unit 5) have been observed (Witteveen *et al.* 2011), indicating that the whales feeding in this area do not comprise a completely distinct feeding aggregation. Based on stable isotope analyses of pooled skin samples collected from whales found during the feeding season (May–December) in lower Cook Inlet, Kenai Fjords, and Prince William Sound region, humpback whales in this area appear to primarily consume fish species (Witteveen *et al.* 2011).

Photo-identification data demonstrate that HI and MX DPS whales occur in this area (Calambokidis *et al.* 2008). WNP DPS whales have not been photo-identified in this specific area; however, their presence in this area has been inferred based on available data indicating that humpback whales from WNP wintering areas occur in this general region of Alaska (NMFS 2020a, Table C5).

Unit 7—Kenai Peninsula Area

This area extends eastward from 150°40′ W at the boundary with Unit 5 (Kodiak Island Area) to 148°31′ W, and extends offshore to a boundary marked by the 1,000-m isobath. The nearshore boundary of this unit is the 1-m isobath (relative to MLLW). This unit measures approximately 8,496 nmi² and is within the Kenai Peninsula Borough.

This area captures the region separating the Kodiak Island and Prince William Sound BIAs and includes feeding areas around the Kenai Fjords. Estimated densities of humpback whales within the shelf portion of the Navy Temporary Maritime Activities Area, which overlaps with a portion of Unit 7, has ranged from 0.0930 in 2013 (CV = 0.74) to 0.0050 in 2015 (CV = 0.32, Rone *et al.* 2017). Based on results reported in Witteveen *et al.* 2011, site fidelity of humpback whales to this area can be inferred to be fairly high. Inter-annual movement of whales has also been observed between this area and the coastal waters around Kodiak Island (Witteveen *et al.* 2011). As noted previously for Unit 6, stable isotope analyses of pooled skin samples collected from whales found during the feeding season (May–December) in Kenai Fjords, lower Cook Inlet, and Prince William Sound region, suggest that humpback whales in this area primarily consume fish species (Witteveen *et al.* 2011). High abundance of euphausiids and variable abundances of forage fishes, such as capelin and juvenile pollock, occur in this area (Simonsen *et al.* 2016, Ormseth 2014, 2016, McGown *et al.* 2019).

Photo-identification data demonstrate this area is a destination for whales from the HI and MX DPSs (Calambokidis *et al.* 2008). Limited satellite telemetry data also indicate this is a destination for MX DPS whales (Lagerquist *et al.* 2008). WNP DPS whales have not been photo-identified in this specific area, but presence of WNP DPS whales has been inferred based on available data indicating that humpback whales from WNP wintering areas occur within the Gulf of Alaska (NMFS 2020a, Table C5).

Unit 8—Prince William Sound Area

This area extends from 148°31′ W eastward to 145°27′ W, and extends offshore to a boundary drawn along the 1,000-m isobath. The nearshore boundary of this unit is the 1-m isobath (relative to MLLW). This unit is within the Valdez-Cordova Borough and covers about 8,166 nmi² of marine habitat.

This area was drawn to encompass the Prince William Sound feeding BIA (Ferguson *et al.* 2015a), which was identified based on studies conducted mainly in the western and southern portions of the sound (*e.g.,* von Ziegesar *et al.* 2001, Rice *et al.* 2011). This unit was drawn to include waters beyond the boundaries of the BIA based on the additional sightings reported in Witteveen *et al.* (2011, and as detected during SPLASH surveys) and observations reported by von Ziegesar (2013) indicating that humpback whales move between the sound and the fiords along the coast. Minor aggregations of humpback whales (8–13 whales) were also observed near Middleton Island during systematic surveys conducted in summer 1980 in the Gulf of Alaska (Rice

and Wolman 1982). Presence of humpback whales in the sound is strongly associated with the seasonal formation of Pacific herring aggregations (Rice *et al.* 2011, Straley *et al.* 2018, Moran and Straley 2018). Results of surveys conducted during fall/winter of 2007–2009 indicated that a small percentage of photo-identified whales (under 2 percent, n=4) overwintered in the sound (Rice *et al.* 2011). As noted for Unit 5 (Kodiak Island Area), the limited inter-annual movements of whales have been interpreted to mean the two areas support largely separate feeding groups (Waite *et al.* 1999, Witteveen *et al.* 2011); however, new, preliminary analysis of photo-identification data suggests a strong connection between the two areas (Moran and Straley 2019).

Photo-identification data confirm this area is a destination for whales from the HI and MX DPSs (Baker *et al.* 1986, Calambokidis *et al.* 2008). WNP DPS whales have not been photo-identified in this specific area; however, presence has been inferred based on available data indicating that humpback whales from WNP wintering areas occur in the Gulf of Alaska (NMFS 2020a, Table C5).

Unit 9—Northeastern Gulf of Alaska

This area extends from 145°27′ W to 139°24′ W and to an offshore drawn along the 1,000-m isobath. The nearshore boundary of this unit is the 1-m isobath (relative to MLLW). This unit mainly borders Yakutat Borough, but also borders a small portion of Valdez-Cordova. Unit 9 covers about 9,065 nmi² of marine habitat.

This area was drawn to capture a section of the Gulf of Alaska between two feeding BIAs (in Units 8 and 10). Surveys within this unit have been relatively limited. Surveys conducted in June–August of 1980 by Rice and Wolman (1982) indicated that humpback whales were sparsely distributed in the Gulf of Alaska (populations were still depleted), but they noted minor aggregations of humpback whales in Yakutat Bay (13 whales). More recently, 21 groups (33 individuals) of humpbacks were sighted in this area during an IWC–POWER survey in July/August of 2012 (Matsuoka *et al.* 2013). Sightings of humpback whales were also recorded in this area by the NMFS Southwest Fisheries Science Center (SWFSC) as part of the SPLASH surveys in 2004 and 2005 (Calambokidis *et al.* 2008; see also Witteveen *et al.* 2011). Based on limited sampling, results of stable isotope analyses suggest that whales in this area have a mixed diet of fish and zooplankton (Witteveen *et al.* 2011). Surveys indicate high abundances of euphausiids and various forage fish species, such as capelin and herring, occur in this area (Simonsen *et al.* 2016, Ormseth 2014).

Photo-identification data confirm this area is a destination for whales from the non-listed HI DPS (Baker *et al.* 1986, Calambokidis *et al.* 2008; and SPLASH data courtesy of C. Gabriele, NPS), and limited satellite telemetry data indicate the presence of MX DPS whales (Lagerquist *et al.* 2008). Photo-identified MX DPS whales have also been sighted in both of the adjacent areas (Units 8 and 10). There are no reported sightings of photo-identified whales of the WNP DPS in this specific area; however, presence of these whales has been inferred based on available data suggesting that humpback whales from WNP wintering areas occur in this general region (NMFS 2020a, Table C8). Given the increased distance of this unit from other confirmed sighting of whales from the WNP DPS, there is uncertainty regarding whether WNP DPS whales occur in this unit.

Unit 10—Southeastern Alaska

This area extends from 139°24′ W, southeastward to the U.S. border with Canada and encompasses a humpback whale BIA. The area also extends offshore to a boundary drawn along the 2,000-m isobath, which corresponds to the offshore boundary of the BIA. The nearshore boundary of this unit also corresponds to the BIA boundary. This unit borders unorganized boroughs, but includes water off of Skagway-Hoonah-Angoon, Haines, Juneau, Sitka, Petersburg, Wrangell, and Ketchikan Gateway. Unit 10 covers approximately 22,152 nmi² of marine habitat.

This area was drawn to encompass well established feeding grounds in southeast Alaska and an identified feeding BIA (Andrews 1909, Baker *et al.* 1985, Straley 1990, Dahlheim *et al.* 2009, Ferguson *et al.* 2015a). Humpback whales occur year-round in this unit, with highest densities occurring in summer and fall (Baker *et al.* 1985, 1986). Periods of occupancy of over 100 days have been reported for a significant portion of the whales using this area (Baker *et al.* 1985). Based on sighting data for summer months during 1985–2014 in Glacier Bay and Icy Strait, over 60 percent of the adult whales remained in this area to feed for more than 20 days, and average residency time for whales seen on more than 1 day within a season was 67 days (SD = 38.3; Gabriele *et al.* 2017). Photo-identification data collected in Southeast Alaska from 1979 to 1983 indicate a high degree of site fidelity to this area, with 47.2 percent of whales being sighted in more than one year (154 whales out of 326 unique individuals; Baker *et al.* 1986). Sightings histories for three female humpback whales in particular indicate these whales returned in each of 12 or 13 years during 1977–1992 (Straley *et al.* 1994). Evaluation of sighting histories in Glacier Bay and portions of Icy Strait from 1985 to 2013 also indicate a high degree of site fidelity with 63 percent (244 of 386 total whales identified) of non-calves returning to the survey area in more than 1-year, 17 percent (n=66) returning every year, and an additional 10 percent (n=39) returning in all but 1 year (Gabriele *et al.* 2017). Humpback whales are known to feed on krill, herring, capelin, sand lance, myctophids, and juvenile pollock within Southeast Alaska, but dominant prey within the diet vary among the specific locations and seasons (Bryant *et al.* 1981, Straley *et al.* 2018).

Photo-identification data confirm this area is a destination for whales from the HI and MX DPSs (Baker *et al.* 1985, 1986; Calambokidis *et al.* 2008). Although sightings of WNP DPS whales are reported for general areas to either side of this unit (Kodiak, Alaska and Vancouver Island, British Columbia, *e.g.,* Calambokidis *et al.* 2001), portions of Unit 10 have been surveyed extensively, and those survey data do not indicate that the WNP DPS occurs in Unit 10.

Unit 11—Coastal Washington

This area extends southward from the U.S. EEZ to 46°50′ N, just north of Willapa Bay, WA. The unit extends offshore to a boundary corresponding to the 1,200-m isobath, which also aligns with the seaward extent of a BIA. The unit includes waters within the U.S. portion of the Strait of Juan de Fuca to an eastern boundary line at Angeles Point (123°33′ W). The 50-m isobath forms the shoreward boundary. The unit includes waters off Clallam and Jefferson Counties, and a portion of Grays Harbor County. Unit 11 covers about 3,441 nmi² of marine habitat.

This area was drawn to encompass the Northern Washington BIA (Calambokidis *et al.* 2015), located at the northern edge of this unit, and cells containing the highest 90 percent of the study area abundance predicted by the Becker *et al.* (2016) habitat model. In addition to the habitat model results, clusters of humpback whale sightings just off Grays Harbor area (see Calambokidis *et al.* 2015), movement data collected from five humpback whales with LIMPET satellite tags (Schorr *et al.* 2013), and telemetry-

derived ARS data for whales tagged off of Oregon in 2017 (n=4) and Washington (n=9, Palacios *et al.* 2020) support inclusion of waters beyond the BIA in this unit. The unit also includes waters within the Strait of Juan de Fuca where whales have been observed foraging in recent years (and which falls outside of the area covered by surveys used to generate the habitat model predictions) (see also Palacios *et al.* 2020). Although humpback whales have been increasingly observed within the Salish Sea (*i.e.,* the waters of the Strait of Georgia, the Strait of Juan de Fuca, Puget Sound, and around the San Juan Islands, Calambokidis *et al.* 2017), Unit 11 does not extend beyond the strait farther into the Salish Sea. High reporting rates from areas within the Salish Sea have likely resulted in a biased understanding of humpback whale abundance in these waters; however, hundreds of whales appear to be using the strait (J. Calambokidis, CRC, pers. comm., May 23, 2018; see also Palacios et al. 2020). The offshore boundary for Unit 11 was selected to follow the contour of cells containing the highest 90 percent of the study area abundance predicted by the Becker *et al.* (2016) habitat model, which generally coincided with the 1,200-m isobath. Multiple, persistent, dense aggregations of krill occur near the Juan de Fuca canyon in this area, likely due to the canyon feature (Santora *et al.* 2018). Various forage-fish species also occur within this unit, with Pacific herring being one of the most prevalent forage fish off Washington and Northern Oregon (Brodeur *et al.* 2005, Zwolinski *et al.* 2012).

Photo-identification data confirm this area is a destination for whales from the HI, MX, and CAM DPSs (Calambokidis *et al.* 2008).

Unit 12—Columbia River Area

This area extends southward from 46°50′ N to 45°10′ N and extends out to a seaward boundary corresponding to the 1,200-m isobath. The 50-m isobath forms the shoreward boundary. This area includes waters off of Pacific County, WA and Clatsop County, OR. This unit covers about 3,636 nmi² of marine habitat.

This unit was drawn to capture the Columbia River plume system, which supports foraging by many predators, including concentrations of humpback whales. Hotspots with persistent, heightened abundance of krill (Santora *et al.* 2018), and seasonally and annually variable assemblages of forage fishes, including anchovy, sardine, and herring, occur in this unit (Demer *et al.* 2012, Zwolinski *et al.* 2012). The area extends out to the 1,200-m isobath to capture the outer edge of cells containing the highest 90 percent of the study area abundance predicted by the Becker *et al.* (2016) habitat model. The area also encompasses areas over which humpback whales have been observed to feed based on ARS data from satellite tagged whales (Mate *et al.* 2018, Palacios *et al.* 2020). The southern boundary at 45°10′ N was drawn to encompass the available ARS areas and to reflect where the habitat model predictions begin to shift farther offshore.

Photo-identification data are not available to validate occurrences of particular DPSs within this precise unit; however, the available photo-identification data do support a conclusion that this area is a destination for whales from the MX and CAM DPSs (Green *et al.* 1992, Calambokidis *et al.* 2000, Calambokidis *et al.* 2017). Some available genetic data also suggest that HI DPS whales may occur in this unit (Mate *et al.* 2018).

Unit 13—Coastal Oregon

This area extends southward from 45°10′ latitude to 42°10′, and extends offshore to a boundary at the 1,200-m isobath. The 50-m isobath forms the shoreward boundary. This area includes the BIA at Stonewall and Heceta Bay, and includes waters off of Tillamook, Lincoln, Lane, Douglas, Coos, and Curry Counties. Unit 13 covers about 5,750 nmi² of marine habitat.

This unit includes the Stonewall and Heceta Bank BIA, which supports humpback whale feeding aggregations from May to November (Calambokidis *et al.* 2015). The northern and offshore boundaries of this unit correspond to cells containing the highest 90 percent of the study area abundance predicted by the Becker *et al.* (2016) habitat model. The southern boundary of this unit was drawn just north of another BIA. Based on surveys conducted in spring and summer of 2000 as part of the US Global Ocean Ecosystem Dynamics (GLOBEC) Northeast Pacific program, concentrations of humpback whales on Heceta Bank were shown to correspond to high densities of fish (Pacific sardine and juvenile salmon) and large, high density patches of krill (Tynan *et al.* 2005, Ressler *et al.* 2005). Within this unit, large, persistent aggregations of krill have been observed inshore of Heceta Bank, off Cape Blanco, and in association with submarine canyons (Ressler *et al.* 2005, Santora *et al.* 2018).

Photo-identification data confirm this area is a destination for whales from the MX DPS (Green *et al.* 1992, Calambokidis *et al.* 2008). Presence of CAM DPS whales in this area is indicated by genetic data as well as modelling of sightings data (Wade 2017, Mate *et al.* 2018).

Unit 14—Southern Oregon/Northern California

This area is bounded in the north at 42°10′ and extends south to the Mendocino escarpment at 40°20′. The area extends offshore to a boundary drawn along the 2,000-m isobath. The 50-m isobath forms the shoreward boundary. The area includes the marine waters off Del Norte County, CA, and most of Humboldt County, CA, and borders a small portion of Curry County, OR. Unit 14 covers about 3,412 nmi² of marine habitat.

