DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223 and 226

[Docket No. 220318–0073]

RIN 0648–BJ65

Endangered and Threatened Species; Designation of Critical Habitat for the Beringia Distinct Population Segment of the Bearded Seal

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

ACTION: Final rule.

SUMMARY: We, the National Marine Fisheries Service (NMFS), issue this final rule to designate critical habitat for the Beringia distinct population segment (DPS) of the Pacific bearded seal subspecies *Erignathus barbatus nauticus* under the Endangered Species Act (ESA). The critical habitat designation comprises an area of marine habitat in the Bering, Chukchi, and Beaufort seas.

DATES: This rule is effective May 2, 2022.

ADDRESSES: The final rule, critical habitat map, and associated Final Impact Analysis Report (*i.e.,* report titled ''Final RIR/ESA Section 4(b)(2) Preparatory Assessment/FRFA of Critical Habitat Designation for the Beringia Distinct Population Segment (DPS) of the Bearded Seal'') can be found on the NMFS website at *www.fisheries.noaa.gov/species/bearded-seal#conservation-management.*

FOR FURTHER INFORMATION CONTACT: Tammy Olson, NMFS Alaska Region, (907) 271–5006; Jon Kurland, NMFS Alaska Region, (907) 586–7638; or Heather Austin, NMFS Office of Protected Resources, (301) 427–8422.

SUPPLEMENTARY INFORMATION:

Background

On December 28, 2012, we published a final rule to list the Beringia DPS of the Pacific bearded seal subspecies as threatened under the ESA (77 FR 76740). Section 4(b)(6)(C) of the ESA requires the Secretary to designate critical habitat concurrently with listing a species as threatened or endangered unless it is not determinable at that time, in which case the Secretary may extend the deadline for this designation by one year. At the time of listing, we announced our intention to designate critical habitat for the Beringia DPS in a separate rulemaking, as it was not then determinable. Concurrently, we solicited information to assist us in (1) identifying the physical or biological features essential to the conservation of the Beringia DPS, and (2) assessing the economic impacts of designating critical habitat for this species.

On July 25, 2014, the listing of the Beringia DPS as a threatened species was vacated by the U.S. District Court for the District of Alaska (*Alaska Oil & Gas Ass'n* v. *Pritzker,* Case No. 4:13–cv–18–RRB, 2014 WL 3726121 (D. Alaska July 25, 2014)). This decision was reversed by the U.S. Court of Appeals for the Ninth Circuit on October 24, 2016 (*Alaska Oil & Gas Ass'n* v. *Ross,* 840 F.3d 671 (9th Cir. 2016)), and the listing was reinstated on February 22, 2017.

On June 13, 2019, the Center for Biological Diversity filed a complaint in the U.S. District Court for the District of Alaska alleging that NMFS had failed to timely designate critical habitat for the Beringia DPS of bearded seals. Under a court-approved stipulated settlement agreement between the parties, NMFS published a proposed rule to designate critical habitat for the Beringia DPS of bearded seals on January 8, 2021 (86 FR 1433). Specifically, we proposed to designate as critical habitat for the Beringia DPS an area of marine habitat in the northern Bering, Chukchi, and Beaufort seas containing physical and biological features essential to the conservation of the species and that may require special management considerations or protection. On January 27, 2021, a correction to the comment period closing date identified in this proposal from ''March 9, 2020'' to ''March 9, 2021'' was published in the **Federal Register** (86 FR 7242).

We requested public comments on the proposed designation and associated Draft Impact Analysis Report (NMFS 2020) through March 9, 2021, and held three public hearings (86 FR 7686, February 1, 2021). In response to requests, we extended the public comment period through April 8, 2021 (86 FR 13518, March 9, 2021). For a complete description of our proposed action, we refer the reader to the proposed rule (86 FR 1433, January 8, 2021).

This final rule describes the critical habitat designation for Beringia DPS bearded seals and the basis for the designation, including a summary of, and responses to, comments received. A detailed discussion and analysis of probable economic impacts associated with this critical habitat designation is provided in the Final Impact Analysis Report (NMFS 2021), which is referenced throughout this final rule.

Critical Habitat Definition and Process

Section 3(5)(A) of the ESA defines critical habitat as (1) 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 essential to the conservation of the species and which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary of Commerce (Secretary) that such areas are essential for the conservation of the species (16 U.S.C. 1532(5)(A)). 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. Also, by regulation, critical habitat shall not be designated within foreign countries or in other areas outside U.S. jurisdiction (50 CFR 424.12(g)).

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 this Act 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).)

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 the economic impact, the impact on national security, and any other relevant impact of specifying any particular area as critical habitat. This section also grants the Secretary discretion to exclude any area from critical habitat if he or she determines the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat. However, the

Secretary may not exclude areas if such exclusion will result in the extinction of the species (16 U.S.C. 1533(b)(2)).

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 that 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.

Description and Natural History

The bearded seal is the largest of the northern ice-associated seals. Adults average 2.1 to 2.4 meters (m) in length and weigh up to 360 kilograms (Chapskii 1938, McLaren 1958, Johnson *et al.* 1966, Burns 1967, Benjaminsen 1973, Burns 1981). In general, bearded seals reach sexual maturity at 5 to 6 years of age for females and 6 to 7 years of age for males (McLaren 1958, Tikhomirov 1966, Burns 1967, Burns and Frost 1979, Smith 1981, Andersen *et al.* 1999). The life span of bearded seals is reported to be about 20 to 25 years (Kovacs 2002), although some can reach 40 years, and females surviving into their late 20s or early 30s can remain reproductively active (Quakenbush 2020a). The average life span is likely to be much lower, due to high first-year mortality rates (Fedoseev 2000, Cameron *et al.* 2010, Trukhanova *et al.* 2018).

General Seasonal Distribution and Habitat Use

Bearded seals of the Beringia DPS inhabit seasonally ice-covered waters of the Bering, Chukchi, Beaufort, and East Siberian seas. They primarily feed on organisms on or near the seafloor (benthic organisms) that are more numerous in shallow water where light can reach the sea bottom. Thus, their effective habitat is generally restricted to areas where seasonal ice occurs over relatively shallow waters, typically less than 200 m, where they can reach the ocean floor to forage (Burns and Frost 1979, Burns 1981, Nelson *et al.* 1984, Fedoseev 2000). Still, bearded seal dive depths have been recorded to greater than 488 m (Gjertz *et al.* 2000). Cameron *et al.* (2010) defined the core distribution of bearded seals as those areas of known extent that are in water less than 500 m deep.

Sea ice provides bearded seals isolation from terrestrial predators, as well as some protection from aquatic predators such as killer whales (*Orcinus orca*), although the extent of such predation is unknown. The ice serves as a platform out of the water for whelping and nursing of pups, pup maturation, and molting (shedding and regrowing hair and outer skin layers), as well as for resting (Cameron *et al.* 2010). Bearded seals can be found in a broad range of different ice types (Fay 1974, Burns and Frost 1979, Burns 1981, Nelson *et al.* 1984), but they favor drifting pack ice with natural openings and areas of open water, such as leads, fractures, and polynyas, for breathing, hauling out on the ice, and accessing the water for foraging (Heptner *et al.* 1976, Burns and Frost 1979, Nelson *et al.* 1984, Kingsley *et al.* 1985, Cleator and Stirling 1990). Although bearded seals prefer sea ice with natural access to the water, observations indicate the seals are able to make breathing holes in thinner ice (Burns 1967, Burns and Frost 1979, Burns 1981, Nelson *et al.* 1984). They tend to avoid areas of continuous, thick, landfast (shorefast) ice—which is attached to the shoreline and forms seasonally to varying extent along the Alaskan Arctic coast—and are rarely seen in the vicinity of unbroken, heavy, drifting ice or large areas of multi-year ice (Heptner *et al.* 1976, Burns and Frost 1979, Nelson *et al.* 1984, Kingsley *et al.* 1985, Cleator and Stirling 1990). Still, some bearded seals may occur in areas of landfast ice, as documented by aerial surveys conducted during late May to early June in the Beaufort Sea in 1999 to 2002 (Moulton *et al.* 2000, Moulton *et al.* 2001, Moulton *et al.* 2002, Moulton *et al.* 2003).

Although adult bearded seals have rarely been seen hauled out on land in Alaska (Burns 1981, Nelson 1981), two adults were captured for tagging in September 2019 while they were hauled out on land near Utqiaġvik (Alaska Department of Fish and Game (ADF&G), 2019, unpublished data). Juvenile bearded seals have been observed hauled out on land along lagoons and rivers in some areas of Alaska, including in the Bering Strait region in summer to early fall (Huntington 2000, Oceana and Kawerak 2014, Gadamus *et al.* 2015, Huntington *et al.* 2015b), on the Chukchi Sea coast near Wainwright (Nelson 1981), and on sandy islands near Utqiaġvik (Cameron *et al.* 2010). In addition, satellite tracking data obtained from juvenile bearded seals tagged in Alaska during 2014 to 2018 indicate that during the period of minimum ice extent (July to October), about half of the seals that hauled out (7 of 13 individuals) used terrestrial sites located south of the ice edge in Kotzebue Sound and Norton Sound (and for one individual, in a bay on the Chukotka Peninsula) whereas the other seals remained near the ice edge and hauled out on ice, and two individuals showed both patterns in separate years (Olnes *et al.* 2020). There is some evidence that, other than during the critical life history periods related to reproduction and molting, bearded seals can remain at sea for extended periods without requiring the presence of sea ice for hauling out. Some bearded seals tagged in Alaska have remained in the

water for weeks or months at a time during the open-water period and into early winter (Frost *et al.* 2008, Boveng and Cameron 2013, Quakenbush *et al.* 2019).