This unit includes the Point St. George BIA, which typically supports whale feeding aggregations during July–November (Calambokidis *et al.* 2015). The northern boundary of this unit corresponds to the boundary of this BIA. The southern boundary corresponds with the Cape Mendocino/the Mendocino escarpment, where the predicted abundance from the habitat model shows a somewhat abrupt shift offshore (Becker *et al.* 2016). The seaward boundary for this unit extends out to the 2,000-m isobath to capture the habitat model predictions. ARS areas derived from satellite tracking data (n=26 whales, Mate *et al.* 2018) indicate that feeding behavior occurs throughout this unit, and although some ARS data indicate whales feed seaward of the 2,000-m isobath, the majority of the ARS behavior is captured within the boundaries of this unit. Multiple, recurring, high density aggregations (hotspots) of krill occur off of Cape Mendocino and elsewhere in this unit, in association with submarine canyons (Santora *et al.* 2018). Within this unit and southward along the coast to Southern California (*i.e.,* Unit 19), Fleming *et al.* (2016) collected 259 skin samples from humpback whales during 1993–2012 and used stable carbon and nitrogen isotope analyses to evaluate the relative contribution of euphausiids versus fish to the diet. Shifts over the 20-year study period in isotope signatures in whale skin samples observed by Fleming *et al.* (2016) indicate trophic-level shifts in the humpback whale diet, and these shifts corresponded to shifts in relative prey abundance (krill versus anchovy and sardine) and changing oceanographic conditions within the CCE. These results suggest that the dominant prey in humpback whale diet switched from krill to fish, and back to krill during the 20-year period, depending on the relative abundance of each prey.

Temporal shifts in diet composition (*e.g.,* from euphausiids and sardine in the 1920s to mainly anchovy in the 1950s and 1960s) are also reflected in historical whaling data and stomach content data from harvested whales (Rice 1963, Clapham *et al.* 1997).

Photo-identification data confirm this area is a destination for whales from the MX and CAM DPSs (Calambokidis *et al.* 2008).

Unit 15–California North Coast Area

This unit is bounded along its northern edge by the Mendocino escarpment at approximately 40°20′ N and extends southward to 38°40′ N, which corresponds to the approximate southern boundary of an identified BIA. The area extends offshore to a boundary drawn at the 3,000-m isobath. The 50-m isobath forms the shoreward boundary. This area includes marine waters off the coasts of Humboldt and Mendocino counties, CA, and covers about 4,898 nmi² of marine habitat.

The northern boundary of this unit corresponds to the Mendocino escarpment and a shift farther offshore in the habitat model predictions (Becker *et al.* 2016). The offshore boundary of this unit extends out to the 3,000-m isobath to more closely correspond to cells containing the highest 90 percent of the study area abundance predicted by the Becker *et al.* (2016) habitat model. This boundary is also supported by ARS data indicating that whales are feeding farther from shore in this area (Mate *et al.* 2018). Encompassed within this unit is a BIA that extends from Fort Bragg to Point Arena and that typically supports feeding aggregations of humpback whales from July to November (Calambokidis *et al.* 2015). The southern boundary of the unit corresponds to the northern boundary of another BIA. High-density, persistent aggregations of krill occur off Cape Mendocino and in association with canyon features within this unit (Santora *et al.* 2018). Krill hotspots, measuring about 216–320 km², have also been documented offshore of Point Arena near the 2,000-m isobath (Santora *et al.* 2011, Dorman *et al.* 2015).

Photo-identification data are not available to validate occurrences of particular DPSs within this unit; however, the available data strongly support the conclusion that this area is a destination for whales from the MX and CAM DPSs (Calambokidis *et al.* 2000, Calambokidis *et al.* 2017). For example, photo-identification data indicate that the percent of humpback whale encounters off northern California that correspond to the non-listed ''Hawaii DPS'' is extremely low, compared to about 10 and 25 percent, respectively, for the CAM and MX DPSs (Calambokidis *et al.* 2017).

Unit 16—San Francisco and Monterey Bay Area

This area extends from 38°40′ N southward to 36°00′ N to encompass a BIA. The seaward boundary is drawn along the 3,700-m isobath. The inshore boundary is mainly defined by the 15-m isobath, but also extends up to the Golden Gate Bridge within San Francisco Bay. This area includes waters off of the southern edge of Mendocino County, and Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties. Unit 16 covers approximately 12,349 nmi² of marine habitat.

This unit encompasses the Gulf of the Farallones-Monterey Bay BIA (Calambokidis *et al.* 2015) as well as cells containing the highest 90 percent of the study area abundance predicted by the Becker *et al.* (2016) habitat model. In this unit, the habitat model predictions extend farther offshore relative to the more northern west coast units, and extend even farther offshore based on modeled whale distributions in colder months (January–April, see Becker *et al.* 2017). Therefore, the offshore boundary was placed at the 3,700-m isobath to capture areas of higher predicted abundances in both summer and winter. (The area covered by the Becker *et al.* (2017) winter model starts at 38°00′, and we are not aware of any other models based on winter distributions for areas north of this unit.) This area also extends into the mouth of the San Francisco Bay to capture a recently recognized important foraging area for humpback whales (Calambokidis *et al.* 2017) as well as ARS data indicating that whales are feeding in and around the mouth of the bay (Mate *et al.* 2018). The highest densities of whales are seen at the entrance to San Francisco Bay, with a few extending into the Bay (J. Calambokidis pers. comm., May 23, 2018). Based on data from hydroacoustic surveys spanning multiple years between 2000–2009, persistent and recurring, high-density aggregations of krill ranging in size from about 578 km² to 950 km² have been shown to occur in multiple areas within this unit, including Bodega Head, Cordell Bank, Gulf of the Farallones, Pescadora, and Monterey Bay (Santora *et al.* 2011, Dorman *et al.* 2015, Santora *et al.* 2018).

Photo-identification data confirm this area is a destination for whales from the MX and CAM DPSs (Baker *et al.* 1986, Calambokidis *et al.* 2008).

Unit 17—Central California Coast Area

This area extends from 36°00′ N to a southern boundary at 34°30′ N, just south of an identified BIA. The nearshore boundary is defined by the 30-m isobath, and the seaward boundary is drawn along the 3,700-m isobath. This unit includes waters off of southern Monterey county, and San Luis Obispo and Santa Barbara counties. Unit 17 covers about 6,697 nmi² of marine habitat.

This unit encompasses a BIA that extends from Morro Bay to Point Sal and typically supports high density feeding aggregations of humpback whales from April to November (Calambokidis *et al.* 2015). In this area, as with Unit 16, the predicted abundance extends farther offshore in the warmer months (July–December) and even more so in cooler months (January–April) relative to the northern units (Becker *et al.* 2016 and 2017). Therefore, the offshore boundary was placed at the 3,700-m isobath to capture areas of higher predicted abundance in both summer and winter. The southern boundary for this area was drawn just south of the BIA. Based on acoustic survey data collected during 2004–2009, large krill hotspots, ranging from 700 km² to 2,100 km², occur off Big Sur, San Luis Obispo, and Point Sal (Santora *et al.* 2011). Hotspots with persistent, heightened abundance of krill were also reported in this unit in association with bathymetric submarine canyons (Santora *et al.* 2018).

Photo-identification data confirm this area is a destination for whales from the MX and CAM DPSs (Calambokidis *et al.* 2008).

Unit 18—Channel Islands Area

This area extends from a northern boundary at 34°30′ N to a boundary line that extends from Oxnard, CA seaward to the 3,700-m isobath, along which the offshore boundary is drawn. The 50-m isobath forms the shoreward boundary. This unit includes waters off of Santa Barbara and Ventura counties. This unit covers about 9,799 nmi² of marine habitat.

This unit encompasses the Santa Barbara Channel-San Miguel BIA, which supports high density feeding aggregations of humpback whales during March through September (Calambokidis *et al.* 2015). The seaward boundary at the 3,700-m isobath encompasses cells containing the highest 90 percent of the study area abundance predicted by both the summer and winter habitat models (Becker *et al.* 2016 and 2017). The southern boundary of this unit was

selected to correspond to where the habitat model predictions for both models show a clear decline in predicted humpback whale densities. The area to the south (*i.e.,* Unit 19) is predicted to have much lower summer densities of whales. Based on acoustic survey data collected during 2004–2009, a krill hotspot of about 780 km² has been documented off Point Conception (Santora *et al.* 2011). Some additional krill hotspots have also been observed in this unit in association with bathymetric submarine canyons (Santora *et al.* 2018).

Photo-identification data confirm this area is a destination for whales from the MX and CAM DPSs (Calambokidis *et al.* 2008).

Unit 19—California South Coast Area

The northern boundary for this unit extends southwest from Oxnard, CA through the Santa Cruz Basin and out to a seaward boundary along the 3,700-m isobath. The unit is also bounded in the south by the U.S. EEZ. The 50-m isobath forms the shoreward boundary. This unit includes waters off of Los Angeles, Orange, and San Diego counties, and covers about 12,966 nmi² of marine habitat.

This area does not contain a BIA but was drawn to capture the southern extent of the cells containing the highest 90 percent of humpback whale abundance predicted by the Becker *et al.* (2017) habitat model. This area has the lowest predicted humpback whale densities in the summer/fall months relative to all other units, but is predicted to support higher densities of whales in the winter/spring months relative to the summer/fall predictions for this area (Becker *et al.* 2016, Becker *et al.* 2017). The higher densities of humpback whales in winter/spring may stem from the fact that some of the whales sighted in this area are likely transiting through the area, rather than occupying the area as a feeding destination. Within this unit, krill hotspots ranging in size from about 210 km²–430 km² have been observed off San Nicolas and Santa Barbara Islands (Santora *et al.* 2011), and additional hotspots have been observed in association with submarine canyons (Santora *et al.* 2018).

Photo-identification data are not available to validate occurrences of particular DPSs within this unit; however, the available data support the conclusion that whales from the MX and CAM DPSs occur in this area (Calambokidis *et al.* 2000, Rasmussen *et al.* 2012).

Application of ESA Section 4(a)(3)(B)(i) (Military Lands)

Section 4(a)(3)(B)(i) of the ESA precludes designating as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense (DOD) or designated for its use, that are subject to an Integrated Natural Resources Management Plan (INRMP) prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation. *See* 16 U.S.C. 1533(a)(3)(B)(i); 50 CFR 424.12(h). Where these standards are met, the relevant area is ineligible for consideration as potential critical habitat. The regulations implementing the ESA set forth a number of factors to guide consideration of whether this standard is met, including the degree to which the plan will protect the habitat of the species (50 CFR 424.12(h)(4)). This process is separate and distinct from the analysis governed by section 4(b)(2) of the ESA, which directs us to consider the economic impact, the impact on national security, and any other relevant impact of designation and affords the Secretary discretion to exclude particular areas if the benefits of exclusion outweigh the benefits of inclusion of such areas. *See* 16 U.S.C. 1533(b)(2).

After we had identified specific areas that would potentially meet the definition of critical habitat for humpback whales, but prior to publishing the proposed rule, we contacted DOD representatives and requested information regarding relevant INRMPs. In response, the U.S. Navy (Navy) provided descriptions and locations of four areas adjacent to the humpback whale specific areas and that are managed under Sikes Act-compliant INRMPs: (1) Pacific Beach Annex, WA; (2) Naval Base Ventura County, Point Mugu, CA; (3) Naval Outlying Field, San Nicolas Island, CA; and (4) Naval Auxiliary Landing Field, San Clemente Island, CA. The Navy also provided information regarding how in their view, each of their approved INRMPs provides a conservation benefit to humpback whales and their habitat. An additional fifth INRMP, associated with the Navy's Southeast Alaska Acoustic Measurement Facility, AK (SEAFAC), was also noted as being under development, and that a draft was expected to be completed in December 2019. After reviewing the information and maps provided, we found that the Pacific Beach Annex INRMP addresses an entirely upland property and does not overlap with the areas under consideration for designation as critical habitat. Therefore, that INRMP was not considered further.

As described in the proposed rule (84 FR 54354, October 9, 2019), following completion of analyses under section 4(b)(2) of the ESA and resulting decisions regarding exclusions, only two INRMPs—the Naval Outlying Field San Nicolas Island (SNI) and Naval Base Ventura County (NBVC), Point Mugu—spatially overlapped with areas under consideration for designation as critical habitat and thus warranted further review during development of the proposed designations.

The NBVC Point Mugu INRMP addresses submerged lands and resources 3 nmi out from Point Mugu (relative to MLLW) and a zone that extends 0.25 nmi offshore around San Miguel and Prince Islands. This INRMP thus includes areas that overlapped with Unit 18 (*i.e.,* the area around San Miguel and Prince Islands). Relevant areas within the footprint of the SNI INRMP are the waters surrounding SNI and Begg Rock within the 300-foot (91-m) isobath or 1 nmi from shore, whichever is greater. This area around Begg Rock extended into Unit 18. Management efforts described within both of these INRMPs, which are discussed in detail in the Section 4(b)(2) Report (NMFS 2020b), include actions such as water quality monitoring within nearshore waters and storm-water management; surveys of intertidal, subtidal, and deep water habitats; and area closures to minimize impacts of noise or other disturbances on marine mammals. Based on our consideration of the activities listed in the INRMPs and their relevance to humpback whales and their habitat, the certainty that the relevant management actions would be implemented, the frequency of use of the areas by humpback whales, and the extent of humpback prey occurrences within the areas, we concluded that the areas covered by the applicable INRMPs provide a conservation benefit to humpback whales. Thus, we determined during the development of the proposed designations that the areas covered by the INRMPs are not eligible for designation as critical habitat and removed them from Unit 18. Consequently, the final designations do not include these areas.

Analysis of Impacts Under Section 4(b)(2) of the ESA

We considered the impacts of designating particular areas under section 4(b)(2) of the ESA, and weighed the benefits of excluding each area against the benefits of including the

area. While section 3(5) of the ESA defines critical habitat as ''specific areas,'' section 4(b)(2) requires the agency to consider the impacts of designating any ''particular area.'' Depending on the biology of the species, the characteristics of its habitat, and the nature of the impacts of designation, ''particular'' areas evaluated for potential exclusion may be—but need not necessarily be—delineated so that they are the same as the already identified ''specific'' areas of potential critical habitat. For this designation, we analyzed two types of particular areas. When we considered economic impacts, we used the same biologically-based ''specific areas'' we had identified under section 3(5)(A) (*i.e.,* Units 1–19, Figure 1). This delineation allowed us to most effectively compare the biologically-based conservation benefits of designation against economic benefits of exclusion, which we undertook for this designation, and led us to exclude some units. For our consideration of impacts on national security, however, we instead delineated particular areas based on DOD control or designated use of the area or as otherwise specified by DOD in an exclusion request. As discussed below, the consideration of national security impacts led to the exclusion of a portion of a larger, specific area (Unit 11). Similarly, for our consideration of other relevant impacts, such as the impacts designation of a particular area would have on Tribes, we considered particular areas that corresponded to tribal lands, associated treaty rights, and/or relevant resources.

Below, we summarize the economic, national security, and other relevant impacts of designating the areas identified as meeting the definition of critical habitat for the three DPSs of humpback whales. Additional detail is provided in the final Economic Analysis (IEc 2020) and Section 4(b)(2) Report (NMFS 2020b).

National Security Impacts

To gather information on potential national security impacts of our proposed designation, we contacted representatives from DOD and the Department of Homeland Security (DHS) by letter dated October 9, 2018. We asked for information regarding impacts of a potential critical habitat designation for humpback whales on military operations and national security. Under the 4(b)(2) Policy, a requesting agency must provide a reasonably specific justification for the assertion that there is an incremental impact on national security that would result from the designation of that specific area as critical habitat (81 FR 7226, 7231, February 11, 2016).

Requests for exclusion due to national security impacts were initially received from the both the Navy and the U.S. Air force (USAF); however, following subsequent discussions with USAF representatives, the USAF withdrew their requests for exclusions. On December 5, 2018, the Navy requested exclusion of the following three range areas from the humpback whale critical habitat designation:

(1) Southeast Alaska Acoustic Measurement Facility (SEAFAC), which lies within critical habitat Unit 10;

(2) Quinault Range Site (QRS; a component of the Naval Undersea Warfare Center Division Keyport Range Complex), which overlaps with a portion of Unit 11; and

(3) Southern California Range Complex (SOCAL) portion of the Hawaii-Southern California Training and Testing Study Area, which overlaps with Unit 19.

The Navy also provided a written assessment of the potential national security impacts and detailed descriptions of training and testing operations occurring at each of these ranges.