The region that includes the Bering and Chukchi seas is the largest area of continuous habitat for bearded seals (Burns 1981, Nelson *et al.* 1984). The Bering-Chukchi Platform is a shallow intercontinental shelf that encompasses about half of the Bering Sea, spans the Bering Strait, and covers nearly all of the Chukchi Sea. Bearded seals can reach the bottom everywhere along the shallow shelf, so it provides them favorable foraging habitat (Burns 1967). The Bering and Chukchi seas are generally covered by sea ice in late winter and spring and are then mostly ice-free in late summer and fall, a process that helps to drive a seasonal pattern in the movements and distribution of bearded seals in this region (Johnson *et al.* 1966, Burns 1967, Heptner *et al.* 1976, Burns and Frost 1979, Burns 1981, Nelson *et al.* 1984). In spring, as the sea ice begins to melt, many of the bearded seals that overwintered in the Bering Sea migrate northward with the receding ice through the Bering Strait and into the Chukchi and Beaufort seas and spend the summer and early fall foraging in these waters, while an unknown proportion of these seals, in particular juveniles, may remain in the Bering Sea.

Studies that have inferred locations of foraging activity for bearded seals tagged in Alaska based on movement and dive data (Boveng and Cameron 2013, Gryba *et al.* 2019, Quakenbush *et al.* 2019, Olnes *et al.* 2020) show some overlap in the areas used extensively by individual seals, including for some seals near the 100-m isobath in the Bering Sea in July to November. However, the spatial patterns of habitat use and locations of intensive use can vary substantially among individuals (*e.g.,* Quakenbush *et al.* 2019, Olnes *et al.* 2020). The results of these studies represent use by primarily juvenile tagged bearded seals, and it is unknown how representative they are for older animals. Bearded seal sightings recorded during aerial surveys of the northeastern Chukchi and Beaufort seas off Alaska conducted in summer and/or fall from 1982 to 2019 (formerly to monitor the fall migration of bowhead whales and more recently to document the distribution and relative abundance of whales and other marine mammals) were distributed over the continental shelf in both coastal and offshore areas (Alaska Fisheries Science Center 2020).

Some bearded seals (largely juveniles), have been observed or tracked via satellite telemetry in small coastal bays, lagoons, and estuaries, near river mouths, and up some rivers, in particular during late summer and fall (*e.g.,* Burns 1981, Nelson 1981, Oceana and Kawerak 2014, Huntington *et al.* 2016, Northwest Arctic Borough 2016, Huntington *et al.* 2017a, 2017b, Huntington *et al.* 2017d, Gryba *et al.* 2019, Quakenbush *et al.* 2019, Quakenbush 2020b), although the majority of Alaska Native hunters interviewed at Utqiaġvik indicated that all ages of bearded seals use rivers and creeks (Gryba *et al.* 2021). Indigenous Knowledge (IK) documented for several communities in northern and western Alaska indicates that in these areas, bearded seals feed on fishes such as whitefish species, cods, smelts, herring, and salmon, as well as shrimps and clams (Oceana and Kawerak 2014, Huntington *et al.* 2016, 2017c).

As the ice forms in the fall and winter, many bearded seals move south with the advancing ice edge through the Bering Strait into the Bering Sea where they spend the winter (Burns 1967, Heptner *et al.* 1976, Burns and Frost 1979, Burns 1981). Bearded seal vocalizations were recorded throughout winter and spring in the northeastern Chukchi Sea and western Beaufort Sea, indicating that some bearded seals overwinter in these seas (Hannay *et al.* 2013, MacIntyre *et al.* 2013, Jones *et al.* 2014, MacIntyre *et al.* 2015, Frouin-Mouy *et al.* 2016, Berchok *et al.* 2019, Vate Brattström *et al.* 2019). Intermittent coastal leads deep in the ice pack of these seas provide at least marginal habitat for low densities of females to whelp in the spring (Burns and Frost 1979, Cameron *et al.* 2010).

Of the bearded seals tagged in Alaska to date, few have been adults, and the majority were tagged in Norton Sound and Kotzebue Sound. Tracking data for most tagged seals have shown an overall pattern of broad latitudinal movement northward in summer with receding sea ice and southward in fall as sea ice advances (Frost *et al.* 2008, Boveng and Cameron 2013, Breed *et al.* 2018, Cameron *et al.* 2018, Quakenbush *et al.* 2019). However, Quakenbush *et al.* (2019) and Olnes *et al.* (2020) found that the extent of these movements for seals tracked during their study depended on where the seals were tagged. Two juveniles tagged in the western Beaufort Sea did not travel south of about 70° N (in the Chukchi Sea) and one juvenile tagged in Kotzebue Sound remained there during winter, whereas juveniles tagged in Norton Sound made more extensive latitudinal movements (Quakenbush *et al.* 2019). Similarly, an adult male tagged in the western Beaufort Sea near Utqiaġvik in the fall of 2019 remained in nearshore areas southeast of Utqiaġvik and in the vicinity of Barrow Canyon and overwintered near Barrow Canyon in two consecutive years, a habitat use pattern also shown by one of the two subadults that remained north of about 70° N (Quakenbush *et al.* 2019, Quakenbush 2020b; ADF&G, 2021, unpublished data).

Breed *et al.* (2018) and Cameron *et al.* (2018) found that from late fall to early spring, juvenile bearded seals tagged in Kotzebue Sound from 2004 to 2009 selected habitat at the southern ice edge, which depending on ice conditions may extend to near the shelf break during late winter and early spring. In contrast, using data from juvenile bearded seals tagged mainly in Norton Sound during the more recent 2014 to 2018 period, Olnes *et al.* (2021) reported differences in habitat selection in both winter and spring that appear to be the result of recent changes to the distribution of sea ice concentrations and habitats. Although ice concentrations were similar in both periods, in the more recent period, those ice concentrations were located well north of the ice edge, and some individuals overwintered in the Chukchi and Beaufort seas (Quakenbush *et al.* 2019, Olnes *et al.* 2021).

Reproduction

During the winter and spring, pregnant female bearded seals find broken pack ice over shallow areas on which to whelp, nurse pups, and molt (Fay 1974, Heptner *et al.* 1976, Burns 1981, Andersen *et al.* 1999, Kovacs 2002). Females with pups are generally solitary, tending not to aggregate (Heptner *et al.* 1976, Kovacs *et al.* 1996). After giving birth on the ice, female bearded seals feed throughout the lactation period of about 24 days, continuously replenishing fat reserves lost while nursing pups (Holsvik 1998, Andersen *et al.* 1999, Krafft *et al.* 2000). Pups nurse on the ice (Lydersen *et al.* 1994, Andersen *et al.* 1999, Kovacs *et al.* 2019), and by the time they are a few days old, they spend half their time in the water (Lydersen *et al.* 1994, Gjertz *et al.* 2000, Watanabe *et al.* 2009). Pups develop diving, swimming, and foraging skills over the nursing period and beyond (Lydersen *et al.* 1994, Gjertz *et al.* 2000, Watanabe *et al.* 2009, Hamilton *et al.* 2019). In the Bering Sea, newborn pups have been observed from mid-March to early May (Cameron *et al.* 2010). A peak in births in the Bering Strait and central Chukchi Sea is estimated to occur in late April (Johnson *et al.* 1966, Tikhomirov 1966, Heptner *et*

al. 1976, Burns 1981, Cameron *et al.* 2010).

Bearded seals vocalize intensively during the breeding season, which Cameron *et al.* (2010) estimated extends from April into June. Passive acoustic monitoring studies in the northern Bering, Chukchi, and Beaufort seas off Alaska have recorded a variable progressive increase in bearded seal call activity over winter, with peak rates occurring from about mid-March or April to late June in the Chukchi and Beaufort seas (Hannay *et al.* 2013, MacIntyre *et al.* 2013, Jones *et al.* 2014, MacIntyre *et al.* 2015, Frouin-Mouy *et al.* 2016, Berchok *et al.* 2019, Vate Brattström *et al.* 2019), and from about mid-March to the middle or end of May in the northern Bering Sea (MacIntyre *et al.* 2015, Chou *et al.* 2019). Some male bearded seals maintain a single small aquatic territory during the breeding season, while others roam across larger areas (Van Parijs *et al.* 2003, 2004, Van Parijs and Clark 2006). Male vocalizations during the breeding season are considered to function to maintain aquatic territories and/or advertise breeding condition (Ray *et al.* 1969, Cleator *et al.* 1989, Van Parijs *et al.* 2003, Van Parijs and Clark 2006, Risch *et al.* 2007).

Surveys indicate that in the Bering Sea during spring, bearded seals use nearly the entire extent of pack ice over the continental shelf. The highest densities of bearded seals in early spring have typically been observed between St. Lawrence and St. Matthew Islands, with lower densities reported southeast of St. Matthew Island and in the southern Gulf of Anadyr (Krylov *et al.* 1964, Kosygin 1966b, Braham *et al.* 1981, Cameron and Boveng 2007, Cameron *et al.* 2008). In early spring of some years, high densities of bearded seals have also been observed north and west of St. Lawrence Island (Braham *et al.* 1977, Fedoseev *et al.* 1988, Cameron *et al.* 2008). The age-sex composition of these aggregations was not documented, so it is not known if these are whelping areas. However, spring aerial surveys of the Bering Sea conducted in 2012 and 2013 documented numerous bearded seals, including pups, in Norton Sound and the Chirikov Basin north of St. Lawrence Island, extending to well south of St. Matthew and Nunivak Islands (NMFS Marine Mammal Laboratory, unpublished data). The subsistence harvest of bearded seal pups by hunters in Quinhagak also suggests that some bearded seals may whelp south of Nunivak Island (Coffing *et al.* 1999). Existing information on the spring distribution of bearded seals is otherwise limited. Aerial surveys conducted in parts of the Chukchi Sea during April and May of 2016 documented numerous bearded seals, including some pups, in the Hope Basin south of Point Hope, and less frequent sightings of bearded seals (which included a few pups) north of Point Hope (NMFS Marine Mammal Laboratory, unpublished data). Bearded seals were also more commonly observed south of Point Hope during aerial surveys flown primarily along the coast of the northeastern Chukchi Sea in late May to early June of 1999 and 2000 (Bengtson *et al.* 2005). However, the age-sex composition of bearded seals observed was not reported and this survey was timed toward the molting period.

Molting

Adult and juvenile bearded seals molt annually, a process that for adults typically begins shortly after mating, as it does with other mature phocid or ''true'' seals (Chapskii 1938, Ling 1970, Ling 1972, King 1983, Yochem and Stewart 2002). Juvenile bearded seals have been reported to molt earlier than adults (Krylov *et al.* 1964, Heptner *et al.* 1976, Fedoseev 2000). Bearded seals haul out of the water onto the ice more frequently during molting (Burns 1981, Fedoseev 2000, Olnes *et al.* 2020), a behavior that facilitates higher skin temperatures and may accelerate shedding and regrowth of hair and epidermis (Héroux 1960, Feltz and Fay 1966, Fay 1982). A captive bearded seal showed only a slight elevation in metabolic rate during molt (Thometz *et al.* 2021), but also a prolonged molt, consistent with natural history descriptions. In this way, the species may avoid the pulse of energy demand experienced by ringed seals (*Pusa hispida*) and spotted seals (*Phoca largha*), which complete their molt in about one quarter of the time. The molting period of bearded seals in the Bering, Chukchi, and Beaufort seas off Alaska has not been specifically investigated, but has been described as protracted, occurring between April and August with a peak in May and June (Tikhomirov 1964, Kosygin 1966a, Burns 1981). This observed timing of molting coincides with the period in which bearded seals that overwintered in the Bering Sea migrate long distances to summering grounds in the Chukchi and Beaufort seas. Measures of body condition and blubber thickness are at their annual minimums following the molt (Burns and Frost 1979, Smith 1981, Andersen *et al.* 1999).

Diet

Bearded seals feed primarily on benthic organisms, including a variety of invertebrates dwelling on the surface of the seabed (epifauna) and in the seabed substrate (infauna), and some fishes found on or near the sea bottom (demersal). They are also able to switch their diet to include schooling pelagic (non-demersal) fishes when advantageous (Antonelis *et al.* 1994). A wide variety of prey species have been reported for bearded seals of the Beringia DPS, though the bulk of their diet appears to consist of relatively few major prey types. Bearded seals of the Beringia DPS primarily feed on bivalve mollusks and crustaceans like crabs and shrimps, while fishes such as sculpins, cods, and flatfishes can also be a significant component of their diet (Kenyon 1962, Johnson *et al.* 1966, Burns 1967, Kosygin 1971, Burns and Frost 1979, Lowry *et al.* 1979, 1980, Antonelis *et al.* 1994, Hjelset *et al.* 1999, Fedoseev 2000, Dehn *et al.* 2007, Quakenbush *et al.* 2011, Crawford *et al.* 2015, Bryan 2017, Quakenbush 2020a). Quakenbush *et al.* (2011) reported that in the Bering and/or Chukchi seas, the diet of bearded seals shifted toward an increased proportion and diversity of fish between the periods 1961 to 1979 and 1998 to 2009.

Specific bearded seal prey species differ somewhat between geographic locations. This variability is likely a result of differences in prey assemblages in each region (Burns and Frost 1979, Lowry *et al.* 1980, Dehn *et al.* 2007). Diet composition of bearded seals has been observed to change seasonally (Johnson *et al.* 1966, Burns and Frost 1979, Quakenbush *et al.* 2011, Quakenbush 2020a), and has also been reported to vary interannually as well as longer-term (Lowry *et al.* 1980, Quakenbush *et al.* 2011, Carroll *et al.* 2013, Crawford *et al.* 2015, Quakenbush 2020a). Further, bearded seal diet composition may be influenced by interannual variations in sea ice conditions (Hindell *et al.* 2012). No differences have been shown in the feeding habitats of male and female bearded seals (Kelly 1988); however, prey composition of the bearded seal's diet has shown some variation with age (Burns and Frost 1979, Lowry *et al.* 1980, Quakenbush *et al.* 2011, Crawford *et al.* 2015, Quakenbush 2020a). Although major prey types documented in the diets of all bearded seal age classes in the Bering and Chukchi seas included crabs, shrimps, clams, and fishes, differences among age classes were reported in the relative importance of certain prey types and prey species

consumed (based on frequency of occurrence and/or volume) (Burns and Frost 1979, Lowry *et al.* 1980, Quakenbush *et al.* 2011, Crawford *et al.* 2015, Quakenbush 2020a).

Critical Habitat Identification

In the following sections, we describe the relevant definitions and requirements in the ESA and implementing regulations at 50 CFR part 424, and the key information and criteria used to prepare this final critical habitat designation. In accordance with section 4(b)(2) of the ESA, this critical habitat designation is based on the best scientific data available. Our primary sources of information include the status review report for the bearded seal (Cameron *et al.* 2010), our proposed and final rules to list the Beringia and Okhotsk DPSs of the bearded seal as threatened under the ESA (75 FR 77496, December 10, 2010; 77 FR 76740, December 28, 2012), articles in peer-reviewed journals, other scientific reports, peer reviewer and public comments on the proposed rule, and relevant Geographic Information System (GIS) and satellite data (*e.g.,* shoreline data, U.S. maritime limits and boundaries data, sea ice extent) for geographic area calculations and mapping. We also rely upon IK of Alaska Native subsistence users.

To identify specific areas that may qualify as critical habitat for bearded seals of the Beringia DPS, in accordance with 50 CFR 424.12(b), we followed a five-step process: (1) Identify the geographical area occupied by the species at the time of listing; (2) identify physical or biological habitat features essential to the conservation of the species; (3) determine the specific areas within the geographical area occupied by the species that contain one or more of the physical and biological features essential to the conservation of the species; (4) determine which of these essential features may require special management considerations or protection; and (5) determine whether a critical habitat designation limited to geographical areas occupied by the species at the time of listing would be inadequate to ensure the conservation of the species. Our evaluation and conclusions are described in detail in the following sections, and incorporate changes in response to peer reviewer and public comments (see Summary of Comments and Responses and Summary of Changes From the Proposed Designation sections).

Geographical Area Occupied by the Species

The phrase ''geographical area occupied by the species at the time it is listed,'' 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, such as migratory corridors, seasonal habitats, and habitats used periodically, but not solely, by vagrant individuals (*Id.*).

Based on existing literature, including available information on sightings and movements of bearded seals of the Beringia DPS, we identified the range of the Beringia DPS in the final ESA listing rule (77 FR 76740; December 28, 2012) as the Arctic Ocean and adjacent seas in the Pacific Ocean between 145° E longitude and 130° W longitude, except west of 157° E longitude, or west of the Kamchatka Peninsula, where the Okhotsk DPS of the bearded seal is found. As noted previously, we cannot designate areas outside U.S. jurisdiction as critical habitat. Thus, the geographical area under consideration for this designation is limited to areas under U.S. jurisdiction that the Beringia DPS occupied at the time of listing. This area extends to the outer boundary of the U.S. Exclusive Economic Zone (EEZ) in the Chukchi and Beaufort seas and south over the continental shelf in the Bering Sea (Cameron *et al.* 2010).

Physical and Biological Features Essential to the Conservation of the Species

The statutory definition of 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. Implementing regulations at 50 CFR 424.02 define such features as those that occur in specific areas and that are essential to support the life-history needs of the species. The regulations provide additional details and examples of such features.

Based on the best scientific information available regarding the natural history of bearded seals and the habitat features that are essential to support the species' life-history needs, we have identified the following physical and biological features that are essential to the conservation of the Beringia DPS of bearded seals within U.S. waters occupied by the species.

(1) *Sea ice habitat suitable for whelping and nursing, which is defined as areas with waters 200 m or less in depth containing pack ice of at least 25 percent concentration and providing bearded seals access to those waters from the ice.*

Sea ice habitat suitable for bearded seal whelping and nursing is essential to the conservation of the Beringia DPS because the seals rely on sea ice as a dry platform for whelping, nursing, and rearing pups in proximity to benthic foraging habitats. Further, hauling out on the ice reduces thermoregulatory demands, and is thus especially important for growing pups, which have a disproportionately large skin surface and rate of heat loss in the water (Harding *et al.* 2005, Cameron *et al.* 2010). If suitable ice cover is absent from shallow-water feeding areas during whelping and nursing, maternal females would be forced to seek sea ice over deeper waters, with less access to benthic food, or may haul out on shore, with potential increased risk of disturbance, predation, intra- and interspecific competition, and disease transmission. However, we are not aware of any occurrence of bearded seals whelping or nursing pups on land. Rearing pups in poorer foraging grounds would also require mothers to forage for longer periods to replenish energy reserves lost while nursing and/or compromise their own body condition, both of which could impact the transfer of energy to offspring and the survival of pups, mothers, or both. In addition, learning to forage in sub-optimal habitat could impair a pup's ability to learn effective foraging skills, and hence, impact its long-term survival.