The area that pertains to the first requested exclusion, SEAFAC, is small area, covering 48 nmi^2 (164 km^2) in the Western Behm Canal near the city of Ketchikan, Alaska, and serves as the Navy's primary acoustic engineering measurement facility in the Pacific. Additional details regarding this facility, which was proposed for exclusion from the critical habitat designation for the MX DPS based on national security impacts, are provided in the proposed rule (54 FR 54354, October 9, 2019). Because the larger specific area (*i.e.,* Unit 10, Southeast Alaska) within which SEAFAC is located is excluded from the final critical habitat designation for the MX DPS (see Exclusions Based on Economic Impacts), further discussion of SEAFAC is not included here.

The area that pertains to the second requested exclusion, QRS, is a defined space off the coast of Washington that encompasses air, surface (~5,228 nmi^2 (6,924 km^2)) and subsurface space (with variable depths up to 1.8 km), as well as a surf zone area off the coast of Pacific Beach, Washington. The QRS overlaps with approximately 44 percent of Unit 11 and also overlaps with the southern portion of the Olympic Coast National Marine Sanctuary (OCNMS). The Navy does not own or directly control the sea space of QRS, which is largely defined by the boundaries of the special use airspace, known as W–237A, above it. The Navy has internal control of subareas for scheduling purposes only. The Navy issues notices to mariners (NOTMARs) when the Navy engages in activities that may be hazardous to vessels engaged in innocent passage, and/or recreational and commercial activities. Compliance with NOTMARS is voluntary, but helps to protect public safety and prevent damage to test equipment. Activities planned in the QRS to the year 2020 and beyond include activities such as at-sea sonar testing, anti-submarine warfare testing, acoustic and oceanographic research, countermeasure testing, torpedo testing, undersea warfare testing, etc. The Navy stated that use of explosives within the QRS is likely to have adverse effects on humpback prey species, although in their view these would not have effects at the population level. The Navy concluded that designation of humpback whale critical habitat would impact the ability of the Navy to test and field new systems and platforms and thus impact national security if ESA section 7 consultations resulted in additional mitigation requirements or restrictions on testing activities in the QRS.

Subsequent to their initial request for exclusion of QRS, the Navy conducted further analysis and, in September 2019, submitted additional information relative to this particular national security exclusion. Specifically, the Navy requested that an additional 5.4-nmi (10-km) buffer around QRS be excluded from the designation in order to avoid impacts to ongoing and future testing activities that would result in the event that Naval Sea Systems Command must halt, reduce in scope, or geographically or seasonally constrain testing activities to prevent adverse effects or adverse modification of critical habitat. The Navy determined that sound and energy levels that may cause injuries to humpback whale prey species within critical habitat from the largest explosives that could be used on the range could extend beyond the QRS boundaries, and that excluding a buffer of 10-km around QRS from the critical habitat designation would avoid additional mitigation requirements. The Navy indicated that they determined this specific buffer distance after taking into account the site specific oceanographic conditions and the best available science establishing fish injury thresholds (which the Navy cited as Popper *et al.* 2014).

The area that pertains to the third requested exclusion, SOCAL, is located between Dana Point and San Diego, California, and extends more than 600

nmi (1,111 km) southwest into the Pacific Ocean. Most activities occur within the eastern portion of SOCAL, closer to shore. The spatial extent of overlap between SOCAL and Unit 19 is 10,731.5 nmi² (36,808 km²), which is approximately 54 percent of the Navy's core training area within SOCAL and approximately 83 percent of Unit 19, which measures 12,966 nmi² (44,472.1 km²). A wide variety of training and testing activities occur within the SOCAL range complex on a routine and sometimes fairly frequent basis. A few types of Navy testing activities in this area are those related to anti-submarine warfare, torpedo, mine countermeasure, gun, missile and rocket, and propulsion testing. The activities that occur in SOCAL have the potential to impact the water surface or water column, with the degree of impact depending on the nature of the particular activity. The Navy referred to the detailed discussions on particular impacts provided in the Navy's 2018 Final Environmental Impact Statement for Hawaii-Southern California Training and Testing. Ultimately, the Navy concluded that designation of Unit 19 as critical habitat could lead to requirements for additional mitigations (avoidance, limitations, etc.) that could hinder Navy testing and training activities, and thereby impact military readiness and national security. Therefore, Navy requested that we exclude Unit 19 from any critical habitat designation.

Economic Impacts

The primary impact of a critical habitat designation stems 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 the extent of this impact in practical terms is complicated by the fact that section 7(a)(2) contains the associated but distinct requirement that Federal agencies must also ensure their actions are not likely to jeopardize the species' continued existence. The incremental economic impacts of a critical habitat designation stem from the additional effort to engage in consultation regarding potential adverse effects to the critical habitat as part of section 7 consultations (often referred to as administrative costs), and any conservation measures that may be necessary to avoid adverse modification and that would not otherwise be implemented (often referred to as project modification costs). Thus, the incremental impacts attributable to critical habitat stem from conservation efforts that would not already be required due to the need to avoid jeopardy to humpback whales or due to other existing protections (*e.g.,* for other listed species, other Federal, state, or local regulations). Additional economic impacts of designation would include any state and local protections that are likely to be triggered as a result of designation. However, as discussed in chapter 3 of the FEA, we did not identify state or local protections that are likely to be triggered by a proposed humpback whale critical habitat designation (IEc 2020).

The analysis methods for estimating the incremental, economic impacts stemming from designation of the identified specific critical habitat areas for the WNP, MX, and CAM DPSs of humpback whales are described in the proposed rule and in detail in the FEA prepared by Industrial Economics, Inc. (IEc 2020). The economic analysis was also revised based on new information and public comments received on the Draft Economic Analysis (IEc 2019a). As detailed in the FEA, modifications made to the analysis resulted in an increase in the anticipated total present value and annualized costs of the rule, especially in Alaska, and in Unit 10 particularly. Increases in the anticipated costs of the rule reflect some changes in anticipated levels of certain activities (*e.g.,* aquaculture) as well as a shift in the timeframe of the analysis and update of the results from 2018 dollars to 2020 dollars to adjust for inflation.

The following categories of activities with a Federal nexus were identified as having the potential to affect the essential prey feature and as being expected to occur within one or more of the specific critical habitat areas under consideration: (1) Commercial fishing, (2) oil and gas activities (including seismic surveys, and oil spill planning and response), (3) alternative energy development, (4) in-water construction (including dredging and offshore mining), (5) vessel traffic (specifically, activities related to establishment of the shipping lanes by the USCG, and other USCG activities, including maintenance, repair, and replacement of aids to navigation), (6) aquaculture and hatcheries, (7) scientific research, (8) water quality management and inland activities (*e.g.,* pesticide registration, establishment of water quality standards, Clean Water Act (CWA) general permits, power plant operations, land management pesticide/herbicide application, and National Pollutant Discharge Elimination System (NPDES) permitting), (9) military activities, (10) liquefied natural gas (LNG) facilities and activities, (11) space vehicle and missile launches, and (12) U.S. Forest Service activities (activities related to timber and forest management). These activities have the potential to affect the essential feature by altering or reducing the quantity, quality, or the accessibility of the prey feature essential to the conservation of one or more of the listed DPSs of humpback whales.

Our regulations recognize that impacts of designation may be quantitatively or qualitatively described (50 CFR 424.19(b)). As discussed in chapter 2 of the FEA, the costs stemming from critical habitat designation will be largely limited to administrative costs of consultation, which are the only costs monetized in the analysis (IEc 2020). No project modifications or additional conservation measures were identified as likely to result for the majority of the forecasted consultations, largely due to the baseline protections in place. Depending on the specific area at issue and the Federal action, relevant baseline protections include, for example, protections for co-occurring listed species such as North Pacific right whales, Southern Resident killer whales, salmon, Southern DPS of Pacific eulachon, and the Southern DPS of green sturgeon; designated critical habitat for listed species; as well as protections for humpback whales under both the ESA and the MMPA. The number, location, and/or effects on prey of a few forecasted activities, particularly seismic surveys and alternative energy activities, cannot be determined at this time and would require speculation. Therefore, we did not identify any probable conservation efforts that would likely be recommended specifically to avoid adverse modification of the humpback whale critical habitat as a result of these activities, nor was it possible to estimate the cost of any such probable project modifications.

The FEA indicates that, if all 19 units were designated, the critical habitat would increase administrative costs of consultations involving humpback whales by an estimated $930,000 to $1,000,000 over the next ten years, assuming a seven percent discount rate (IEc 2020). This equates to an annualized cost of $110,000 to $120,000 over the next ten years (IEc 2020). The largest portion of the projected administrative costs are attributed to Unit 10 (25 to 27 percent of total costs), followed by Unit 13 (9 percent) and Unit 17 (7 to 8 percent). Unit 10 is also associated with the greatest level of uncertainty and potential for unquantified impacts (IEc 2020). The largest portions of the estimated costs are associated with in-water

construction and dredging activities (25 to 33 percent of the total costs), aquaculture activities (27 to 30 percent), and commercial fisheries (14 to 15 percent, IEc 2020). Estimated costs for each of the 19 habitat units and by each of the 12 categories of Federal activities can be found in Exhibits 3–3 and 3–5 in the FEA (IEc 2020).

Parties that may incur the administrative costs estimated in the analysis include NMFS, the Federal action agency (*e.g.,* the agency undertaking or permitting the activity), and in some cases, a third-party applicant, which may be a municipality, a private party, etc. Because section 7 consultations regarding impacts to species or critical habitats under the jurisdiction of NMFS are primarily between NMFS and Federal action agencies, the administrative costs of consultation are largely borne by NMFS and other Federal agencies and not, for example, by private entities or small governmental jurisdictions. However, some consultations may include third parties (*e.g.,* project proponents or landowners) that may be small entities, and in some instances these third parties may bear some portion of the administrative consultation costs. Ultimately, the economic analysis found that consultations on in-water and coastal construction and aquaculture activities may generate costs borne by small entities. All other activities are either not expected to involve small entities or are associated with no more than one consultation per year spread across the entire critical habitat. As described in chapter 5 of the FEA, the analysis anticipates approximately eight consultations on in-water and coastal construction activities per year, six of which are concentrated in critical habitat Unit 10 in Alaska. This analysis estimates that the small entities involved in these consultations will incur $5,200 in annualized administrative costs (IEc 2020). Additionally, the analysis projects 12 consultations per year on aquaculture activities in Alaska, and estimates that third parties involved in these consultations will incur $5,300 in annualized administrative costs (IEc 2020). (See ''Initial Regulatory Flexibility Act'' section of this document for information regarding impacts on small entities.)

Tribal Impacts

Section 4(b)(2) of the ESA and our regulations also provide for the consideration of other relevant impacts associated with the designation of critical habitat (16 U.S.C. 1533(b)(2); 50 CFR 424.19(b)). We identified potential impacts on federally recognized tribes and Alaska Native corporations as a possible source of other impacts relevant to the humpback whale critical habitat designation. A broad array of activities that occur on Indian lands may trigger ESA section 7 consultations. Indian lands are those defined in Secretarial Order 3206, ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act'' (June 5, 1997), and include: (1) Lands held in trust by the United States for the benefit of any Indian tribe; (2) land held in trust by the United States for any Indian tribe or individual subject to restrictions by the United States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians.

In developing the proposed rule, we did not find any overlap between the areas under consideration as critical habitat and Indian lands, and thus preliminarily found that there were no Indian lands subject to consideration for possible exclusion. In the proposed rule we also indicated that it was not clear whether there may be some nearshore areas that could be considered for possible exclusion on the basis of tribal impacts, and that we lacked information regarding where boundaries of tribal-owned lands lie in relation to shoreward boundary of the specific critical habitat areas in Alaska, which are generally bounded by the 1-m isobath (relative to MLLW). We indicated that there are Indian tribes and Alaska Native corporations that have lands that are in close proximity to areas under consideration for designation as critical habitat for humpback whales, have usual and accustomed areas that overlap with critical habitat areas, or may otherwise be affected in coastal Alaska, Washington, Oregon, and California. Thus, as described more fully in the proposed rule, we reached out to 27 tribes located in Washington, Oregon, and California, and 149 tribes and tribal organizations located within Alaska to offer the opportunity to consult on critical habitat for humpback whales and discuss any concerns regarding the potential designations. In the proposed rule, we requested information regarding tribal impacts as a result of the designations (54 FR 54354, October 9, 2019), and following publication of the proposed rule, we contacted the potentially affected tribes and Native corporations to solicit their input on the proposed designations.

As discussed in the proposed rule, we received requests for meetings from two tribes in Washington, the Quinault Indian Nation and the Quileute Tribe, in response to our initial outreach efforts. Both tribes expressed concern regarding the potential impact of the critical habitat designation on tribal fisheries, particularly within usual and accustomed fishing areas located in coastal marine waters. We had multiple follow-up communications with these tribes; however, neither tribe elected to submit formal comment or information regarding impacts on tribal resources or treaty rights, nor did they request additional meetings or consultation.

Following publication of the proposed rule, we received several comments from tribes and requests for meetings. Specifically, we received a letter from the Sun'Aq Tribe of Kodiak, stating that, based on the available information, they did not believe the humpback whale critical habitat designation would adversely impact the Kodiak Archipelago economy. They also stated that if the designations are finalized, annual consultations should be conducted to provide opportunities to present any new information about subsistence or economic impacts. We received separate requests for meetings from the Bristol Bay Marine Mammal Council, the Aleut Marine Mammal Commission, and the Indigenous People's Council for Marine Mammals, and we subsequently participated in meetings with each organization to provide an overview of the proposed designations and discuss particular concerns regarding potential effects of the designations on subsistence as well as commercial fishing. Lastly, we received a letter, dated January 13, 202, from Shaan-Seet, Inc., the Alaska Native Village Corporation for Craig, Alaska, indicating that they had not been directly contacted about the proposed rule, and that they opposed the designation of critical habitat in Southeast Alaska. In February 2020, we contacted Shaan-Seet, Inc. to correct this oversight, and acknowledged that, while the Craig Tribal Association was on our contact list, Shaan-Seet, Inc. had been inadvertently omitted from our list of contacts and was thus not contacted directly about publication of the proposed rule. The Shaan-Seet, Inc. president indicated that we should contact the Craig Tribal Association to discuss any potential concerns further, which we subsequently did.

Ultimately, through our additional outreach efforts following publication of the proposed rule, we did not identify any specific tribal impacts that are likely to result from the designation of critical habitat for humpback whales, nor did we receive any information

indicating that the designations were likely to result in impacts to tribal interests. Given the outcome of other aspects of our 4(b)(2) analysis and the decision to exclude Unit 10 (Southeast Alaska) from the final critical habitat designation, the humpback whale critical habitat will also not affect tribes or Native corporations in Southeast Alaska. Thus, this rule does not contain any exclusions of particular areas under section 4(b)(2) of the ESA based on impacts to tribes or Alaska Native corporations.

Analysis of the Benefits of Designation

The primary benefit of critical habitat designation—and the only regulatory consequence—stems from the ESA section 7(a)(2) requirement that all Federal agencies ensure that their actions are not likely to destroy or adversely modify the designated habitat (16 U.S.C. 1536(a)(2)). This benefit is in addition to the section 7(a)(2) 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 the public, states, and others notice of areas and features important to species conservation, and information about the types of activities that may reduce the conservation value of or otherwise affect the habitat. Critical habitat designation may also lead to additional protections under state or local regulations.

In addition to the benefits of critical habitat designation to the whales, there may be ancillary benefits. These other benefits may be economic in nature, or they may result in improvement of the ecological functioning of the designated areas. Chapter 4 of the FEA (IEc 2020) discusses other forms of benefits that may be attributed to the conservation and recovery of humpback whales (although not specifically attributed to the designation of critical habitat), including use benefits (*e.g.,* for wildlife viewing), non-use benefits (*e.g.,* existence values), and ancillary ecosystem service benefits (*e.g.,* water quality improvements and enhanced habitat conditions for other marine and coastal species). Humpback whales are also valued in terms of the utility gained from whale watching experiences. In Washington, Oregon, California, and Alaska, humpback whales are sought by whale watchers (IEc 2020). Whale watch participants in these states generate tens of millions of dollars in economic activity annually (Pendelton 2006). Although humpback whales clearly have significant value to people nationally and have economic value regionally, we are unable to (and are not required to) quantify or monetize associated use and non-use economic benefits that would be attributable to a critical habitat designation. Available literature and data do not permit such precise valuation. More information about these types of benefits and values may be found in chapter 4 of the FEA (IEc 2020).

It would be useful and informative if the best available information allowed the benefits of designation to be monetized so they could be directly compared to the economic benefits of excluding a particular area. However, sufficient and relevant data are not available to monetize the benefits of designation (*e.g.,* estimates of the monetary value of the protecting the feature within areas designated as critical habitat, or the monetary value of education and outreach benefits). Nor are some of the key values served by a designation (fulfilling the statutory mandate, supporting the conservation of the species) susceptible to direct quantification. For this reason, the ESA regulations recognize that benefits may be quantitatively or qualitatively described (50 CFR 424.19(b)). In addition, we cannot isolate and quantify the effect that a critical habitat designation would have on recovery of humpback whales separate from other ongoing or planned conservation actions. It is also not possible to accurately predict the future harm to the habitat that would otherwise have been realized in the absence of a critical habitat designation. Ultimately, given these challenges and lack of sufficient information, the associated incremental use and non-use economic benefits of designating particular areas of the potential designation cannot be quantified. Therefore, we assessed the benefits of designation using a biologically-based analysis of the specific areas. In this particular case, the CHRT considered relevant humpback whale datasets to qualitatively rate the conservation impact or value for the DPSs if a particular area is designated as critical habitat. These qualitative conservation value ratings were then used to represent the benefits of designation. As presented in the Final Biological Report (NMFS 2020a), several changes were made to the datasets considered by the CHRT in response to public comments, and the CHRT then repeated its analysis to systematically assign a qualitative conservation value rating to each of the specific habitat units for each DPS.

In general, the multiple datasets considered by the CHRT provided information about the importance of a given area for humpback whale feeding and the level of use of the units by whales of each particular DPS (see Appendix C, NMFS 2020a). The first dataset contained information about the feeding BIAs that have been identified for humpback whales (see Ferguson *et al.* 2015a, c and Calambokidis *et al.* 2015). Rather than simply considering presence/absence of a BIA, and to make this information more comparable across units, the CHRT considered the size of the BIAs relative to the size of the particular critical habitat unit. Specifically, the CHRT calculated the percent of total area (km^2) of a unit that was covered by the BIA within that unit (Table C4, NMFS 2020a). The CHRT members considered this information in light of the underlying data and approaches taken in delineating the BIAs in different geographic regions.

A second dataset addressed the presence of whales from each particular DPSs within each critical habitat unit. Several different pieces of information were presented in this dataset. First, information regarding the level of survey effort (*i.e.,* vessel days and whether small boat surveys were conducted) and the total number of unique humpback whales sighted during the SPLASH study were presented for each habitat unit. Secondly, we calculated the percentage of whales identified as belonging to a specific DPS within each specific habitat unit, out of the total number of matched sightings of that DPS. (Matched sightings are the total number of whales photo-identified in both breeding area and the critical habitat unit. Note that most whales sighted in feeding areas have not been matched to a particular DPS.) Third, we provided the probabilities of whales from a particular DPS moving from their winter, breeding area to a feeding area (critical habitat unit) as calculated by Wade (2017). These movement probabilities were derived from associated SPLASH data. The feeding areas from the SPLASH study and from Wade (2017) represent larger geographic areas than the critical habitat units, so in many cases a given movement probability applied to multiple, adjacent critical habitat units. Lastly, we compiled available documentation of whales from a specific DPS occurring in each unit (*i.e.,* confirmed presence). These data came from both the SPLASH study as well as other references, a complete list of which is provided in the Final Biological Report (see Table C5).

These compiled datasets, available literature summarized in the Final Biological Report, as well as the CHRT's individual expert opinions informed the structured decision-making process that

the CHRT applied in assessing the relative conservation value of each specific area and for each DPS. As discussed in more detail in the Final Biological Report, before conducting the updated analysis, the CHRT discussed the various datasets to ensure consistent interpretation of the data, and discussed other references and studies beyond SPLASH that should be brought to bear in their assessment. The CHRT also discussed how to prioritize the relevant information, to help ensure greater consistency in terms of how each CHRT member weighed the various data in their assessment. For example, the primary consideration of the CHRT members in determining the relative conservation value of a given habitat unit to a given DPS was the degree to which whales of that DPS rely on that area for feeding. After reviewing the data and process as a group, each member of the CHRT independently rated each habitat unit for each relevant DPS by distributing four ''points'' across the following four conservation value categories for each of the critical habitat units:

(1) Very high—meaning areas where the available data indicate the area is very important to the conservation of the DPS;

(2) high—meaning areas where the available data indicate the area is important to the conservation of the DPS;

(3) medium—meaning the available data indicate the area is moderately important to the conservation of the DPS; and

(4) low conservation value—meaning the available data suggest the DPS does not rely on this area for feeding.

CHRT members could place all four points for a given habitat unit and DPS in one of these qualitative categories or spread those four points across any or all of the four categories. The degree to which votes were spread across the conservation value categories thus served as a measure of uncertainty in the conservation value of a particular unit. However, CHRT members were permitted to forego assigning their four votes for a specific critical habitat unit if they concluded the available data were either too limited or there was too much uncertainty associated with the available data to make an assessment of the conservation value of a particular area for the given DPS. In these instances the CHRT members were allowed to instead categorize the unit as ''data deficient.''

Following an initial round of scoring, the CHRT met to discuss their assessments of the data and results. Following that team discussion, CHRT members were given the opportunity to independently re-evaluate their own point distributions and make any changes (*if* they elected to do so). The results of the CHRT's assessment for each of the habitat units are provided in Tables 1–3 of the Final Biological Report; complete results are also presented and discussed within the Final Biological Report (NMFS 2020).

We reviewed and agree with the conclusions of the CHRT as presented in the Final Biological Report and used their conservation ratings of the specific areas to inform our section 4(b)(2) analysis, as described in this rule as well as in the Final Section 4(b)(2) Report (NMFS 2020b).

Exclusions Based on Economic Impacts

As is clear from the preceding discussion, the conservation benefits to the humpback whale DPSs that would result from the designation of any particular critical habitat unit, expressed as a qualitative rating, are not directly comparable to the economic benefits that would result from exclusion of the particular unit from designation, which is expressed as a quantified cost. However, to weigh the benefits of designation against the economic benefits of exclusion, we have to compare these two types of information. As noted previously, the Secretary has discretion to determine the weight to assign to the relevant factors and may exclude any particular area from the critical habitat designation upon a determination that the benefits of such exclusion outweigh the benefits of specifying the particular area as part of the critical habitat (50 CFR 424.19(c)). The Secretary, however, cannot exclude any particular area if, based on the best scientific and commercial data available, the Secretary determines that the failure to designate that area as critical habitat will result in the extinction of the species concerned (50 CFR 424.19(c)). For this analysis, we note that each of the units identified for potential designation meet the definition of critical habitat because they are in the occupied range of the species and contain the identified physical or biological feature for which we have determined that special management considerations or protection may be required; however, the areas vary as to the level of their conservation value for the species. We (exercising the delegated authority of the Secretary) determined that the conservation benefits of including areas with medium, high, or very high conservation ratings should have significant weight in this analysis. It is reasonable to give great weight to the conservation value of the habitat, in light of the purpose of critical habitat under the Act (to support the conservation, or recovery, of the species) and the statutory mandate to designate critical habitat to the maximum extent prudent and determinable.

Overall, the projected economic impacts to Federal agencies and non-Federal entities of designating each of the 19 habitat units are considered low, with annualized impacts ranging from $1,700–$32,000 per habitat unit (IEc 2020). If all 19 units were designated, the total annualized impact is estimated to range from $110,000 to $120,000 over the next 10 years (IEc 2020).

WNP DPS

Results of the biological and economic analyses (see Table 1) indicate that for the WNP DPS, habitat units rated as having very high or medium conservation value are associated with annualized impacts ranging from $2,300–$2,700 (Unit 3, Shumagin Islands Area) to $4,600–$5,400 (Unit 5, Kodiak Island Area). (Note there were no high conservation values for the WNP DPS). Specific areas rated as having low conservation value for the WNP DPS were associated with annualized impacts ranging from $2,600 (Units 7, Kenai Peninsula Area and 9, Northeastern Gulf of Alaska) to $5,600 (Unit 6, Cook Inlet Area). After reviewing the updated costs and the CHRT's revised conservation values for each specific area, we concluded that the economic impacts for the habitat units with very high and medium conservation ratings are not outweighed by the relatively low costs attributed to any of those units. We have confidence in the data-driven process by which the CHRT carefully evaluated and then re-evaluated the relative conservation value of each critical habitat unit, and we therefore find that areas receiving these rating classifications are all of moderate to very high importance to the conservation of the WNP DPS. In other words, these higher value feeding areas are expected to support the life history needs and recovery of these whales. The benefit of designating these important feeding areas as critical habitat is not outweighed by the relatively low economic impacts projected to occur as a result of their designation. For areas rated as having a low conservation value, however, we continue to find that the economic impacts, though still objectively low, outweigh the benefits of including them in the designation. By definition, these low value habitat units, based on the CHRT's assessment of the best available data, are areas the WNP

DPS whales are not expected to rely on as extensively for feeding given the very low occurrence or predicted occurrence of WNP DPS whales in the area relative to other areas with higher conservation value. Even though the estimated annualized impacts only ranged from $2,600–$5,600 across all of the low conservation value areas for the WNP DPS, we find that these costs outweigh the minimal conservation benefits to the WNP DPS whales of designating these areas. Because this DPS does not rely as extensively on these areas for feeding, or in the case of Unit 1, is not known to rely on the area for feeding, we continue to find that exclusion of these areas will not result in the extinction of this DPS (see Section 4(b)(2) Report). Therefore, consistent with the exclusions identified in the proposed rule, the final critical habitat designation for the WNP DPS excludes the following areas: Unit 4—Central Peninsula Area, Unit 6—Cook Inlet, Unit 7—Kenai Peninsula Area, Unit 8—Prince William Sound Area, and Unit 9—Northeastern Gulf of Alaska.

Based on the CHRT's reassessment of relative conservation values of the specific areas for the WNP DPS, Unit 1 (Bristol Bay Area) was rated as being ''data deficient.'' This outcome was the result of the careful review of the available data and refinement of the underlying dataset used during the CHRT's reassessment, which are provided in the Final Biological Report (NMFS 2020a; see also response to Comment 30. Specifically, the available data regarding predicted movement probabilities (*i.e.,* Wade 2017), which were derived from SPLASH data, were found to not be applicable to Unit 1. While the available data indicate the eastern Bering Sea is part of the occupied range of WNP DPS whales, this area was not sampled during the SPLASH study, and no other photo-identification data are available to determine relative use of this particular area by this DPS (versus other humpback whales). Refining the interpretation of data in this way led the CHRT to conclude that it was not possible on the basis of the best available information to assess the relative conservation value of this area, which had previously been assigned a rating of high conservation value for the WNP DPS (based largely on the extrapolation of results of Wade (2017) to this area and the presence of a BIA). Ultimately, the majority of the CHRT concluded that, based on the very limited data, the extent to which WNP DPS whales rely on this area for feeding could not be reliably assessed. After considering the outcome of the CHRT's assessment and the available information regarding the documented distribution of WNP DPS whales as summarized in the Final Biological Report, we conclude that the conservation benefit of designating Unit 1 for the WNP DPS is outweighed by the economic impact of designating this area, although it is relatively low (annualized impact of $2,300). Given the available data indicating that WNP DPS whales primarily use other feeding areas, including areas outside U.S. waters, we also conclude that exclusion of this particular area will not result in extinction of this DPS. Therefore, the final critical habitat designation for the WNP DPS does not include Unit 1—Bristol Bay Area.

We note, however, that historical whaling data as well as more recent survey data indicate that humpback whales use this area, which may become increasingly important feeding habitat for humpback whales as changing ocean conditions alter the distributions and abundances of important or quality prey or as the DPSs recover. Because most of this area has been poorly surveyed, and because we have an inadequate understanding of the importance of this area to ESA-listed humpback whales, the CHRT recommended that research efforts should be directed towards surveying humpback whales in this particular portion of the range.

CAM DPS

Results of the biological and economic analyses (see Table 2) indicate that for the CAM DPS, habitat units rated as having very high, high, and medium conservation value are associated with annualized impacts ranging from $1,700 (Unit 15, California North Coast) to $10,000 (Unit 13, Coastal Oregon). Consistent with our conclusions in the proposed rule, we do not find that the relatively low estimated economic impacts outweigh the benefits of designating these higher conservation value areas for the CAM DPS. These feeding areas are expected to contribute to supporting the overall life history and conservation of these endangered whales. We do not find that the benefits of designating these areas as critical habitat are outweighed by the relatively low economic impacts projected to occur as a result of their designation. One area was rated as medium/low (Unit 12, Columbia River Area) as a result of a tie in the votes from the CHRT (*i.e.,* half of the votes were cast for low and the other half were cast for medium conservation value), and is associated with an estimated annualized cost of $6,900. This medium/low area does not contain a BIA and the documented occurrence of whales from the CAM DPS in this area is lower relative to habitat units farther south in the CCE. However, as discussed previously, the predicted movement probabilities for whales of the CAM DPS whales to this general area are high (Wade 2017), and recent evidence from satellite-tagged whales indicate this is an important feeding area for humpback whales (Palacios *et al.* 2020). Overall, the CHRT concluded that the conservation value of this unit for the endangered CAM DPS is not outweighed by the low estimated economic impacts ($6,900, Table 2).

Consistent with the proposed rule, we continue to find that the benefits of designating the habitat unit rated as having low conservation value for the CAM DPS (*i.e.,* Unit 19, California South Coast), are outweighed by the estimated economic impacts of designation, which are estimated to range from $5,500–$5,700 (annualized). Unit 19 is not recognized as important feeding habitat for humpback whales and does not contain a feeding BIA. Waters off the southernmost portion of the California coast (*i.e.,* Unit 19) also have the lowest predicted abundance of humpback whales during summer months as well as during cooler months (Becker *et al.* 2016 and 2017; see Figure 17, NMFS 2020a). Because this area, which comprises 12,966 nmi^2 of marine habitat, is small relative to the overall designation, which extends over 48,521 nmi^2 of marine waters off of Washington, Oregon, and California, we find that exclusion of this habitat unit from the critical habitat designation for the CAM DPS will not result in extinction of this DPS.; Therefore, this unit is excluded from the final critical habitat designation for the CAM DPS.

MX DPS

Results of the biological and economic analyses (see Table 3) indicate that for the MX DPS, habitat units rated as having very high and high conservation value are associated with annualized impacts ranging from $1,700 (Unit 15, California North Coast) to $10,000 (Unit 13, Coastal Oregon). Areas rated as having medium conservation value are associated with annualized costs ranging from $3,400 (Unit 8, Prince William Sound) to $8,200 (Unit 11, Coastal Washington). In no instance were these estimated economic impacts found to outweigh the value of these areas to the conservation of the MX DPS. These higher conservation value areas, which are located within all of the regions known to be used as feeding habitat by the MX DPS (*i.e.,* Aleutian

Islands/Bering Sea, Gulf of Alaska, CCE) are expected to play an important role in supporting the life history needs and conservation of this DPS.

Areas rated as having low conservation value for the MX DPS also occur within all of the regions used by this DPS and are associated with estimated annualized impacts ranging from $2,600 (Units 7 and 9) to $32,000 (Unit 10). Consistent with the proposed rule and conclusions for other DPSs, we find that the benefits of designating the habitat units rated as having low conservation value are outweighed by the forecasted economic impacts associated with their designation. These low conservation value areas are areas that whales of this DPS are not expected to rely on as extensively for feeding, as indicated by their very low occurrence or predicted occurrence in these areas. Thus, based on the currently available information for the MX DPS, these areas likely have minimal conservation value for this DPS, which we find is outweighed by the projected economic impacts, although they are low. For Units 7, 9, and 19, this finding is consistent with our conclusions in the proposed rule, which includes addition discussion regarding exclusion of these particular areas.