To identify ice concentrations (percentage of ocean surface covered by sea ice) that we consider essential for bearded seal whelping and nursing, we relied upon three studies in the Bering Sea that estimated ice concentrations selected by bearded seals in the spring, based on aerial survey observations of bearded seals hauled out on ice. Simpkins *et al.* (2003) found that between St. Lawrence and St. Mathew Islands in March, bearded seals selected areas with ice concentrations of 70 to 90 percent. Another study conducted in a broader area of the Bering Sea south of St. Lawrence Island in April and May found the highest probability of bearded seal occurrence was in ice concentrations of 75 to 100 percent, but only the 0 to 25 percent ice class had substantially lower probability of occurrence (Ver Hoef *et al.* 2014). Informed by these two studies (specifically, Simpkins *et al.* (2003) and Ver Hoef *et al.* (*In review*), later

published as Ver Hoef *et al.* (2014)), Cameron *et al.* (2010) defined the minimum ice concentration sufficient for bearded seal whelping and nursing as 25 percent. Subsequently, a third paper by Conn *et al.* (2014), which established analytical methods to estimate the abundance of ice-associated seals from survey data collected across the U.S. Bering Sea in April and May, showed that in April bearded seals occupied ice concentrations exceeding 95 percent. Bearded seal abundance peaked in ice concentrations between about 50 and 75 percent, and abundance was lowest in ice concentrations largely below 25 percent. Based on the information from these studies, we concluded that sea ice habitat suitable for bearded seal whelping and nursing is of at least 25 percent ice concentration.

Cameron *et al.* (2010) defined the core distribution of bearded seals as those areas of the known extent of the species' distribution that are in waters less than 500 m deep. However, as discussed above, the bearded seal's effective habitat is generally restricted to areas where seasonal sea ice occurs over relatively shallow waters, typically less than 200 m. Moreover, in the U.S. portion of its range, the Beringia DPS occurs largely in waters less than 200 m deep. Also, bearded seals favor ice with access to the water, and tend to avoid continuous areas of landfast ice and unbroken drifting ice. Therefore, we conclude that sea ice habitat essential for bearded seal whelping and nursing occurs in areas with waters 200 m or less in depth containing pack ice (*i.e.,* sea ice other than landfast ice; pack ice is also termed drift ice) of at least 25 percent concentration and providing bearded seals access to those waters from the ice.

(2) *Sea ice habitat suitable as a platform for molting, which is defined as areas with waters 200 m or less in depth containing pack ice of at least 15 percent concentration and providing bearded seals access to those waters from the ice.*

Sea ice habitat suitable for molting is essential to the conservation of the Beringia DPS because molting is a biologically important, energy-intensive process that could incur increased energetic costs if it occurs in water or could involve increased risk of predation (due to the absence of readily accessible escape routes to avoid predators, *i.e.,* natural opening in the sea ice), intra- and inter-specific competition, and the potential for disease transmission if it occurs on land. In light of the studies referenced above by Simpkins *et al.* (2003) and Ver Hoef *et al.* (*In review*) (later published as Ver Hoef *et al.* (2014)) documenting spring ice concentrations selected by bearded seals, and based on the assumption that sea ice requirements for molting in May and June are less stringent than those for whelping and nursing pups, Cameron *et al.* (2010) concluded that 15 percent ice concentration would be minimally sufficient for molting. As discussed above, the U.S. range of the Beringia DPS is largely in waters 200 m or less in depth, and the preferred depth range of bearded seals is less than 200 m. Further, bearded seals favor ice with access to the water, and tend to avoid continuous areas of landfast ice and unbroken drifting ice. Therefore, we conclude that sea ice essential for molting occurs in areas with waters 200 m or less in depth containing pack ice of at least 15 percent concentration and providing bearded seals access to those waters from the ice.

(3) *Primary prey resources to support bearded seals: Waters 200 m or less in depth containing benthic organisms, including epifaunal and infaunal invertebrates, and demersal fishes.*

Primary prey resources to support bearded seals in waters 200 m or less in depth are essential to the conservation of the Beringia DPS because bearded seals rely on those prey resources to meet their annual energy budgets. As discussed above, bearded seals have a diverse diet with a large variety of prey items throughout their range, and are considered benthic generalists. The proportion of benthic dives made by tagged juvenile bearded seals (n=14) ranged from 0.66 to 0.93, indicating that most but not all foraging was done near the bottom (Olnes *et al.* 2020).

Quakenbush *et al.* (2011) found that a diverse assemblage of invertebrates (63 taxa) and fish (20 taxa), associated with both benthic and pelagic habitats, was consumed by bearded seals sampled in the Bering and Chukchi seas between 1961 and 2009. Major prey types reported for bearded seals in the Bering, Chukchi, and western Beaufort seas include epifaunal crustaceans like crabs and shrimps as well as infaunal invertebrates like clams and marine worms, but fishes such as sculpins, Arctic cod (*Boreogadus saida*), and saffron cod (*Eleginus gracilis*) can also be a significant component (Johnson *et al.* 1966, Burns 1967, Kosygin 1971, Burns and Frost 1979, Lowry *et al.* 1979, 1980, Antonelis *et al.* 1994, Dehn *et al.* 2007, Quakenbush *et al.* 2011, Crawford *et al.* 2015).

Stomach content analysis of bearded seals from the Alaska Native subsistence harvest in the northern Bering and Chukchi seas during 2000 to 2019 (n=834) forms the most comprehensive source for description of recent and current diets of these seals in U.S. waters (Quakenbush 2020a). The results reported by age class (non-pup versus pup), season (open-water vs. ice-covered), and sampling period (2000 to 2015 versus 2016 to 2020) for common prey types (prey items identified in 20 percent or more of stomachs) show that bearded seals eat many species of fish and invertebrates. Sample-weighted averages across age class, season, and sampling periods indicate invertebrate remains were found in most (96 percent) of the bearded seal stomachs. The most prevalent invertebrate groups were shrimps (71 percent of stomachs; mostly family Crangonidae), crabs (infraorder Brachyura, 52 percent of stomachs), and bivalve mollusks (45 percent of stomachs). The most prevalent fish groups were sculpins (family Cottidae, 63 percent of stomachs), and righteye flounders (family Pleuronectidae, 48 percent of stomachs). Small cods were also important (family Gadidae, 46 percent of stomachs). All of these prevalent fish are demersal, spending much of their lives on or near the bottom. Arctic cod was the most prevalent small cod (saffron cod was also identified as a common prey species). It is more pelagic than the other most prevalent fishes identified in the seals' diet and is often associated with the under surface of the sea ice; whether bearded seals catch Arctic cod near the bottom, consistent with their main foraging habits, has not been determined.

As described below in the section, Summary of Changes From the Proposed Designation, peer reviewer and public comments led us to re-evaluate and refine the proposed primary prey resources essential feature, which we identified in the proposed rule as benthic organisms, including epifaunal and infaunal invertebrates, and demersal and schooling pelagic fishes. The U.S. range of the Beringia DPS is largely in waters 200 m or less in depth and the preferred depth range of bearded seals is less than 200 m (see *General Seasonal Distribution and Habitat Use* section). We therefore continue to find that it is appropriate to identify the maximum water depth of this feature as 200 m. As we stated in the proposed rule, the broad number of prey species consumed by bearded seals makes specification of particular essential prey species impracticable. However, in considering the best scientific data available on the diets of bearded seals in Alaska, we recognized

that the high prevalence of benthic invertebrates and demersal fishes reported reflects the seals' reliance on seafloor prey communities in particular to meet their annual energy budgets. We therefore conclude that the primary prey resources essential to the conservation of the Beringia DPS are benthic organisms, including epifaunal and infaunal invertebrates, and demersal fishes found in water depths of 200 m or less. We find that this level of specificity, identifying prey types known to be part of the diet of Beringia DPS bearded seals but not limiting the definition to specific prey species or a limited subset of prey types, is most appropriate for defining this essential feature based on the best scientific data available. Because bearded seals feed on a variety of benthic prey items and temporal differences in diet composition have been reported (Cameron *et al.* 2010, Quakenbush *et al.* 2011, Crawford *et al.* 2015, Quakenbush 2020a), we conclude that areas in which the primary prey resources essential feature occurs are those that contain one or more of these prey resources.

Specific Areas Containing the Essential Features

To determine which areas qualify as critical habitat within the geographical area occupied by the species, we are required to identify ''specific areas'' that contain one or more of the physical or biological features essential to the conservation of the species (and that may require special management considerations or protection, as described below) (50 CFR 424.12(b)(1)(iii)). Delineation of the specific areas is done at a scale determined by the Secretary 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.

In determining the scale and boundaries for the specific areas, we considered, among other things, the scales at which biological data are available and the availability of standardized geographical data necessary to map boundaries. Because the ESA implementing regulations allow for discretion in determining the appropriate scale at which specific areas are drawn (50 CFR 424.12(b)(1)), we are not required, nor was it possible, to determine whether each square inch, acre, or even square mile independently meets the definition of ''critical habitat.'' A main goal in determining and mapping the boundaries of the specific areas is to provide a clear description and documentation of the areas containing the identified essential features. This is ultimately fundamental to ensuring that Federal action agencies are able to determine whether their particular actions may affect the critical habitat.

As described below in the section, Summary of Changes From the Proposed Designation, after refining the proposed definition of the primary prey resources essential feature, and in response to public comments and concerns regarding our proposed delineation of the boundaries of critical habitat with respect to the primary prey resources essential feature, we re-evaluated the best scientific data available and the approach we used to identify those boundaries to ensure that they were drawn appropriately. As a result of this evaluation, we now identify one specific area that contains this feature in addition to the sea ice essential features as described in this section.

As we explain below, the essential features of bearded seal critical habitat, in particular the sea ice essential features, are dynamic and their locations are variable on both spatial and temporal scales. Bearded seal movements and habitat use are strongly influenced by the seasonality of sea ice, and the seals can range widely in response to the specific locations of the most suitable habitat conditions. Based on the best scientific data available, we have therefore identified one specific area that comprises parts of the Bering, Chukchi, and Beaufort seas as critical habitat, within which all of the identified essential features can be found in any given year.

We first focused on identifying where the essential features that support the species' life history functions of whelping, nursing, and molting occur (*i.e.,* specific areas that contain the sea ice essential features). As discussed above, bearded seals generally maintain an association with drifting sea ice, and many seals migrate seasonally to maintain access to this ice. Bearded seal whelping and nursing take place in the Bering Sea while ice cover is at or near its peak extent. Bearded seal molting overlaps with the periods of whelping, nursing, pup maturation, and breeding, and continues into early summer as the pack ice edge recedes north through the Bering Strait and into the Chukchi and Beaufort seas. Therefore, we considered where the sea ice essential features occur in all three seas.

The dynamic nature of sea ice and the spatial and temporal variations in sea ice cover constrain our ability to map precisely the specific geographic locations where the sea ice essential features occur. Sea ice characteristics such as ice extent and ice concentration vary spatiotemporally ((*e.g.,* Frey *et al.* 2015). Thus, the specific geographic locations of essential sea ice habitat used by bearded seals vary from year to year, or even day to day, depending on many factors, including time of year, local weather (*e.g.,* wind speed/direction), and oceanographic conditions (*e.g.,* Burns and Frost 1979, Frey *et al.* 2015, Gadamus *et al.* 2015). In addition, the duration that sea ice habitat essential for whelping and nursing, or for molting, is present in any given location can vary annually depending on the rate of ice melt and other factors. The temporal overlap of bearded seal molting with whelping and nursing, combined with the dynamic nature of sea ice, also makes it impracticable to separately identify specific areas where each of these essential features occur. However, it is unnecessary to distinguish between specific areas containing each sea ice essential feature because the ESA permits the designation of critical habitat where one or more essential features occur.

Bearded seals of the Beringia DPS can range widely, which, combined with the dynamic variations in sea ice conditions, results in individuals distributing broadly and using sea ice habitats within a range of suitable conditions. We integrated these physical and biological factors into our identification of specific areas where one or both sea ice essential features occur based on the information currently available on the seasonal distribution and movements of bearded seals during the annual period of reproduction and molting, the maximum depth where the sea ice essential features occur, and satellite-derived estimates of the position of the sea ice edge and extent and seasonality of landfast ice over time. Although this approach allowed us to identify specific areas that contain one or both of the sea ice essential features at certain times, the available data supported delineation of specific areas only at a coarse scale. Consequently, we delineated a single specific area that contains the sea ice features essential to the conservation of the Beringia DPS, as follows.

We first identified the southern boundary of this specific area. The information discussed above regarding the seasonal distribution and movements of bearded seals in the Bering Sea suggests that sea ice essential for whelping and nursing (and potentially for molting) extends south of St. Matthew and Nunivak Islands. But a more precise southern boundary for this habitat is unavailable because existing

information is limited on the spatial distribution and whelping locations of bearded seals in the Bering Sea during spring, and the temporal and spatial distribution of sea ice cover, which influences bearded seal distributions, is variable between years.

We therefore turned to Sea Ice Index data maintained by the National Snow and Ice Data Center (NSIDC) for information on the estimated median position of the ice edge in the Bering Sea during April (Fetterer *et al.* 2017, Version 3.0, accessed November 2019), which is the peak month for bearded seal whelping activity (peak molting for adults occurs later in the spring). This estimated median ice edge is derived by the NSIDC from a time series of satellite records for the 30-year reference period from 1981 to 2010. To further inform our evaluation, we also examined the position of the median ice edge in April for the more recent 30-year period from 1990 to 2019, which was estimated using methods and data types similar to those used for the Sea Ice Index. We note that the two most recent years included in this 30-year period had record low ice extent in the Bering Sea (Stabeno and Bell 2019).

The April median ice edge for the 1981 to 2010 reference period from the Sea Ice Index is located approximately 170 kilometers (km) southwest of St. Matthew Island and 175 km south of Nunivak Island, and it extends eastward across lower Kuskokwim Bay to near Cape Newenham, a headland between Kuskokwim Bay and Bristol Bay. Because bearded seals use nearly the entire extent of pack ice over the Bering Sea shelf in spring, depending upon ice conditions in a given year, some bearded seals may use sea ice for whelping south of this median ice edge. But we concluded that the variability in the annual extent and timing of sea ice in this southernmost portion of the bearded seal's range in the Bering Sea (*e.g.,* Boveng *et al.* 2009, Stabeno *et al.* 2012, Frey *et al.* 2015) renders these waters unlikely to contain the sea ice essential features on a consistent basis in more than limited areas. The position of the April median ice edge for the more recent 1990 to 2019 period is generally similar to that of the Sea Ice Index, except that the ice edge has a wide inverted U-shape in Kuskokwim Bay, and as a result, there is roughly half as much area with sea ice there. Given the reduction in sea ice in Kuskokwim Bay between the reference period used for the Sea Ice Index and the more recent period, we also concluded that these waters appear unlikely to contain the sea ice essential features on a consistent basis in more than limited areas.

As such, we delineated the southern boundary to reflect the estimated position of the April median ice edge west of Kuskokwim Bay. To simplify the southern boundary for purposes of delineation on maps, we modified the ice edge contour line for the 1990 to 2019 period as follows: (1) Intermediate points along the contour line between its intersection point with the seaward limit of the U.S. EEZ (60°32′26″ N/179°9′53″ W) and the point where the contour line turns eastward (57°58′ N/170°25′ W) were removed to form the segment of the southern boundary that extends from the seaward limit of the U.S. EEZ southeastward approximately 575 km; (2) intermediate points along the contour line between the point where the contour line turns eastward and the approximate point on the west side of Kuskokwim Bay where the contour line turns northeastward (58°29′ N/164°46′ W) were removed to form a second segment of the southern boundary that extends eastward approximately 335 km; and (3) these two line segments were connected to the mainland by an approximately 200-km line segment that follows 164°46′ W longitude to near the west side of the mouth of the Kolovinerak River, about 50 km east of Nunivak Island. This editing produced a simplified southern boundary that retains the general shape of the original ice edge contour line west of Kuskokwim Bay.

We then identified the northern boundary of the specific area that contains one or both of the sea ice essential features. As discussed above (see Description and Natural History section), limited spring aerial survey information, satellite tracking data for tagged bearded seals, and year-round passive acoustic recordings of bearded seal vocalizations suggest that some portion of the Beringia DPS overwinters in the Chukchi and Beaufort seas. In addition, many of the bearded seals that overwinter in the Bering Sea migrate northward with the receding ice edge in the spring and early summer into the Chukchi and Beaufort seas, coincident with the timing of molting. Therefore, consistent with the maximum depth identified for the sea ice essential features, we defined the northern boundary as the 200-m isobath over the continental shelf break in the Chukchi and Beaufort seas (*i.e.,* the northern extent of waters 200 m or less in these seas), and the boundaries to the east and west as the limit of the U.S. EEZ. Sea ice concentrations suitable for whelping, nursing, and molting occur over waters extending up to and beyond these boundaries (see, *e.g.,* Fetterer *et al.* 2017, Sea Ice Index Version 3.0, accessed November 2019). We note that Canada contests the limits of the U.S. EEZ in the eastern Beaufort Sea, asserting that the line delimiting the two countries' EEZs should follow the 141st meridian out to a distance of 200 nautical miles as opposed to an equidistant line that extends seaward perpendicular to the coast at the U.S.-Canada land border.

Sea ice habitat identified as essential for bearded seal whelping, nursing, and molting is found in waters 200 m or less in depth containing pack ice, *i.e.,* sea ice other than landfast ice, of suitable concentrations. We therefore considered the best scientific data available regarding the spatial extent of landfast ice and its annual cycle in the Beaufort, Chukchi, and Bering seas to inform our delineation of the appropriate shoreward boundary for the specific area containing one or both sea ice essential features. In the following discussion of landfast ice, we refer to the northeastern Chukchi Sea (from Wainwright to Point Barrow) and Beaufort Sea as the Beaufort region, the Chukchi Sea extending south of Wainwright to the tip of the northern Seward Peninsula as the Chukchi region, and the Bering Sea from there south to Kuskokwim Bay as the Bering region. Analysis of data derived using satellite imagery for each of twelve annual cycles between 1996 and 2008 indicates that landfast ice in the Beaufort region extended farther from shore and occurred in deeper water than in the Chukchi and Bering regions (Mahoney *et al.* 2012, Mahoney *et al.* 2014, Jensen *et al.* 2020).

Mahoney *et al.* (2014) found that the water depth at the seaward landfast ice edge in the Beaufort region developed over the course of winter to a single well-defined mode around 20 m, in agreement with earlier findings by Mahoney *et al.* (2007), although there was significant variability in water depths at the seaward landfast ice edge and multiple modes at a local scale (some of which is related to differences in local configuration of the coastline and bathymetry, as is the case more broadly across the Beaufort, Chukchi, and Bering seas). Thus, overall there is similarity between the average seaward landfast ice edge location and isobaths near 20 m in the Beaufort region (Mahoney *et al.* 2007, Mahoney *et al.* 2012, Mahoney *et al.* 2014). In contrast, the distribution of water depths at the seaward landfast ice edge in the Chukchi region was found to be broader and less symmetric than in the Beaufort region (modal water depth at the

seaward landfast ice edge was approximately 12 to 13 m), and showed substantial variation in modal water depth at the seaward landfast ice edge in each subregion (Mahoney *et al.* 2012, Mahoney *et al.* 2014). Hence, the modal depth at the seaward landfast ice edge in the Chukchi region is highly locally specific and, therefore, the position of the seaward landfast ice edge is not well represented by a particular isobath (Mahoney *et al.* 2012, Mahoney *et al.* 2014). Finally, Jensen *et al.* (2020) reported that in the Bering region, the modal water depths at the seaward landfast ice edge varied by subregion (for the northern, central, and southern subregions, respective values were 13 m, 7 m, and 8.5 m). They attributed this variation to differing conditions in nearshore bathymetry and physical geography (*e.g.,* presence of coastal features such as lagoons and sheltered embayments).