Based on the results of the CHRT's reassessment of relative conservation value, three additional habitat units now fall into this low conservation value category for the MX DPS—Unit 4 (Central Peninsula Area), Unit 6 (Cook Inlet Area), and Unit 10 (Southeast Alaska). Each of these three areas, all of which are located in waters off Alaska, were rated as medium conservation value based on the CHRT's initial assessment leading to the proposed rule. As noted previously, and as presented in detail in the Final Biological Report and Summary of Changes (see also response to Comment 30), we revised the datasets applied by the CHRT during their reassessment of relative conservation value and placed greater emphasis on the degree to which whales of each specific DPS are relying on each area for feeding. Each of these three areas has low documented occurrences and/or low predicted occurrences of MX DPS, and two of these areas (Units 4 and 6) do not include a feeding BIA. Unit 10 (Southeast Alaska), however, contains a large BIA and supports feeding by a large number of humpback whales, which influenced the CHRT's initial assessment. The CHRT's reassessment placed less weight on presence of the BIA, and placed greater emphasis on the data indicating that the large majority of whales using this BIA are from the non-listed Hawaiian population, while only a small percentage of MX DPS whales use or are predicted to use this general area (Barlow *et al.* 2011, Wade 2017). In addition, the revised economic analysis indicates that the largest portion of the quantified, annualized impacts ($26,000–$32,000) as well as the potential, non-quantified economic impacts (*e.g.,* project delays) are associated with this Unit.

Based on the best available data and the revised analyses, for each of these three, additional low conservation value areas (Units 4, 6, and 10) and the other three low conservation value areas (Units 7, 9, and 19), we conclude that the benefits of designating the area are outweighed by the estimated economic impacts associated with their designation. Given the large area included in the designation, the documented distribution of MX DPS whales, and the current status of this threatened DPS, we also conclude that exclusion of the low conservation value areas from critical habitat will not result in extinction of the MX DPS. Therefore, we are excluding the following six areas from the final critical habitat designation for the MX DPS: Unit 4—Central Peninsula Area, Unit 6—Cook Inlet Area, Unit 7—Kenai Peninsula Area, Unit 9—Northeastern Gulf of Alaska, Unit 10—Southeast Alaska, and Unit 19—California South Coast.

Based on the CHRT's reassessment of relative conservation values of the specific areas for the MX DPS, Unit 1 (Bristol Bay Area) was rated as being ''data deficient.'' As discussed previously for the WNP DPS, the basis for this outcome was the revision to the data and approach used by the CHRT in their reassessment of the relative conservation value of each specific area, which is discussed in more detail in the Final Biological Report (NMFS 2020a). In particular, while the available data indicate the eastern Bering Sea is part of the occupied range of MX DPS whales, this area was not sampled during the SPLASH study, and no other photo-identification data are available to determine relative use of this particular area by whales from this DPS (versus other humpback whales). Although this area had previously been assigned a rating of high conservation value for the MX DPS (based largely on the extrapolation of results of Wade (2017) to this area and the presence of a BIA), ultimately, the majority of the CHRT concluded that, based on the very limited data, the extent to which MX DPS whales are relying on this area for feeding could not be reliably assessed. After considering the outcome of the CHRT's assessment and the available information regarding the documented distribution of MX DPS whales as summarized in the Final Biological Report, we conclude that the conservation benefit of designating Unit 1 for the MX DPS is outweighed by the economic impact of designating this area, although low (annualized impact of $2,300). Given the available data indicating that MX DPS whales primarily use other feeding areas and the status of this DPS as threatened rather than endangered, we also conclude that exclusion of this particular area will not result in extinction of this DPS. Therefore, the final critical habitat designation for the MX DPS does not include Unit 1—Bristol Bay Area. As noted previously, the CHRT recommended that future research effort be directed at improving our understanding of this potentially important habitat for humpback whales generally and for ESA-listed humpback whales in particular.

TABLE 1—CONSERVATION RATINGS AND ESTIMATED, INCREMENTAL, ANNUALIZED ECONOMIC IMPACTS ASSOCIATED WITH SECTION 7 CONSULTATIONS OVER THE NEXT 10 YEARS FOR THE SPECIFIC AREAS OF CRITICAL HABITAT CONSIDERED FOR THE WNP DPS OF HUMPBACK WHALES

Unit No.	Area	Conservation rating	Annualized impacts
1	Bristol Bay Area	data deficient	$2,300
2	Aleutian Islands Area	very high	2,600–4,400
3	Shumagin Islands Area	Medium	2,300–2,700
4	Central Peninsula Area	Low	2,600–2,800
5	Kodiak Island Area	Medium	4,600–5,400
6	Cook Inlet Area	Low	5,200–5,600
7	Kenai Peninsula Area	Low	2,600

TABLE 1—CONSERVATION RATINGS AND ESTIMATED, INCREMENTAL, ANNUALIZED ECONOMIC IMPACTS ASSOCIATED WITH SECTION 7 CONSULTATIONS OVER THE NEXT 10 YEARS FOR THE SPECIFIC AREAS OF CRITICAL HABITAT CONSIDERED FOR THE WNP DPS OF HUMPBACK WHALES—Continued

Unit No.	Area	Conservation rating	Annualized impacts
8	Prince William Sound Area	Low	3,400
9	Northeastern Gulf of Alaska	Low	2,600

TABLE 2—CONSERVATION RATINGS AND ESTIMATED, INCREMENTAL, ANNUALIZED ECONOMIC IMPACTS ASSOCIATED WITH SECTION 7 CONSULTATIONS OVER THE NEXT 10 YEARS FOR THE SPECIFIC AREAS OF CRITICAL HABITAT CONSIDERED FOR THE CAM DPS OF HUMPBACK WHALES

Unit No.	Unit name	Conservation rating	Annualized impacts
11	Coastal Washington	Medium	$7,500–$8,200
12	Columbia River Area	medium/low	6,900
13	Coastal Oregon	Medium	9,500–10,000
14	Southern Oregon/Northern California	High	2,600
15	California North Coast	High	1,700
16	San Francisco/Monterey Bay Area	very high	3,000
17	California Central Coast	very high	7,900
18	Channel Islands Area	very high	3,900
19	California South Coast	Low	5,500–5,700

TABLE 3—CONSERVATION RATINGS AND ESTIMATED, INCREMENTAL, ANNUALIZED ECONOMIC IMPACTS ASSOCIATED WITH SECTION 7 CONSULTATIONS OVER THE NEXT 10 YEARS FOR THE SPECIFIC AREAS OF CRITICAL HABITAT CONSIDERED FOR THE MX DPS OF HUMPBACK WHALES

Unit No.	Area	Conservation rating	Annualized impacts
1	Bristol Bay Area	data deficient	$2,300
2	Aleutian Islands Area	very high	2,600–4,400
3	Shumagin Islands Area	High	2,300–2,700
4	Central Peninsula Area	Low	2,600–2,800
5	Kodiak Island Area	very high	4,600–5,400
6	Cook Inlet Area	Low	5,200–5,600
7	Kenai Peninsula Area	Low	2,600
8	Prince William Sound Area	Medium	3,400
9	Northeastern Gulf of Alaska	Low	2,600
10	Southeastern Alaska	Low	26,000–32,000
11	Coastal Washington	Medium	7,500–8,200
12	Columbia River Area	Medium	6,900
13	Coastal Oregon	High	9,500–10,000
14	Southern Oregon/Northern California	High	2,600
15	California North Coast	High	1,700
16	San Francisco/Monterey Bay Area	very high	3,000
17	California Central Coast	High	7,900
18	Channel Islands Area	High	3,900
19	California South Coast Area	Low	5,500–5,700

Exclusions Based on National Security Impacts

Based on the written information provided by the Navy in December 2018 and information provided through subsequent discussions with Navy representatives, we evaluated whether there was a reasonably specific justification indicating that designating certain areas as critical habitat would have a probable incremental impact on national security. In accordance with our 4(b)(2) Policy (81 FR 7226, 7231 February 11, 2016), in instances where the Navy provided a reasonably specific justification, we deferred to their expert judgement as to: (1) Whether activities on its lands or waters, or its activities on other lands or waters, have national security or homeland-security implications; (2) the importance of those implications; and (3) the degree to which the cited implications would be adversely affected by the critical habitat designation. In conducting a review of these exclusion requests under section 4(b)(2) of the ESA, we also gave great weight to the Navy's national-security concerns. To weigh the national security impacts against conservation benefits of a potential critical habitat designation, we also considered the following: (1) The size of the requested exclusion and the percentage of the specific critical habitat area(s) that overlaps with the Navy area; (2) the relative conservation value of the specific area for each particular humpback whale DPS; (3) the likelihood that the Navy's activities would destroy or adversely modify critical habitat, and the likelihood that NMFS would require project modifications to reduce or avoid these impacts; and (4) the likelihood that other Federal actions may occur in the

site that would not be subject to the critical habitat provision if the particular area were excluded from the designation.

After considering the information provided by the Navy regarding potential impacts on national security stemming from the designation of a portion of Unit 11 as critical habitat, we found that the Navy had provided a reasonably specific justification for their requested exclusion of the area overlapping with the QRS as well the 10-km buffer surrounding the QRS. The requested exclusion comprises about 44 percent of the area of Unit 11, which was rated as having a medium conservation value for the CAM DPS and a medium conservation value for the MX DPS. The requested exclusion comprises a very small portion of the total critical habitat designations for the CAM DPS (about 3 percent) and the MX DPS (about 1.3 percent). To more precisely gauge the value of the specific QRS area (including the buffer) to the whales, we reviewed the overlap of the QRS with the location of the BIA and the predicted whale densities from Becker *et al.* (2016), which modeled predicted densities in approximately 10 km by 10 km grid cells. Those comparisons indicated that the QRS is entirely outside of, and south of, the BIA, and overlaps only partially with the area where the highest densities of humpback whales are predicted to occur within Unit 11. In other words, an exclusion of the QRS and buffer area would remove from the designation only a small amount of the comparatively high use locations within Unit 11. The Navy also indicated that while they do not control access to this area, they do exert significant influence in terms of limiting other Federal activities within the QRS. The QRS and associated buffer also have a significant degree of overlap with the OCNMS, where certain activities are prohibited, including oil, gas, or mineral exploration, development, or production; discharging or depositing any material or other matter; drilling into, dredging, or otherwise altering the seabed, with some exceptions (15 CFR 922.152). Because of these prohibitions, we find that the likelihood of other Federal activities being proposed in this area of the QRS is low.

Overall, in light of the Navy's substantial and specific concerns regarding the potential impact of a critical habitat designation on their unique testing and training activities that occur within the QRS and the potential delay in critical missions in order to complete adverse modification analyses, we determined that the benefits of excluding the QRS due to national security impacts outweighs the benefits of designating this portion of Unit 11 as critical habitat for the MX and CAM DPSs. Upon further review of the requested buffer exclusion, however, and as discussed previously (see response to Comment 40), we determined the benefit of excluding this area on the basis of a national security impact does not outweigh the benefit of designating critical habitat in a portion of the 10-km buffer extending from the northeast corner of the QRS where it overlaps with the OCNMS. The Navy does not currently use or currently plan to use explosives in the northeast corner of the QRS; therefore, potential impacts to the humpback whale critical habitat are unlikely to extend into the OCNMS. The Navy provided additional information to NMFS clarifying the impact to national security should the full 10-km buffer around the QRS not be excluded from designation as critical habitat. The Navy noted that the current limitation on conducting underwater explosives in this portion of the QRS is based on mitigation measures the Navy proposed in its NWTT SEIS (September 2020) and associated ESA and MMPA compliance documentation, which preclude the use of all underwater explosives for training and testing within 50 nmi from shore, with the exception of mine countermeasures neutralization activities, which occur in the QRS where it does not overlap with the OCNMS. Navy concluded it was practicable to implement this restriction; however, all Navy mitigation measures allow for deviations (in consultation with NMFS) if driven by new and immediate national security requirements. Further, the Navy reviews its mitigation measures annually and can modify those mitigation measures as driven by evolving military readiness requirements, also in consultation with NMFS. The Navy stated that because techniques and tactics needed for national security can rapidly evolve, it is possible that modifications to current activities and the development of new technologies will require testing in areas that may not be currently utilized for underwater explosives. Thus, we find that, while there are national security impacts as described by the Navy, benefits of excluding this area do not outweigh the conservation benefits of designating this particular area as critical habitat for both the MX and CAM DPSs. Given the small size of this particular area relative to the overall designations and the medium conservation value of this area for both DPSs, we conclude that excluding this area (*i.e.,* QRS with the modified buffer)) from the designations will not result in extinction of either the CAM or MX DPS. We note that should the Navy's requirements change in such a manner that materially affects how it will conduct activities within the QRS, the Navy will provide NMFS with an updated explanation of impacts to national security, and we will reconsider whether those impacts outweigh the benefits of designating a small portion of the 10-km buffer as critical habitat.

We considered the information provided by the Navy concerning potential impacts on national security stemming from the designation of Unit 19 as critical habitat, and found that the Navy had provided a reasonably specific justification for the requested exclusion. We considered the information provided by the Navy regarding the nature and types of training and testing activities that occur within SOCAL (*e.g.,* anti-submarine warfare, torpedo, mine countermeasure, gun, missile and rocket, and propulsion testing) to evaluate their potential to affect humpback whale critical habitat. We also reviewed the discussions about particular impacts provided in the Navy's 2018 Final Environmental Impact Statement for Hawaii-Southern California Training and Testing (*e.g.,* impacts to fish and invertebrates). We agree with the Navy's assessment that the activities that occur in SOCAL, many of which occur with high frequency, have the potential to impact humpback whale prey species, with the degree of impact depending on the nature of the particular activity. We also considered that Unit 19, about 83 percent of which overlaps with the SOCAL range complex, had been assessed as having low conservation value to both the MX and CAM DPSs of humpback whales. Given the low conservation value rating this area received for each DPS, we conclude that the benefits of excluding SOCAL outweigh the benefits of including it in either designation. Overall, we concur with the Navy that designation of this portion of Unit 19 would likely have national security impacts that outweigh the benefits of designating this low conservation value area. Further, as indicated previously, we also conclude that exclusion of all of Unit 19 from the critical habitat designations will not result in the extinction of either the CAM or MX DPS. Thus, even though we have separately determined to exclude all of Unit 19 based on economic impacts, we are also making an independent determination to exclude

the subset of this area that the DOD requested be excluded on the basis of national security impacts.

Final Critical Habitat Designations

We find that designation of critical habitat for these DPSs of humpback whales is both determinable and prudent. For the reasons discussed in our proposed rule and the foregoing sections of this final rule, we determine the critical habitat for each DPS on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and other relevant impacts, as follows:

For the endangered WNP DPS of humpback whales, we designate approximately 59,411 nmi² of marine habitat off the coast of Alaska as occupied critical habitat. The designation encompasses Units 2, 3, and 5 as shown in Figure 1. The specific areas included in the designation are seasonal feeding habitat that is occupied by the WNP DPS whales and contain the biological prey feature that is essential to their conservation and that we find may require special management considerations or protection. We have excluded 6 particular areas from this designation pursuant to ESA section 4(b)(2) based on our finding that the benefits of exclusion (*i.e.,* avoiding the probable economic impacts) outweigh the benefits of specifying these areas as part of the critical habitat, and we find on the basis of the best scientific and commercial data available that these exclusions will not result in the extinction of the species, because the excluded areas are not known to serve as important feeding habitat for this DPS. We are not designating any unoccupied areas for the WNP DPS.