To assess changes in landfast ice in the Chukchi and Beaufort regions, Mahoney *et al.* (2014) compared data from their study with late winter maximum seaward landfast ice edges mapped by Stringer (1978) for the period 1973 to 1976. They found that in the Beaufort region, the late winter maximum seaward landfast ice edges delineated for the period 1973 to 1976 were within the same range as those delineated for the period 1996 to 2008. However, in the Chukchi region, there was evidence of a significant reduction in the late winter maximum extent of landfast ice (Mahoney *et al.* 2014). In addition, trends were identified that in general indicate an earlier end (and later start) to the landfast ice season in the both regions (Mahoney *et al.* 2012, Mahoney *et al.* 2014). A similar comparison is not available for the Bering region; however, Jensen *et al.* (2020) reported a trend in earlier landfast ice breakup (and later formation) from 1996 to 2008 in two of the three Bering subregions (breakup of landfast occurred between March and May, but persistence of this ice varied with local physical geography). They also noted that the results of their analysis for the Bering region do not account for trends in recent periods of sea ice decline in this region (*e.g.,* Perovich *et al.* 2019a, Perovich *et al.* 2019b, Stabeno and Bell 2019). IK of landfast ice conditions documented for several coastal communities in the Bering Strait region indicates that landfast ice can be particularly dynamic in some locations in the Bering Sea, and those communities have noted changes in landfast ice in recent years, *e.g.,* a reduction in the winter/early spring average extent of landfast ice in Norton Bay (Oceana and Kawerak 2014, Huntington *et al.* 2017d).

As shown in the preceding discussion, the best information available indicates that relationships between landfast ice and bathymetry in the Beaufort region, Chukchi region, and Bering region differ regionally and locally. Significant inter-annual variability in the maximum extent of landfast ice was also observed, in particular in the Beaufort region (Mahoney *et al.* 2007, Mahoney *et al.* 2012, Mahoney *et al.* 2014). In addition, there is evidence of decreases in the extent of landfast ice trends in earlier breakup of landfast ice in the Chukchi and Bering regions. It is therefore impracticable to delineate a single isobath as the shoreward boundary for the specific area containing one or both of the sea ice essential features that accounts precisely for where landfast may occur during the period of whelping, nursing, and molting in a given year. Nonetheless, we concluded that defining the nearshore boundary by a depth contour at a coarse level for each region is appropriate given that landfast ice forms in areas of shallow bathymetry and such ice is not identified as essential to the conservation of the Beringia DPS. Because the available information indicates that in the Beaufort region, the 20-m isobath provides a reasonable approximation of the average stable extent of landfast ice, and landfast ice extent has apparently not changed significantly in the past several decades, we selected the 20-m isobath (relative to MLLW) as the shoreward boundary in the Beaufort region. The available information indicates that in the Chukchi and Bering regions landfast ice occupies shallower water overall, though water depths at the seaward landfast ice edge are more variable and locally specific. In addition, there is evidence of decreases in the extent of landfast ice and trends in earlier breakup of this ice in the Chukchi region, as well as of changes in landfast ice conditions in the Bering region in recent years. In determining the shoreward boundary in the Chukchi and Bering regions, we considered the above information on landfast ice in these areas in addition to examining existing information on the spring distribution of bearded seals from aerial surveys of the Bering Sea (in 2012 and 2013) and parts of the Chukchi Sea (in 2016) (NMFS Marine Mammal Laboratory, unpublished data) to inform our selection of appropriate shoreward boundaries. After considering the available information, we selected the 10-m isobath (relative to MLLW) as the shoreward boundary in the Chukchi region, and the 5-m isobath (relative to MLLW) as the shoreward boundary in the Bering region. For both of these regions, we conclude that shallower waters are likely to contain landfast ice and are therefore less likely to contain the sea ice essential features. We adjusted the shoreward boundary to form a continuous line crossing the entrance to Port Clarence Bay because available information does not indicate this area contains the sea ice essential features. For the purpose of delineating the shoreward boundary, we defined the division between the Beaufort and Chukchi regions as the line of latitude south of Wainwright at 70°36′ N, and the division between the Chukchi and Bering regions as the line of latitude south of Cape Prince of Wales (tip of the Seward Peninsula) at 65°35′ N. Although we recognize that landfast ice can occur to a varying extent within the specific area delineated for the sea ice essential features, given the dynamic nature of sea ice, we conclude that the shoreward boundary is drawn at an appropriate scale based on the best scientific data available.

The seasonally ice-covered shelf waters of the Alaskan Bering, Chukchi, and Beaufort seas support an abundance of bearded seal benthic prey resources (review of abundance and distribution of Beringia DPS prey in Cameron *et al.* 2010, also, *e.g.,* Logerwell *et al.* 2011, McCormick-Ray *et al.* 2011, Rand and Logerwell 2011, Stevenson and Lauth 2012, Blanchard *et al.* 2013, Konar and Ravelo 2013, Ravelo *et al.* 2014, Grebmeier *et al.* 2015, Norcross *et al.* 2017a, Norcross *et al.* 2017b, Sigler *et al.* 2017, Grebmeier *et al.* 2018, Lauth *et al.* 2019). Primary prey species important in the diet of bearded seals in the Beringia DPS include decapod crustaceans, such as the multitude of crangonid shrimp species known to inhabit the Bering and Chukchi seas (Cameron *et al.* 2010). Most crangonid shrimp species are broadly distributed throughout this region (*e.g., Sclerocrangon boreas* and *Argis lar*) (Butler 1980), and in the Beaufort Sea the crangonid shrimp *Sabinea septemcarinata* is widespread (Frost and Lowry 1983, Konar and Ravelo 2013, Ravelo *et al.* 2015, Norcross *et al.* 2017b). Crabs commonly consumed by bearded seals that inhabit the Bering and Chukchi seas include the Arctic lyre crab (*Hyas coarctatus)* and snow crab (*Chionoecetes opilio*) (Ravelo *et al.* 2014, Gross *et al.* 2017, Divine *et al.* 2019), which trawl surveys indicate are

also found in the western Beaufort Sea (Logerwell *et al.* 2011, Ravelo *et al.* 2015). Demersal fishes common in bearded seal diets in Alaska include sculpins, Arctic cod, saffron cod, and flatfishes. One of the most common flatfish in the eastern Bering Sea, yellowfin sole (*Limanda aspera*) (Spies *et al.* 2020b), has been documented in the diet of bearded seals in Alaska, and is also common in the Chukchi Sea (Love *et al.* 2016). In the far northern Bering Sea and the Chukchi and Beaufort seas, the fish fauna transitions from a community dominated by flatfishes to one dominated by smaller cods and sculpins (Cameron *et al.* 2010). Sculpins, which are commonplace in the Bering, Chukchi, and Beaufort seas, include Arctic staghorn sculpin (*Gymnocanthus tricuspis*) (Love *et al.* 2016, Mecklenburg *et al.* 2016), a species prevalent in the diet of bearded seals in Alaska. Arctic cod and saffron cod, which are also commonly consumed by bearded seals, make up a substantial portion of the fish biomass in the U.S. Chukchi Sea, and Arctic cod dominates the fish biomass in the U.S. Beaufort Sea (North Pacific Fishery Management Council 2009, Logerwell *et al.* 2015). The distribution of saffron cod overlaps to some extent with that of Arctic cod in the Chukchi and Beaufort seas, but this species is typically found in warmer waters and has a more coastal distribution that extends further south in the Bering Sea (Love *et al.* 2016, Mecklenburg *et al.* 2016).

In summary, the available data on the distributions of bearded seal primary prey species indicate that they occur throughout the geographical area occupied by the species. However, except in limited circumstances that do not apply here, the Secretary cannot designate as critical habitat the entire geographical area occupied by a species. We have no information that suggests any portions of the species' occupied habitat contains prey species that are of greater importance or otherwise differ from those found within the specific area defined by the sea ice essential features. The best information available indicates that the movements of bearded seals and their use of habitat for foraging are influenced by a variety of factors and the seals' spatial patterns of habitat use and locations of intensive use can vary substantially among individuals. Most importantly, the movements and habitat use of bearded seals are strongly influenced by the seasonality of ice cover and they forage throughout the year. Given this and our consideration of the best scientific data available, we concluded that the best approach to determine the appropriate boundaries for critical habitat is to base the delineation on the same boundaries identified above for the sea ice essential features. We conclude this specific area contains sufficient primary prey resources to support the conservation of the Beringia DPS. Thus, we are designating as critical habitat a single specific area that contains all three of the identified essential features.

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 area contains one or more essential physical or biological feature that may require special management considerations or protection (16 U.S.C. 1532(5)(A)(i); 50 CFR 424.12(b)(1)(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). In determining whether the essential physical or biological features ''may require'' special management considerations or protection, it is necessary to find only 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)).

We have identified four primary sources of potential threats to one or more of the habitat features identified above as essential to the conservation of the Beringia DPS of bearded seals: climate change; oil and gas exploration, development, and production; marine shipping and transportation; and commercial fisheries. As further detailed below, both sea ice essential features and the primary prey resources essential feature may require special management considerations or protection as a result of impacts (either independently or in combination) from these sources. Our evaluation does not consider an exhaustive list of threats that could have impacts on the essential features, but rather considers the primary potential threats that we are aware of at this time that support our conclusion that special management considerations or protection of each of the essential features may be required. Further, we highlight particular threats associated with each source of impacts while recognizing that certain threats are associated with more than one source (*e.g.,* marine pollution and noise).