For the endangered CAM DPS of humpback whales, we designate approximately 48,521 nmi² of marine habitat off the coasts of Washington, Oregon, and California as occupied critical habitat. The designation encompasses part of Unit 11 and Units 12–18 as shown in Figure 1. The areas being designated are seasonal feeding habitat that is occupied by the CAM DPS and contain the biological prey feature that is essential to their conservation and that may require special management considerations or protection. We exclude from the designation approximately 12,966 nmi² off the coast of southern California (*i.e.,* Unit 19) pursuant to ESA section 4(b)(2) based on our finding that the benefits of exclusion (*i.e.,* avoiding the probable economic and national security impacts) outweigh the benefits of specifying this area as part of the critical habitat, and we exclude the QRS and its associated 10-km buffer (which does not extend beyond 10-km into the OCNMS) off the coast of Washington based on our finding that the benefits of exclusion (*i.e.,* avoiding the probable national security impacts) outweigh the benefits of specifying this area as part of the critical habitat. We find on the basis of the best scientific and commercial data available that these exclusions will not result in the extinction of this DPS because these areas are small relative to the overall designation and current extinction risk for this DPS is largely driven by other threats (*e.g.,* ship strikes). The designation does not include areas within the footprint of the SNI INRMP (around Begg Rock) and of the NBVC Point Mugu INRMP (*i.e.,* waters around San Miguel and Prince Islands), as these areas are ineligible for designation as critical habitat under section 4(a)(3)(B)(i) of the ESA. We are not designating any unoccupied areas for the CAM DPS.

For the threated MX DPS of humpback whales, we designate 116,098 nmi² of marine habitat off the coasts of Alaska, Washington, Oregon, and California as occupied critical habitat. The designation encompasses Units 2, 3, 5, 8, part of Unit 11, and Units 12–18 as shown in Figure 1. The areas being designated are seasonal feeding areas that are occupied by the MX DPS and contain the biological prey feature that is essential to their conservation and that we find may require special management considerations or protection. We exclude from the designation 6 areas off the coast of Alaska based on our finding that the benefits of exclusion (*i.e.,* avoiding the probable economic impacts) outweigh the benefits of specifying these areas as part of the critical habitat, and we exclude one area off the coast of southern California based on our finding that the benefits of exclusion (*i.e.,* avoiding both the probable economic and national security impacts) outweigh the benefits of specifying this area as part of the critical habitat. We also exclude the QRS and its associated 10-km buffer (which does not extend beyond 10-km into the OCNMS) off the coast of Washington based on our finding that the benefits of exclusion (*i.e.,* avoiding the probable national security impacts) outweigh the benefits of specifying this area as part of the critical habitat. We find on the basis of the best scientific and commercial data available that these exclusions will not result in the extinction of this DPS given the large area included in the designation, the documented distribution of MX DPS whales, and the current status of this threatened DPS. The designation does not include areas within the footprint of the SNI INRMP (around Begg Rock) and of the NBVC Point Mugu INRMP (*i.e.,* waters around San Miguel and Prince Islands), as these areas are ineligible for designation as critical habitat under section 4(a)(3)(B)(i) of the ESA. We are not designating any unoccupied areas for the MX DPS.

None of the designations in this rule include manmade structures (*e.g.,* ferry docks, sea plane facilities) or the land on which they rest and that are in existences as of the effective date of this rule.

Effects of Critical Habitat Designations

Section 7(a)(2) of the ESA requires Federal agencies, including NMFS, to ensure that any action authorized, funded or carried out by the agency (agency action) is not likely to jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify designated critical habitat. Federal agencies must consult with us on any proposed agency action that may affect the listed species or its critical habitat. During interagency consultation, we evaluate the agency action to determine whether the action may adversely affect listed species or critical habitat and, where there is likely to be an adverse effect, we issue our finding in a biological opinion. The potential effects of a proposed action may depend on, among other factors, the specific timing and location of the action relative to seasonal presence of essential features or seasonal use of critical habitat by the listed species for essential life history functions. While the requirement to consult on an action that may affect critical habitat applies regardless of the season, NMFS addresses the varying spatial and temporal considerations when evaluating the potential impacts of a proposed action during consultation using the best available scientific and commercial information. If we conclude in the biological opinion that the agency action would likely result in the destruction or adverse modification of critical habitat, we would also recommend any reasonable and prudent alternatives to the action that would avoid destruction or adverse modification.

Reasonable and prudent alternatives are defined in 50 CFR 402.02 as alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the

Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid the destruction or adverse modification of critical habitat. The Service may also provide with the biological opinion a statement containing discretionary conservation recommendations. Conservation recommendations are advisory and are not intended to carry any binding legal force.

Regulations at 50 CFR 402.16 require Federal agencies that have retained discretionary involvement or control over an action, or where such discretionary involvement or control is authorized by law, to reinitiate consultation on previously reviewed actions in instances where, among other situations: (1) New information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16(a)(2)–(4)). Consequently, some Federal agencies may request reinitiation of consultation with NMFS on actions for which formal consultation has been completed, if those actions may affect designated critical habitat for the WNP, CAM, or MX DPSs of humpback whales.

Activities subject to the ESA section 7 consultation process include activities on Federal lands, as well as activities requiring a permit or other authorization from a Federal agency (*e.g.,* a section 10(a)(1)(B) permit from NMFS), or another Federal action, including funding (*e.g.,* Federal Emergency Management Agency funding). ESA section 7 consultation would not be required for Federal actions that would not affect listed species or critical habitat, and would not be required for actions on non-Federal and private lands that are not carried out, funded, or authorized by a Federal agency.

Activities That May Be Affected

ESA section 4(b)(8) requires, to the maximum extent practicable, in any final regulation to designate critical habitat, an evaluation and brief description of those activities (whether public or private) that may adversely modify such habitat or that may be affected by such designation. (The term ''destruction or adverse modification'' of critical habitat is defined in 50 CFR 402.02, and means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.) A wide variety of activities may affect the critical habitats and may be subject to the ESA section 7 consultation processes when carried out, funded, or authorized by a Federal agency. These include: (1) Federal fisheries, (2) oil and gas activities (including seismic surveys, and oil spill planning and response), (3) alternative energy development, (4) in-water construction (including dredging and offshore mining), (5) vessel traffic activities (largely, the establishment of the shipping lanes by the USCG, and maintenance and replacement of aids to navigation by the USCG), (6) aquaculture and hatcheries, (7) military activities, (8) LNG terminal activities, (9) space vehicle and missile launches, (10) water quality management and in-land activities (including pesticide registration, establishment of water quality standards, and Clean Water Act general permits), (11) U.S. Forest Service activities (related to timber and forest management), and (12) scientific research. Section 7 consultations must be based on the best scientific and commercial information available when they are undertaken, and outcomes are case-specific. Inclusion (or exclusion) from this list, therefore, does not predetermine the occurrence or outcome of any consultation.

Private or non-Federal entities may also be affected by the critical habitat designations if there is a Federal nexus in that, for example, a Federal permit is required, Federal funding is received, or the entity is involved in or receives benefits from a Federal project. These activities would need to be evaluated with respect to their potential to destroy or adversely modify humpback whale critical habitat.

The critical habitats for humpback whales do not include any manmade structures and the land on which they rest within the described boundaries that were in existence by the effective date of this rule. While these structures/areas would not be directly affected by designation, they may be affected if a Federal action associated with the structure/area (*e.g.,* a discharge permit from the Environmental Protection Agency) may impact the critical habitat.

For ongoing activities, these designations of critical habitat may trigger reinitiation of past consultations. Although we cannot predetermine the outcome of section 7 consultations, we do not anticipate at this time that the outcome of reinitiated consultations would likely require additional conservation measures, because effects to habitat and to humpback whale prey species would in most instances have been assessed in the original consultation. We are committed to working closely with other Federal agencies to conduct any reinitiated consultations in an efficient and streamlined manner to the maximum extent possible and consistent with our statutory and regulatory requirements.

References Cited

A complete list of all references cited in this proposed rule can be found on our website (*www.fisheries.noaa.gov/species/humpback-whale;* click on ''see regulatory actions''), and is available upon request from the NMFS Office of Protected Resources (see **FOR FURTHER INFORMATION CONTACT**).

Classifications

National Environmental Policy Act

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

Regulatory Flexibility Act

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 a final regulatory flexibility analysis (FRFA), which is provided in chapter 5 of the FEA (IEc 2020). Responses to comments on this document are provided earlier in the preamble to the rule, and any necessary changes were made to the FRFA. Results of the FRFA are summarized below.

As discussed previously in this preamble and in our FRFA (see chapter 5 of IEc 2020), the designation of critical habitat is required under the ESA to the maximum extent prudent and determinable. This critical habitat rule does not directly apply to any particular entity, small or large. The rule will operate and have regulatory effect only in conjunction with ESA section 7(a)(2), which requires that Federal agencies ensure, in consultation with NMFS, that any action they authorize, fund, or carry out is not likely to jeopardize the

continued existence of listed species or destroy or adversely modify designated critical habitat. Consultations may result in economic impacts to Federal agencies and proponents of proposed actions (*e.g.,* permittees, applicants, grantees). Those economic impacts may be in the form of administrative costs of participating in a section 7 consultation and, if the consultation results in required measures to protect critical habitat, project modification costs. As discussed previously and as detailed in chapters 2 and 3 of the FEA, incremental impacts associated with this rulemaking that can be monetized are expected to be limited to administrative costs associated with section 7 consultations.

This rule does not duplicate or conflict with any other laws or regulations. However, the protection of listed species and designated critical habitat may overlap with other sections of the ESA. The protections afforded to threatened and endangered species and their habitat are described in sections 7, 9, and 10 of the ESA. This final determination to designate critical habitat requires Federal agencies to consult, pursuant to section 7 of the ESA, with NMFS on any activities the Federal agency funds, authorizes, or carries out, including permitting, approving, or funding non-Federal activities (*e.g.* approval of state water-quality standards by the EPA under the Clean Water Act) that may affect the critical habitat. The requirement to consult is to ensure that any Federal action authorized, funded, or carried out will not likely jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. The incremental impacts contemplated in the FRFA are expected to result from the critical habitat designation and not from other Federal regulations.

During consultation under the ESA, there may be communication among NMFS, the Federal action agency, and a third party participant applying for Federal funding or permitting in an effort to minimize potential adverse impacts to the habitat or essential feature. Communication may include written letters, phone calls, and/or meetings. Project variables such as the type of consultation, the location of the activity, impacted essential features, and activity of concern, may in turn dictate the complexity of these interactions. Third party costs may include administrative work, such as cost of time and materials to prepare for letters, calls, or meetings. The cost of analyses related to the activity and associated reports may be included in these administrative costs. In addition, after the section 7 consultation process, as a requirement of the funding or permit received from the Federal action agency, entities may be required to monitor progress during the activity to ensure that impacts to the habitat and features have been minimized. The rule does not directly mandate ''reporting'' or ''record keeping'' within the meaning of the Paperwork Reduction Act (PRA). The rule does not impose record keeping or reporting requirements on small entities.

With the exception of in-water and coastal construction and aquaculture activities (which we discuss in the next paragraph), all other categories of Federal activities addressed in the FEA (*e.g.,* commercial fishing, oil and gas, alternative energy, aquaculture, LNG facilities, water quality management, and scientific research), are expected to result in negligible costs to third parties in related industries. For each of these other activities, one or fewer consultations are anticipated per year spread across all of the specific areas that were considered for designation as critical habitat. As a result, for each of these activities the annualized incremental cost that may be borne by small entities is estimated to be less than $1,400. The analysis thus focuses on the costs of consultations on in-water and coastal construction activities and aquaculture, which occur more frequently within the critical habitat areas.

As described in Chapter 3 of the FEA, approximately eight consultations per year are expected to focus on in-water and coastal construction activities. The majority of these (six per year) are concentrated within critical habitat Unit 10 in Alaska. As such, the analysis focused on the small in-water construction businesses and government jurisdictions in the region surrounding critical habitat Unit 10, which was ultimately excluded from the critical habitat designation. Additionally, the analysis estimates that 12 aquaculture consultations per year are distributed across the critical habitat units in Alaska, with six occurring in Unit 10, and six each occurring in southcentral (Units 6–9) and southwestern Alaska (Units 1–5), respectively. Because Unit 10 is excluded from the designation, we focus the discussion here on the aquaculture activities.

Small entities that may bear the impacts of this final rule include private businesses and small governmental jurisdictions. Relevant businesses in North American Industry Classification System (NAICS) most likely engaged in aquaculture activities include Shellfish Farming and Other Aquaculture. The FRFA identified 25 small government jurisdictions (*i.e.,* jurisdictions with populations of less than 50,000 people) adjacent to critical habitat units that may be involved in future consultations. However, nine of these areas—Juneau City and Borough, Sitka City and Borough, Haines Borough, Ketchikan Gateway Borough, Prince of Wales-Hyder Census Area, Skagway Municipality, Hoonah-Angoon Census Area, Wrangell City and Borough, and Petersburg Borough—are adjacent to the excluded Unit 10.

The FRFA estimates that up to 12 small aquaculture businesses per year may bear costs associated with participation in consultations regarding humpback whale critical habitat. The total annualized administrative costs that may be borne by these small entities engaged in aquaculture activities is $5,300 (discounted at seven percent), half of which would be incurred in Unit 10. This estimate represents the third-party applicant costs associated with 12 informal consultations. The Alaska Mariculture Development Plan states that sales across all aquatic farm operations totaled $1.23 million in 2016. These revenues were spread across 29 different operations, for an average annual revenue of $42,000 per aquatic farm. If the annualized administrative costs of consultation were spread across 12 unique businesses ($440 per business), the costs to each business would represent approximately one percent of average annual revenues. Given available data, the analysis finds there is potential for a substantial number of businesses to be significantly impacted by this rule if all areas under consideration were designated. However, as discussed in chapter 5 of the FEA, the estimate of annual revenues used in the analysis is highly uncertain and likely substantially understated. As a result, and given the exclusion of Unit 10 from the final designation, this outcome is unlikely.

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 two alternatives. First, we considered proposing to designate all areas meeting the ESA section 3 definition of critical habitat. However, following our consideration of probable national security, economic, and other relevant impacts of designating all the specific areas, we rejected this alternative because we elected to exclude multiple areas based on a determination that the benefits of

designating them were outweighed by the benefits of excluding them. A second alternative of designating a subset of the specific areas meeting statutory definition of critical habitat was considered and is the preferred alternative. As stated previously, under section 4(b)(2) of the ESA, we have the discretion to exclude a particular area from designation as critical habitat even though it meets the definition of ''critical habitat'' if the benefits of exclusion (*i.e.,* the impacts that would be avoided if an area were excluded from the designation) outweigh the benefits of designation (*i.e.,* the conservation benefits to the humpback whale if an area were designated), so long as exclusion of the area will not result in extinction of the species. Exclusion under section 4(b)(2) of the ESA of one or more of the areas considered for designation would reduce the total impacts of designation. This alternative—which is the approach taken in the final rule—results in a critical habitat designation that provides for the conservation of the species while reducing the economic, national security, and other relevant impacts on affected entities.

Coastal Zone Management Act

Under section 307(c)(1)(A) of the Coastal Zone Management Act (CZMA) (16 U.S.C. 1456(c)(1)(A)) and its implementing regulations, each Federal activity within or outside the coastal zone that has reasonably foreseeable effects on any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State coastal management programs. We have determined that the designation of critical habitat designation for the CAM and MX DPSs of humpback whales is consistent to the maximum extent practicable with the enforceable policies of the approved Coastal Zone Management Programs of Washington, Oregon, and California. This determination was submitted to the responsible agencies in the aforementioned states for review, and we subsequently received concurrence from each of the three state agencies.

By operation of Alaska State law, the federally approved Alaska Coastal Management Program expired on July 1, 2011, resulting in a withdrawal from participation in the CZMA's National Coastal Management Program (76 FR 39857, July 7, 2011). The CZMA Federal consistency provision, section 307, no longer applies in Alaska.

Paperwork Reduction Act

The purpose of the Paperwork Reduction Act is to minimize the paperwork burden for individuals, small businesses, educational and nonprofit institutions, and other persons resulting from the collection of information by or for the Federal government. This rule does not contain any new or revised collection of information. This rule does not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations.

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

The designation of critical habitat does not impose an ''enforceable duty'' on state, local, tribal governments, or the private sector and therefore does not qualify as a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an ''enforceable duty'' upon non-Federal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.''

This rule will not produce a Federal mandate. The designation of critical habitat does not impose an enforceable or legally-binding duty on non-Federal government entities or private parties. The only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7 of the ESA. Non-Federal entities that receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, but the Federal agency has the legally binding duty to avoid destruction or adverse modification of critical habitat. We do not find that this rule will significantly or uniquely affect small governments because it is not likely to produce a Federal mandate of $100 million or greater in any year; that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. In addition, the designation of critical habitat imposes no obligations on local, state or tribal governments. Therefore, a Small Government Agency Plan is not required.

Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and co-management agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal Government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Executive Order 13175 on Consultation and Coordination with Indian Tribal Governments outlines the responsibilities of the Federal Government in matters affecting tribal interests. Section 161 of Public Law 108–199 (188 Stat. 452), as amended by section 518 of Public Law 108–447 (118 Stat. 3267), directs all Federal agencies to consult with Alaska Native corporations on the same basis as Indian tribes under E.O. 13175.

None of the critical habitats were identified as occurring on Indian lands. However, the critical habitats overlap with areas used by Indian tribes and Alaska Natives for subsistence, cultural, usual and accustomed fishing, or other purposes. The designations of critical habitat for humpback whales has the potential to affect tribal trust resources, particularly in relation to harvest of fish species that have been identified as important humpback whale prey (*e.g.,* sardine, anchovy, herring). Based on the findings of our analyses as presented in the Final Economic Analysis (IEc 2020) and the Final Section 4(b)(2) Report (NMFS 2020b), while it is possible that the critical habitat designations could result in recommendations for changes in Federal fisheries management, we consider this unlikely at this time given the existing requirement to consider the effect of harvesting prey on the listed humpback whales and given existing Federal fisheries management measures (*e.g.,* prohibitions on krill fishing). Therefore, based on the currently available information, including information received through the outreach described in the preamble, we do not anticipate impacts on tribal fisheries or subsistence harvest as a result of these critical habitat designations and therefore find that this rule will not have tribal implications. Should it be necessary to alter or reduce any tribal fisheries harvest in the future as a consequence of this rule, any reduction would occur in consultation with the affected tribes and consistent with existing Secretarial Orders.

Executive Order 12630, Takings

Under E.O. 12630, Federal agencies must consider the effects of their actions on constitutionally protected private

property rights and avoid unnecessary takings of property. A taking of property includes actions that result in physical invasion or occupancy of private property that substantially affect its value or use. In accordance with E.O. 12630, this rule does not have significant takings implications. The designation of critical habitat affects only Federal agency actions. Further, no areas of private property exist within the proposed critical habitat and therefore none would be affected by this action. Therefore, a takings implication assessment is not required.

Executive Order 12866, Regulatory Planning and Review

OMB has determined that this rule is significant for purposes of E.O. 12866 review. An economic analysis (the FEA, IEc 2020) and Final ESA Section 4(b)(2) Report (NMFS 2020b) have been prepared to support the exclusion process under section 4(b)(2) of the ESA and our consideration of alternatives to this rulemaking as required under E.O. 12866. To view these documents, see the **ADDRESSES** section above.

Based on the FEA, the total estimated present value of the quantifiable incremental impacts of the critical habitat designations at a 7 percent discount rate are approximately $640,000–$680,000 over the next 10 years (2020–2029) and $740,000–$780,000 at a 3 percent discount rate. Assuming a 7 percent discount rate on an annualized basis, the impacts are estimated to be $73,000–$78,000 per year or $84,000–$89,000 per year at a 3 percent discount rate. These total impacts include the additional administrative efforts necessary to consider critical habitat in section 7 consultations. Overall, economic impacts are expected to be small and to be largely associated with the administrative costs borne by Federal agencies.

Beyond the potential for critical habitat to trigger additional conservation efforts as part of section 7 consultations, critical habitat may indirectly affect conservation behaviors in ways that generate both opportunity costs and conservation benefits. For example, critical habitat provides notice to other Federal agencies of areas and features important to species conservation; provides information about the types of activities that may reduce the conservation value of the habitat; and may stimulate research, voluntary conservation actions, and outreach and education activities. To the extent that this information causes agencies, organizations, or individuals to change their behavior for the benefit of humpback whales, these changes would be beneficial to the whales and would be considered benefits of this rulemaking. These changes in behavior could also trigger opportunity costs, for example due to the time or money spent to reduce the risk of negatively affecting the species or its habitat. Insufficient data are available to monetize these impacts (see the FEA, IEc 2020).

Based on the FEA, the total estimated present value of the quantified incremental impacts of the critical habitat designation for the WNP DPS are approximately $186,000–$213,000 over the next 10 years. Assuming a 7 percent discount rate on an annualized basis, the impacts are estimated to be $21,200–$24,300 per year. These total impacts include the additional administrative efforts necessary to consider critical habitat in section 7 consultations. These impacts are also not additive with those associated with the MX DPS, as the areas designated for the WNP DPS are entirely overlapping with areas being designated for the MX DPS. Overall, economic impacts are expected to be small and to be largely associated with the administrative costs borne by Federal agencies. While there are expected beneficial economic impacts of designating critical habitat for the WNP DPS, insufficient data are available to monetize those impacts (see Analysis of the Benefits of Designation section).

Based on the FEA, the total estimated present value of the quantified incremental impacts of the critical habitat designation for the CAM DPS are approximately $416,000–$430,000 over the next 10 years. Assuming a 7 percent discount rate on an annualized basis, the impacts are estimated to be $47,500–$48,500 per year. These total impacts include the additional administrative efforts necessary to consider critical habitat in section 7 consultations. These impacts are also not additive with those associated with the MX DPS, as the areas designated for the CAM DPS are entirely overlapping with areas being designated for the MX DPS. Overall, economic impacts are expected to be small and to be largely associated with the administrative costs borne by Federal agencies. While there are expected beneficial economic impacts of designating critical habitat for the CAM DPS, insufficient data are available to monetize those impacts (see Analysis of the Benefits of Designation section).

Based on the FEA, the total estimated present value of the quantified incremental impacts of the critical habitat designation for the MX DPS are approximately $642,000–$683,000 over the next 10 years. Assuming a 7 percent discount rate on an annualized basis, the impacts are estimated to be $73,300–$77,400 per year. These total impacts include the additional administrative efforts necessary to consider critical habitat in section 7 consultations. Overall, economic impacts are expected to be small and to be largely associated with the administrative costs borne by Federal agencies. These impacts are also not additive with those associated with the WNP and CAM DPSs, as the areas designated for the MX DPS are almost entirely overlapping with areas being designated for another DPS. Because the designation for the MX DPS extends over all other areas being designated as critical habitat for the other two DPSs, the estimated economic impacts associated with the designation for the MX DPS represent the total estimated impacts across all DPSs. As with the other DPSs, there are expected beneficial economic impacts of designating critical habitat for the MX DPS; however, insufficient data are available to monetize those impacts (see Analysis of the Benefits of Designation section).

Executive Order 13132, Federalism

Executive Order 13132 requires agencies to take into account any federalism impacts of regulations under development. It includes specific consultation directives for situations in which a regulation may preempt state law or impose substantial direct compliance costs on state and local governments (unless required by statute). Pursuant to E.O. 13132, we determined that this rule does not have significant federalism effects and that a federalism assessment is not required. The designation of critical habitat directly affects only the responsibilities of Federal agencies. As a result, this rule does not have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in the order.

State or local governments may be indirectly affected by the critical habitat designations if they require Federal funds or formal approval or authorization from a Federal agency as a prerequisite to conducting an action. In these cases, the State or local government agency may participate in the section 7 consultation as a third party. One of the key conclusions of the economic impacts analysis is that the incremental impacts of the designations will likely be limited to additional administrative costs to NMFS, Federal agencies, and to third parties stemming from the need to consider impacts to

critical habitat as part of the forecasted section 7 consultations. Most of these costs are expected to be borne by Federal agencies. Therefore, the designation of critical habitat is also not expected to have substantial indirect impacts on State or local governments.

Executive Order 13211, Energy Supply, Distribution, and Use

E.O. 13211 requires agencies to prepare a Statement of Energy Effects when undertaking a significant energy action. Under E.O. 13211, a significant energy action means any action by an agency that is expected to lead to the promulgation of a final rule or regulation that is a significant regulatory action under E.O. 12866 and is likely to have a significant adverse effect on the supply, distribution, or use of energy. We have considered the potential impacts of this action on the supply, distribution, or use of energy and find that the designations of critical habitat for humpback whales are not likely to have impacts that exceed the thresholds identified in OMB's memorandum M–01–27, Guidance for Implementing E.O. 13211. Thus, these designations are unlikely to have a significant adverse effect within the meaning of the executive order. The energy impacts analysis is presented in chapter 5 of the FEA (IEc 2020).

List of Subjects

50 CFR Part 223

Endangered and threatened species, Exports, Imports, Transportation.

50 CFR Part 224

Endangered and threatened species, Exports, Imports, Transportation.

50 CFR Part 226

Endangered and threatened species.

Dated: April 15, 2021.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR parts 223, 224, and 226 are amended as follows:

PART 223—THREATENED MARINE AND ANADROMOUS SPECIES

■ 1. The authority citation for part 223 continues to read as follows:

Authority: 16 U.S.C. 1531 1543; subpart B, § 223.201–202 also issued under 16 U.S.C. 1361 *et seq.*; 16 U.S.C. 5503(d) for § 223.206(d)(9).

■ 2. In § 223.102, in the table in paragraph (e), revise the entry for ''Whale, humpback (Mexico DPS)'' under Marine Mammals to read as follows:

§ 223.102 Enumeration of threatened marine and anadromous species.

* * * * *

(e) * * *

Species [1]			Citation(s) for listing determination(s)	Critical habitat	ESA rules
Common name	Scientific name	Description of listed entity			
Marine Mammals					
*	*	* * *	*	*	
Whale, humpback (Mexico DPS).	*Megaptera novaeangliae*	Humpback whales that breed or winter in the area of mainland Mexico and the Revillagigedo Islands, transit Baja California, or feed in the North Pacific Ocean, primarily off California-Oregon, northern Washington-southern British Columbia, northern and western Gulf of Alaska and East Bering Sea.	81 FR 62260, Sept. 8, 2016.	226.227	223.213
*	*	* * *	*	*	

[1] Species includes taxonomic species, subspecies, distinct population segments (DPSs) (for a policy statement, see 61 FR 4722; February 7, 1996), and evolutionarily significant units (ESUs) (for a policy statement, see 56 FR 58612; November 20, 1991).

* * * * *

PART 224—ENDANGERED MARINE AND ANADROMOUS SPECIES

■ 3. The authority citation for part 224 continues to read as follows:

Authority: 16 U.S.C. 1531–1543 and 16 U.S.C. 1361 *et seq.*

■ 4. In § 224.101, in the table in paragraph (h), revise the entries for ''Whale, humpback (Central America DPS)'' and ''Whale, humpback (Western North Pacific DPS)'' under Marine Mammals to read as follows:

§ 224.101 Enumeration of endangered marine and anadromous species.

* * * * *

(h) * * *

Species [1]			Citation(s) for listing determination(s)	Critical habitat	ESA rules
Common name	Scientific name	Description of listed entity			
Marine Mammals					
*	*	* * *	*	*	
Whale, humpback (Central America DPS).	*Megaptera novaeangliae*	Humpback whales that breed in waters off Central America in the North Pacific Ocean and feed along the West Coast of the United States and southern British Columbia.	81 FR 62260, Sept. 8, 2016.	226.227	

Species [1]			Citation(s) for listing determination(s)	Critical habitat	ESA rules
Common name	Scientific name	Description of listed entity			
Whale, humpback (Western North Pacific DPS).	*Megaptera novaeangliae*	Humpback whales that breed or winter in the area of Okinawa and the Philippines in the Kuroshio Current (as well as unknown breeding grounds in the Western North Pacific Ocean), transit the Ogasawara area, or feed in the North Pacific Ocean, primarily in the West Bering Sea and off the Russian coast and the Aleutian Islands.	81 FR 62260, Sept. 8, 2016.	226.227	
*	*	*	*	*	*	*

[1] Species includes taxonomic species, subspecies, distinct population segments (DPSs) (for a policy statement, see 61 FR 4722, February 7, 1996), and evolutionarily significant units (ESUs) (for a policy statement, see 56 FR 58612, November 20, 1991).

* * * * *

PART 226—DESIGNATED CRITICAL HABITAT

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

Authority: 16 U.S.C. 1533.

■ 6. Add § 226.227 to read as follows:

§ 226.227 Critical habitat for the Central America, Mexico, and Western North Pacific distinct population segments (DPSs) of humpback whales (*Megaptera novaeangliae*).

Critical habitat is designated for the Central America, Mexico, and Western North Pacific humpback whale DPSs as described in this section. The maps in paragraph (h) of this section, and as clarified by the textual descriptions in this section, are the definitive sources for determining the critical habitat boundaries.

(a) *List of states and counties.* Critical habitat is designated in waters off the coasts of the following states and counties for the listed humpback whale DPSs:

DPS	State-counties
(1) Central America	(i) WA—Clallam, Jefferson, Grays Harbor, Pacific. (ii) OR—Clatsop, Tillamook, Lincoln, Lane, Douglas, Coos, and Curry. (iii) CA—Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura.
(2) Mexico	(i) AK—Lake and Peninsula, Aleutians East, Aleutian West, Kodiak Island, Kenai Peninsula, and Valdez-Cordova. (ii) WA—Clallam, Jefferson, Grays Harbor, Pacific. (iii) OR—Clatsop, Tillamook, Lincoln, Lane, Douglas, Coos, and Curry. (iv) CA—Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura.
(3) Western North Pacific	AK—Lake and Peninsula, Aleutians East, Aleutian West, Kodiak Island, Kenai Peninsula.

(b) *Critical habitat boundaries for the Central America DPS.* Critical habitat for the Central America DPS includes all marine waters within the designated areas as shown by the maps in paragraph (h) of this section and those prepared and made available by the National Marine Fisheries Service (NMFS) pursuant to 50 CFR 424.18.

(1) *Washington.* The nearshore boundary is defined by the 50-meter (m) isobath, and the offshore boundary is defined by the 1,200-m isobath relative to mean lower low water (MLLW). Critical habitat also includes waters within the U.S. portion of the Strait of Juan de Fuca to an eastern boundary line at Angeles Point at 123° 33′ W.

(2) *Oregon.* The nearshore boundary is defined by the 50-m isobath. The offshore boundary is defined by the 1,200-m isobath relative to MLLW; except, in areas off Oregon south of 42° 10′, the offshore boundary is defined by the 2,000-m isobath.

(3) *California.* The nearshore boundary is defined by the 50-m isobath relative to MLLW except, from 38° 40′ N to 36° 00′ N, the nearshore boundary is defined by the 15-m isobath relative to MLLW; and from 36° 00′ N to 34° 30′ N, the nearshore boundary is defined by the 30-m isobath relative to MLLW. North of 40° 20′ N, the offshore boundary of the critical habitat is defined by a line corresponding to the 2,000-m isobath, and from 40° 20′ N to 38° 40′ N, the offshore boundary is defined by the 3,000-m isobath. From 38° 40′ N southward, the remaining areas have an offshore boundary defined by a line corresponding to the 3,700-m isobath.

(c) *Critical habitat boundaries for Mexico DPS.* Critical habitat for the Mexico DPS of humpback whales includes all marine waters within the designated areas as shown by the maps in paragraph (h) of this section and those prepared and made available by NMFS pursuant to 50 CFR 424.18.

(1) *Alaska.* The nearshore boundaries are generally defined by the 1-m isobath relative to MLLW. On the north side of the Aleutian Islands, the seaward boundary of the critical habitat is defined by a line extending from 55° 41 N, 162° 41′ W west to 55° 41′ N, 169° 30′ W, then southward through Samalga Pass to a boundary drawn along the 2,000-m isobath on the south side of the islands. This isobath forms the southern boundary of the critical habitat, eastward to 164° 25′ W. From this point, the 1,000-m isobath forms the offshore boundary, which extends eastward to 158° 39′ W. Critical habitat also includes the waters around Kodiak Island and the Barren Islands. The western boundary for this area runs southward along 154° 54′ W to the 1,000-m depth contour, and then extends eastward to a boundary at 150° 40′ W. The area also extends northward to the mouth of Cook Inlet where it is bounded by a line that extends from Cape Douglas across the inlet to Cape Adam. Critical habitat also includes the Prince William Sound area and associated waters defined by an eastern boundary at 148° 31′ W, a western boundary at 145° 27′ W, and a seaward boundary drawn along the 1,000-m isobath.