Climate Change

The principal threat to the persistence of the Beringia DPS of bearded seals is the ongoing and anticipated decreases in the extent and timing of sea ice stemming from climate change. Climate-change-related threats to the Beringia DPS's habitat are discussed in detail in the bearded seal status review report (Cameron *et al.* 2010), as well as in our proposed and final rules to list the Beringia DPS of bearded seals as threatened. Total Arctic sea ice extent has been showing a decline through all months of the satellite record since 1979 (Meier *et al.* 2014). Although there will continue to be considerable annual variability in the rate and timing of the breakup and retreat of sea ice, trends in climate change are moving toward ice that is more susceptible to melt (Markus *et al.* 2009), and areas of earlier spring ice retreat (Stammerjohn *et al.* 2012, Frey *et al.* 2015). Notably, February and March ice extent in the Bering Sea in 2018 and 2019 were the lowest on record (Stabeno and Bell 2019), and in the spring of 2019, melt onset in the Chukchi Sea occurred 20 to 35 days earlier than the 1981 to 2010 average (Perovich *et al.* 2019b).

Activities that release carbon dioxide and other heat-trapping greenhouse gases (GHGs) into the atmosphere, most notably those that involve fossil fuel combustion, are the major contributing factor to climate change and loss of sea ice (Intergovernmental Panel on Climate Change (IPCC) 2013, U.S. Global Climate Change Research Program (USGCRP) 2017, Stroeve and Notz 2018, IPCC 2021). Such activities may adversely affect the essential features of the habitat of the Beringia DPS by diminishing sea ice suitable for whelping, nursing, and molting, and by causing changes in the distribution, abundance, and/or species composition of primary prey resources to support

bearded seals in association with changes in ocean conditions, such as warming and acidification (caused primarily by uptake of atmospheric CO_2) (as reviewed by Cameron *et al.* 2010, also, *e.g.,* Kędra *et al.* 2015, Kortsch *et al.* 2015, Renaud *et al.* 2015, Alabia *et al.* 2018, Arctic Monitoring and Assessment Programme (AMAP) 2018, Thorson *et al.* 2019, Baker *et al.* 2020, Huntington *et al.* 2020). Declines in the extent and timing of sea ice cover may also lead to increased shipping activity (discussed below) and other changes in anthropogenic activities, with the potential for increased risks to the habitat features essential to the Beringia DPS (Cameron *et al.* 2010). Given that the quality and quantity of these essential features, in particular sea ice, may be diminished by the effects of climate change, we conclude that special management considerations or protection may be necessary, either now or in the future.

Oil and Gas Activity

Oil and gas exploration, development, and production activities in the U.S. Arctic may include: seismic surveys; exploratory, delineation, and production drilling operations; construction of artificial islands, causeways, shore-based facilities, and pipelines; and vessel and aircraft operations. These activities have the potential to affect the essential features of Beringia DPS critical habitat, primarily through pollution (particularly in the event of a large oil spill), noise, and physical alteration of the species' habitat.

Large oil spills (considered in this section to be spills of relatively great size, consistent with common usage of the term) are generally considered to be the greatest threat associated with oil and gas activities in the Arctic marine environment (AMAP 2007). Experiences with spills in subarctic regions, such as in Prince William Sound, Alaska, have shown that large oil spills can have lasting ecological effects (AMAP 2007, Barron *et al.* 2020). In contrast to spills on land, large spills at sea, especially when ice is present, are difficult to contain or clean up, and may spread over hundreds or thousands of square kilometers (National Research Council 2014, Wilkinson *et al.* 2017). Responding to a sizeable spill in the Arctic environment would be particularly challenging. Reaching a spill site and responding effectively would be especially difficult, if not impossible, in winter when weather can be severe and daylight extremely limited. Oil spills under ice or in ice-covered waters are the most challenging to deal with due to, among other factors, limitations on the effectiveness of current containment and recovery technologies when sea ice is present (Wilkinson *et al.* 2017). The extreme depth and the pressure that oil was under during the 2010 blowout at the Deepwater Horizon well in the Gulf of Mexico may not exist in the shallow continental shelf waters of the Beaufort and Chukchi seas. Nevertheless, the difficulties experienced in stopping and containing the Deepwater Horizon blowout, where environmental conditions, available infrastructure, and response preparedness were comparatively good, point toward even greater challenges in containing and cleaning a large spill in a much more environmentally severe and geographically remote Arctic location.

Although planning, management, and use of best practices can help reduce risks and impacts, the history of oil and gas activities indicates that accidents cannot be eliminated (AMAP 2007). Data on large spills (*e.g.,* operational discharges, spills from pipelines, blowouts) in Arctic waters are limited because oil exploration and production there has been limited, and to date, no large spills have occurred in U.S. Arctic marine waters. The Bureau of Ocean Energy Management (BOEM) (2011) estimated the chance of one or more oil spills greater than or equal to 1,000 barrels occurring if development were to take place in the Beaufort Sea or Chukchi Sea Planning Areas as 26 percent for the Beaufort Sea over the estimated 20 years of production and development, and 40 percent for the Chukchi Sea over the estimated 25 years of production and development.

Icebreaking vessels, which may be used for in-ice seismic surveys or to manage ice near exploratory drilling ships, also have the potential to affect the sea ice essential features of bearded seal habitat through physical alteration of the sea ice (see also *Marine Shipping and Transportation* section). Other activities associated with oil and gas exploration and development that may physically alter the essential sea ice features include offshore through-ice activities such as trenching and installation of pipelines. In addition, there is evidence that noise associated with activities such as seismic surveys can result in behavioral and other effects on fishes and invertebrate species (Carroll *et al.* 2017, Slabbekoorn *et al.* 2019), although the available data on such effects are currently limited, in particular for invertebrates (Hawkins *et al.* 2015, Hawkins and Popper 2017), and the nature of potential effects specifically on the primary prey resources essential feature are unclear.

In summary, a large oil spill could render areas containing the identified essential features unsuitable for use by bearded seals of the Beringia DPS. In such an event, sea ice habitat suitable for whelping, nursing, and/or for molting could be oiled. Primary prey resources essential to support bearded seals could also become contaminated, experience mortality, or be otherwise adversely affected by spilled oil. In addition, disturbance effects (both physical disturbance and acoustic effects) could alter the quality of the essential features of bearded seal critical habitat, or render habitat unsuitable. We conclude that the essential features of the habitat of the Beringia DPS may require special management considerations or protection in the future to minimize the risks posed to these features by oil and gas exploration, development, and production.

Marine Shipping and Transportation

The reduction in Arctic sea ice that has occurred in recent years has renewed interest in using the Arctic Ocean as a potential waterway for coastal, regional, and trans-Arctic marine operations and in extension of the navigation season in surrounding seas (Brigham and Ellis 2004, Arctic Council 2009). Marine traffic along the western and northern coasts of Alaska includes tug, towing, and cargo vessels, tankers, research and government vessels, vessels associated with oil and gas exploration and development, fishing vessels, and cruise ships (Adams and Silber 2017, U.S. Committee on the Marine Transportation System 2019). Automatic Identification System data indicate that the number of unique vessels operating annually in U.S. waters north of the Bering Sea in 2015 to 2017 increased 128 percent over the number recorded in 2008 (U.S. Committee on the Marine Transportation System 2019). Climate models predict that the warming trend in the Arctic will accelerate, causing the ice to begin melting earlier in the spring and resume freezing later in the fall, resulting in an expansion of potential transit routes and a lengthening of the potential navigation season, and a continuing increase in vessel traffic (Khon *et al.* 2010, Smith and Stephenson 2013, Stephenson *et al.* 2013, Huntington *et al.* 2015a, Melia *et al.* 2016, Aksenov *et al.* 2017, Khon *et al.* 2017). For instance, analysis of four potential growth scenarios (ranging from reduced activity to accelerated growth) suggests from 2008 to 2030, the number

of unique vessels operating in U.S. waters north of 60° N (*i.e.,* northern Bering Sea and northward) may increase by 136 to 346 percent (U.S. Committee on the Marine Transportation System 2019).

The fact that nearly all vessel traffic in the Arctic, with the exception of icebreakers, purposefully avoids areas of ice, and primarily occurs during the ice-free or low-ice seasons, helps to mitigate the risks of shipping to the essential habitat features identified for bearded seals of the Beringia DPS. However, icebreakers pose greater risks to these features since they are capable of operating year-round in all but the heaviest ice conditions and are often used to escort other types of vessels (*e.g.,* tankers and bulk carriers) through ice-covered areas. Furthermore, new classes of ships are being designed that serve the dual roles of both tanker/carrier and icebreaker (Arctic Council 2009). Therefore, if icebreaking activities increase in the Arctic in the future, as expected, the likelihood of negative impacts (*e.g.,* habitat alteration and risk of oil spills) occurring in ice-covered areas where bearded seals reside will likely also increase. We are not aware of any data currently available on the effects of icebreaking on the habitat of bearded seals during the reproductive and molting periods. Although impacts of icebreaking are likely to vary between species depending on a variety of factors, Wilson *et al.* (2017) demonstrated the potential for impacts of icebreaking, which for Caspian seal (*Pusa caspica*) mothers and pups and their sea-ice-breeding habitat included displacement, breakup of whelping and nursing habitat, and vessel collisions with mothers or pups. The authors noted that while pre-existing shipping channels were used by seals as artificial leads, which expanded access to whelping habitat, seals that whelp on the edge of such leads are vulnerable to vessel collision and repeated disturbance.

In addition to the potential effects of icebreaking on the essential features, the maritime shipping industry transports various types of petroleum products, both as fuel and cargo. In particular, if increased shipping involves the tanker transport of crude oil or oil products, there would be an increased risk of spills (Arctic Climate Impact Assessment 2005, U.S. Arctic Research Commission 2012). Similar to oil and gas activities, the most significant threat posed by shipping activities is considered to be the accidental or illegal discharge of oil or other toxic substances carried by ships (Arctic Council 2009).