(2) *Washington.* The nearshore boundary is defined by the 50-m isobath, and the offshore boundary is defined by the 1,200-m isobath relative

to MLLW. Critical habitat also includes waters within the U.S. portion of the Strait of Juan de Fuca to an eastern boundary line at Angeles Point at 123° 33′ W.

(3) *Oregon.* The nearshore boundary is defined by the 50-m isobath. The offshore boundary is defined by the 1,200-m isobath relative to MLLW; except, in areas off Oregon south of 42° 10′, the offshore boundary is defined by the 2,000-m isobath.

(4) *California.* The nearshore boundary is defined by the 50-m isobath relative to MLLW except, from 38° 40′ N to 36° 00′ N, the nearshore boundary is defined by the 15-m isobath relative to MLLW; and from 36° 00′ N to 34° 30′ N, the nearshore boundary is defined by the 30-m isobath relative to MLLW. North of 40° 20′ N, the offshore boundary of the critical habitat is defined by a line corresponding to the 2,000-m isobath, and from 40° 20′ N to 38° 40′ N, the offshore boundary is defined by the 3,000-m isobath. From 38° 40′ N southward, the remaining areas have an offshore boundary defined by a line corresponding to the 3,700-m isobath.

(d) *Critical habitat boundaries for Western North Pacific DPS.* Critical habitat for the Western North Pacific DPS of humpback whales includes all marine waters within the designated areas as shown by the maps in paragraph (h) of this section and those prepared and made available by NMFS pursuant to 50 CFR 424.18.

(1) *Alaska.* The nearshore boundaries are generally defined by the 1-m isobath relative to MLLW. On the north side of the Aleutian Islands, the seaward boundary of the critical habitat is defined by a line extending due west from 55° 41′ N, 162° 41′ W to 55° 41′ N, 169° 30′ W, then southward through Samalga Pass to a boundary drawn along the 2,000-m isobath on the south side of the islands. This isobath forms the southern boundary of the critical habitat, eastward to 164° 25′ W. From this point, the 1,000-m isobath forms the offshore boundary, which extends eastward to 158° 39′ W. Critical habitat also includes the waters around Kodiak Island and the Barren Islands. The western boundary for this area runs southward along 154° 54′ W to the 1,000-m depth contour, and then extends eastward to a boundary at 150° 40′ W. The area also extends northward to the mouth of Cook Inlet where it is bounded by a line that extends from Cape Douglas across the inlet to Cape Adam.

(2) [Reserved]

(e) *Manmade structures.* Critical habitat does not include manmade structures (*e.g.,* ferry docks, sea plane facilities) and the land on which they rest within the critical habitat boundaries as described in paragraphs (b), (c), and (d) of this section and that were in existence as of May 21, 2021.

(f) *Essential features.* The following features were identified as essential to the conservation of the particular DPS.

(1) *Central America DPS.* Prey species, primarily euphausiids (*Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*) and small pelagic schooling fishes, such as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), and Pacific herring (*Clupea pallasii*), of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

(2) *Mexico DPS.* Prey species, primarily euphausiids (*Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*) and small pelagic schooling fishes, such as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), juvenile walleye pollock (*Gadus chalcogrammus*), and Pacific sand lance (*Ammodytes personatus*) of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

(3) *Western North Pacific DPS.* Prey species, primarily euphausiids (*Thysanoessa and Euphuasia*) and small pelagic schooling fishes, such as Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), juvenile walleye pollock (*Gadus chalcogrammus),* and Pacific sand lance (*Ammodytes personatus*) of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

(g) *Sites owned or controlled by the Department of Defense.* Critical habitat does not include the following particular areas owned or controlled by the Department of Defense, or designated for its use, where they overlap with the areas described in paragraph (b) of this section:

(1) Pursuant to the Endangered Species Act (ESA) section 4(a)(3)(B), all areas subject to the Naval Base Ventura County, Point Mugu, CA, and the Naval Outlying Field, San Nicolas Island, CA, approved Integrated Natural Resource Management Plans (INRMPs); and

(2) Pursuant to ESA section 4(b)(2), the Quinault Range Site (QRS) with an additional 10-km buffer that extends along the southern edge of the QRS and along the northern edge of the QRS except in areas past 10-km into the Olympic Coast National Marine Sanctuary.

(h) *Maps of humpback whale critical habitat.* (1) Spatial data for these critical habitats and mapping tools are maintained on our website and are available for public use (*www.fisheries.noaa.gov/national/endangered-species-conservation/critical-habitat*).

(2) Overview map of critical habitat for the Central America DPS of humpback whales:

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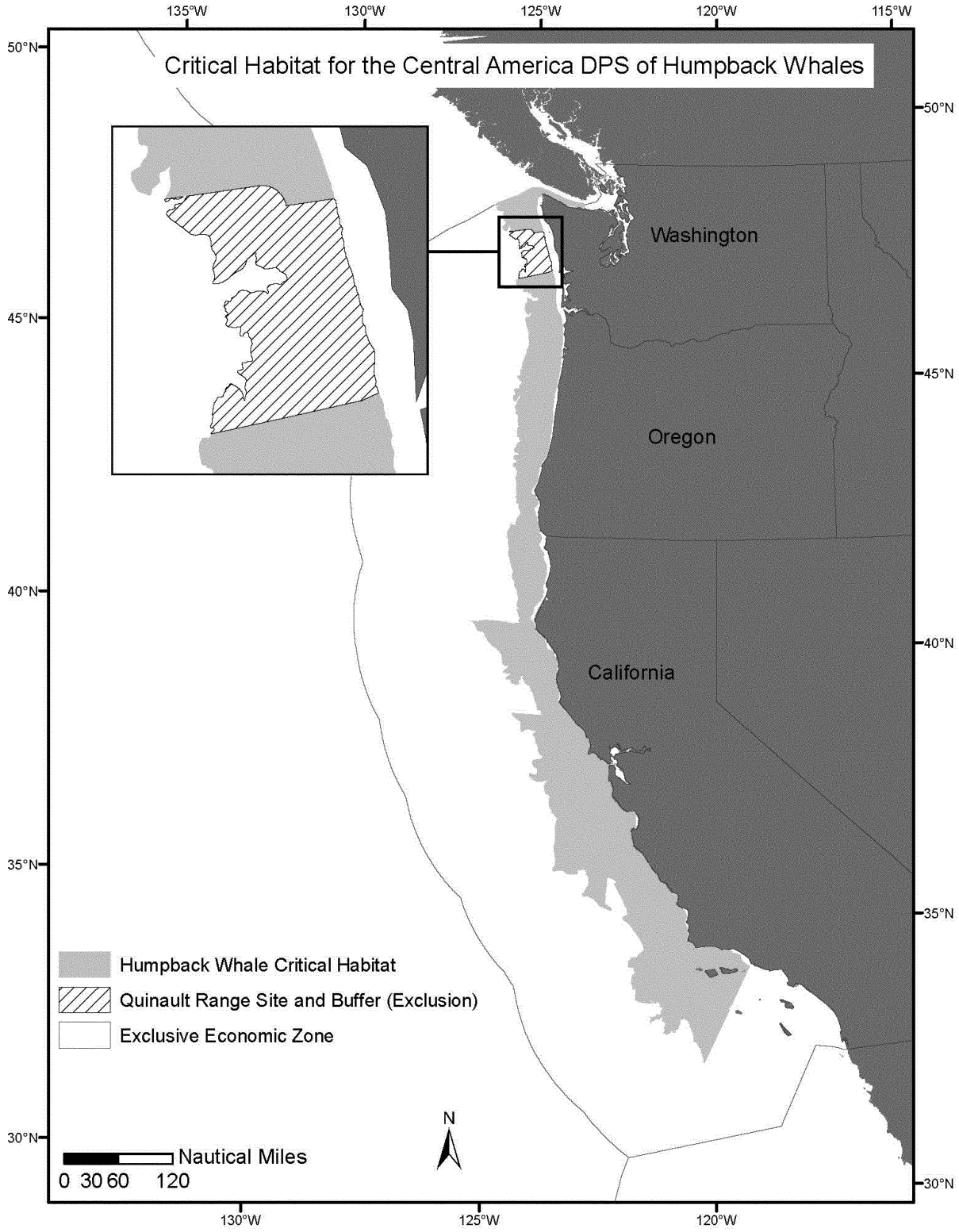
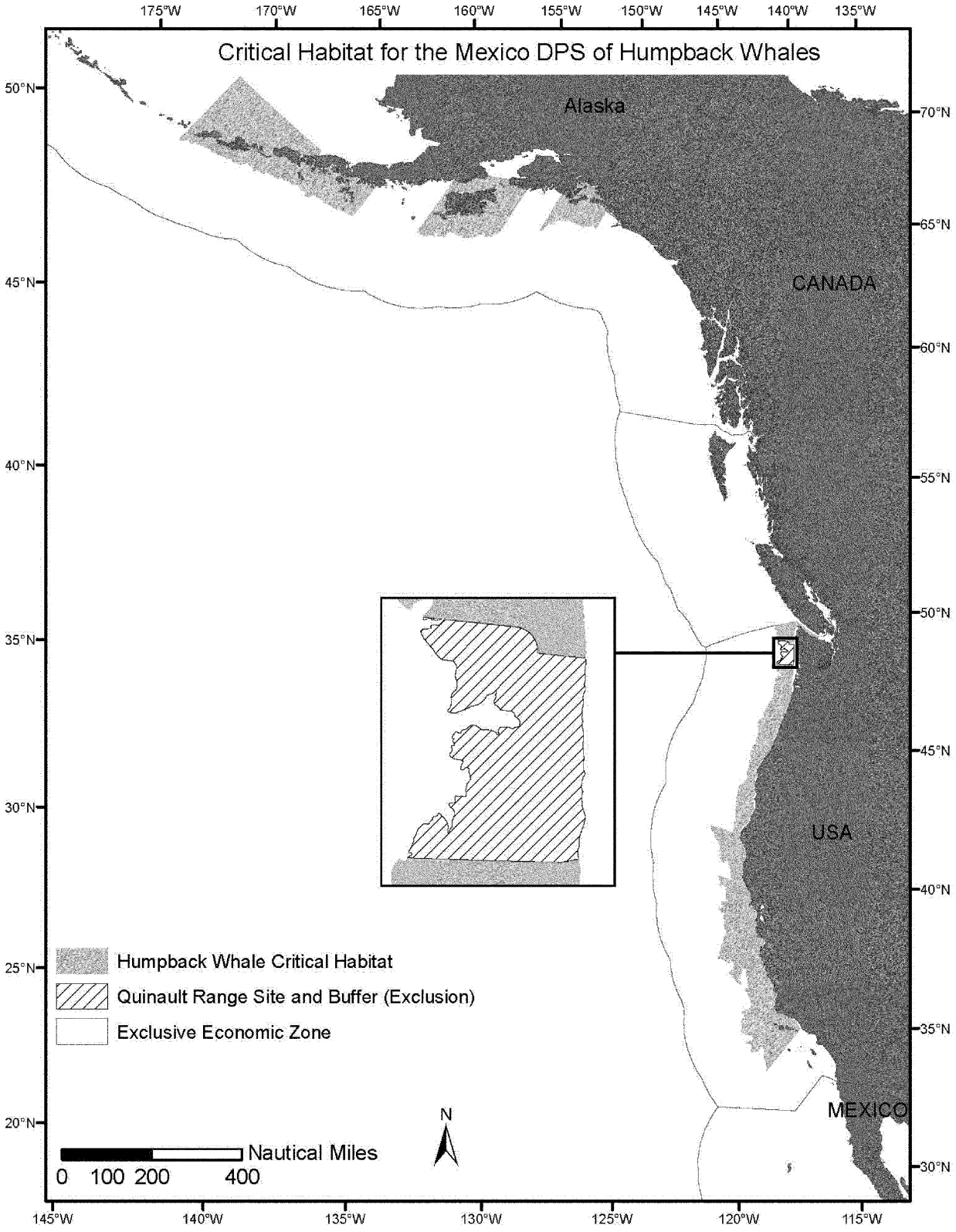
Figure 1 to paragraph (h)(2)



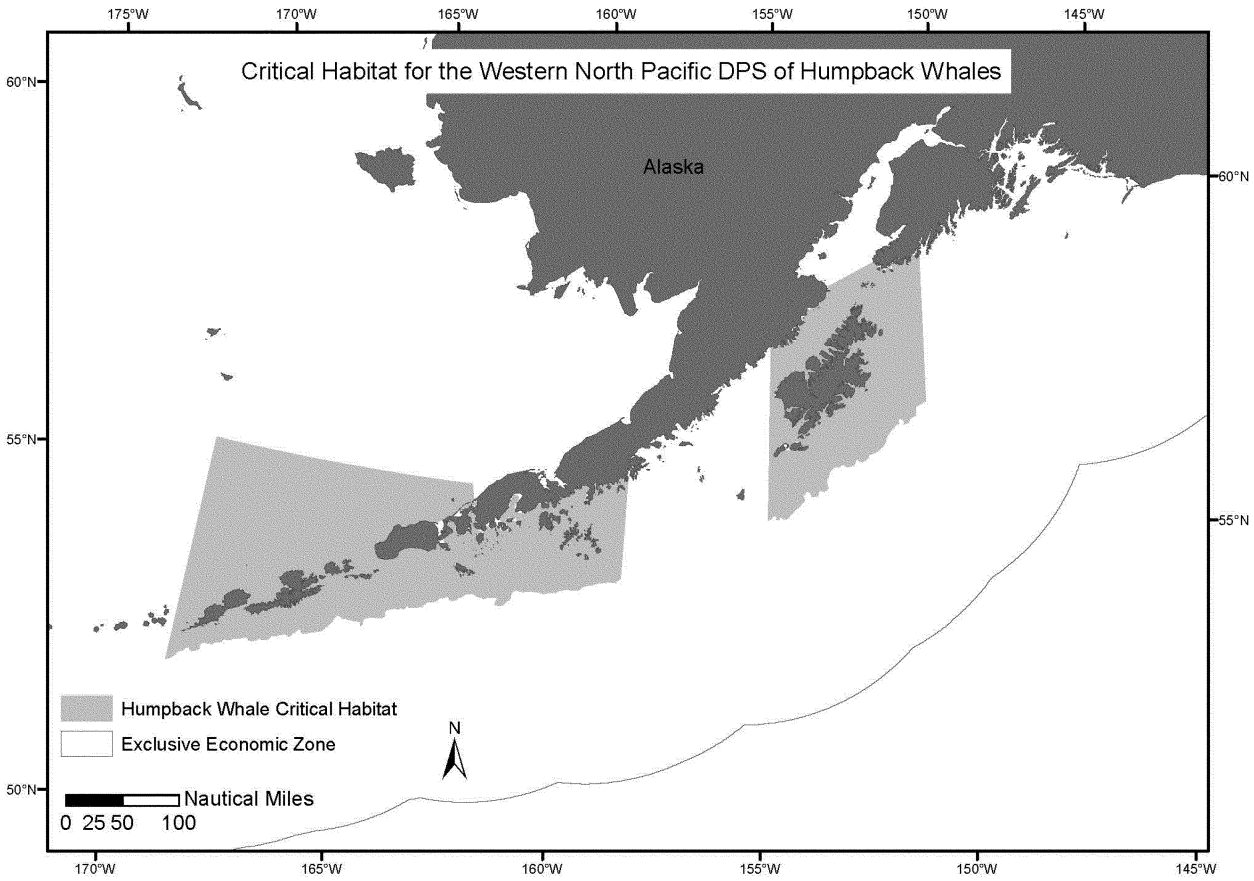
(3) Overview map of critical habitat for the Mexico DPS of humpback whales:

Figure 2 to paragraph (h)(3)



(4) Overview map of critical habitat for the Western North Pacific DPS of humpback whales:

Figure 3 to paragraph (h)(4)



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