Vessel discharges associated with normal operations, including sewage, grey water, and oily wastes are expected to increase as a result of increasing marine shipping and transportation in Arctic waters (Arctic Council 2009, Parks *et al.* 2019), which could affect the primary prey resources essential feature. Increases in marine shipping and transportation and other vessel traffic is also introducing greater levels of underwater noise (Arctic Council 2009, Moore *et al.* 2012), with the potential for behavioral and other effects in fishes and invertebrates (Slabbekoorn *et al.* 2010, Hawkins and Popper 2017, Popper and Hawkins 2019), although there are substantial gaps in the understanding of such effects, in particular for invertebrates (Hawkins *et al.* 2015, Hawkins and Popper 2017), and the nature of potential effects specifically on the primary prey resources of the Beringia DPS are unclear.

We conclude that the essential features of the habitat of the Beringia DPS may require special management considerations or protection in the future to minimize the risks posed by potential shipping and transportation activities because: (1) Physical alteration of sea ice by icebreaking activities could reduce the quantity and/or quality of the sea ice essential features; (2) in the event of an oil spill, sea ice essential for whelping, nursing, and molting could become oiled; and (3) the quantity and/or quality of primary prey resources essential to the conservation of the Beringia DPS could be diminished as a result of spills, vessel discharges, and noise associated with shipping, transportation, and ice-breaking activities.

Commercial Fisheries

The specific area identified in this final rule as meeting the definition of critical habitat for the Beringia DPS overlaps with the Arctic Management Area and the Bering Sea and Aleutian Islands Management Area identified by the North Pacific Fishery Management Council. No commercial fishing is permitted within the Arctic Management Area due to insufficient data to support the sustainable management of a commercial fishery there. However, as additional information becomes available, commercial fishing may be allowed in this management area. For example, two bearded seal prey species—Arctic cod and saffron cod—have been identified as likely initial target species for commercial fishing in the Arctic Management Area in the future (North Pacific Fishery Management Council 2009).

In the northern portion of the Bering Sea and Aleutian Islands Management Area, commercial fisheries overlap with the southernmost portion of the critical habitat. Portions of the critical habitat also overlap with certain state commercial fisheries management areas. Commercial catches from waters in the critical habitat area primarily include: Pacific halibut (*Hippoglossus stenolepis*), several other flatfish species (from the family Pleuronectidae), Pacific cod (*Gadus macrocephalus*), several crab species, walleye pollock (*Theragra chalcogramma*), and several salmon species.

Commercial fisheries may affect primary prey resources identified as essential to the conservation of the Beringia DPS, through removal of prey biomass and potentially through modification of benthic habitat by fishing gear that contacts the seafloor. Given the potential changes in commercial fishing that may occur with the expected increase in the length of the open-water season and range expansion of some economically valuable species responding to climate change (*e.g.,* Stevenson and Lauth 2019, Thorson *et al.* 2019, Spies *et al.* 2020a), we conclude that the primary prey resources essential feature may require special management considerations or protection in the future to address potential adverse effects of commercial fishing on this feature.

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. Our regulations at 50 CFR 424.12(b)(2) require that we first evaluate areas occupied by the species, and only consider unoccupied areas to be essential where a critical habitat designation limited to geographical areas occupied would be inadequate to ensure the conservation of the species. Because bearded seals of the Beringia DPS are considered to occupy their entire historical range that falls within U.S. jurisdiction, we find that there are no unoccupied areas within U.S. jurisdiction that are essential to their conservation.

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

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).

Before publication of the proposed rule, we contacted DOD (Air Force and Navy) and requested information on any facilities or managed areas that are subject to an INRMP and are located within areas that could potentially be designated as critical habitat for the Beringia DPS. In response to our request, the Air Force provided information regarding an INRMP addressing twelve radar sites, 10 of which (7 active and 3 inactive) are located adjacent to the area that was under consideration for designation as critical habitat: Barter Island Long Range Radar Site (LRRS), Cape Lisburne LRRS, Cape Romanzof LRRS, Kotzebue LRRS, Oliktok LRRS, Point Barrow LRRS, Tin City LRRS, Bullen Point Short Range Radar Site (SRRS), Point Lay LRRS, and Point Lonely LRRS. The Air Force requested exemption of these 10 radar sites pursuant to section 4(a)(3)(B)(i) of the ESA. Based on our review of the INRMP (draft 2020 update), the area we are designating as critical habitat, all of which occurs seaward of the 5-m isobath, does not overlap with DOD lands subject to this INRMP. Therefore, we conclude that there are no properties owned, controlled, or designated for use by DOD that are subject to ESA section 4(a)(3)(B)(i) for this critical habitat designation, and thus the exemptions requested by the Air Force are not necessary because no critical habitat would be designated in those radar sites.

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

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 after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat. Regulations at 50 CFR 424.19(b) also specify that 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 described qualitatively or quantitatively. The Secretary is also required to compare impacts with and without the designation (50 CFR 424.19(b)). In other words, we are required to assess the incremental impacts attributable to the critical habitat designation relative to a baseline that reflects existing regulatory impacts in the absence of the critical habitat.

Section 4(b)(2) also describes an optional process by which the Secretary may go beyond the mandatory consideration of impacts and weigh the benefits of excluding any particular area (that is, 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, the Secretary may exclude the particular area(s) so long as the Secretary 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)). We have adopted a policy setting out non-binding guidance explaining generally how we exercise our discretion under 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).

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 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 the reasons set forth below, we are not exercising the discretion delegated to us by the Secretary to exclude any particular areas from the critical habitat designation.

The primary impacts of a critical habitat designation arise from the ESA section 7(a)(2) requirement that Federal agencies ensure that their actions are not likely to result in the destruction or adverse modification of critical habitat (*i.e.,* adverse modification standard). Determining these impacts is complicated by the fact that section 7(a)(2) contains the overlapping requirement that Federal agencies ensure that their actions are not likely to jeopardize the species' continued existence. One incremental impact of critical habitat designation is the extent to which Federal agencies change their proposed actions to ensure they are not likely to adversely modify critical habitat, beyond any changes they would make to ensure actions are not likely to jeopardize the continued existence of the species. Additional impacts of critical habitat designation include any state and/or local protection that may be triggered as a direct result of designation (we did not identify any such impacts for this designation), and other benefits that may arise, such as education of the public regarding the importance of an area for species conservation.

In determining the impacts of designation, we focused on the incremental change in Federal agency actions as a result of critical habitat designation and the adverse modification standard (see *Ariz. Cattle Growers' Ass'n* v. *Salazar,* 606 F.3d 1160, 1172–74 (9th Cir. 2010) (holding that the USFWS permissibly attributed the economic impacts of protecting the northern spotted owl as part of the baseline and was not required to factor those impacts into the economic analysis of the effects of the critical habitat designation)). We analyzed the impacts of this designation based on a comparison of conditions with and without the designation of critical habitat for the Beringia DPS. The ''without critical habitat'' scenario represents the baseline for the analysis. It includes process requirements and habitat protections already extended to bearded seals of the Beringia DPS under its ESA listing and under other Federal, state, and local regulations. The ''with critical habitat'' scenario describes the incremental impacts associated specifically with the designation of critical habitat for the Beringia DPS.

Our analysis for this final rule is described in detail in the associated Final Impact Analysis Report. This analysis assesses the incremental costs and benefits that may arise due to the critical habitat designation, with economic costs estimated over the next

10 years. We chose the 10-year timeframe because it is lengthy enough to reflect the planning horizon for reasonably predicting future human activities, yet it is short enough to allow reasonable projections of changes in use patterns in an area, as well as of exogenous factors (*e.g.,* world supply and demand for petroleum, U.S. inflation rate trends) that may be influential. This timeframe is consistent with guidance provided in Office of Management and Budget (OMB) Circular A–4 (OMB 2003, 2011). We recognize that economic costs of the designation are likely to extend beyond the 10-year timeframe of the analysis, though we have no information indicating that such costs in subsequent years would be different from those projected for the first 10-year period. However, we could not monetize or quantify such costs, as forecasting potential future Federal actions that may require section 7 consultation regarding critical habitat for the Beringia DPS becomes increasingly speculative beyond the 10-year time window of the analysis.

Below, we summarize our analysis of the impacts of designating the specific area identified in this final rule as meeting the definition of critical habitat for the Beringia DPS. Additional detail is provided in the Final Impact Analysis Report prepared for this final rule.

Benefits of Designation

We expect that the Beringia DPS will increasingly experience the ongoing loss of sea ice and changes in ocean conditions associated with climate change, and the significance of other habitat threats will likely increase as a result. As noted above, the primary benefit of a critical habitat designation—and the only regulatory consequence—stems from the ESA section 7(a)(2) requirement that all Federal agencies ensure that any actions authorized, funded, or carried out by such agencies are not likely to destroy or adversely modify the designated habitat. This benefit is in addition to the section 7(a)(2) requirement that all Federal agencies ensure that their actions are not likely to jeopardize listed species' continued existence. Another benefit of critical habitat designation is that it provides Federal agencies and the public specific notice of the areas and features essential to the conservation of the Beringia DPS, and the types of activities that may reduce the conservation value or otherwise affect the habitat. This information will consistently focus future ESA section 7 consultations on key habitat attributes. The designation of critical habitat can also inform Federal agencies regarding the habitat needs of the Beringia DPS, which may facilitate using their authorities to support the conservation of this species pursuant to ESA section 7(a)(1), including to design proposed projects in ways that avoid, minimize, and/or mitigate adverse effects to critical habitat from the outset.

In addition, the critical habitat designation may result in indirect benefits, as discussed in detail in the Final Impact Analysis Report, including education and enhanced public awareness, which may help focus and contribute to conservation efforts for bearded seals of the Beringia DPS and their habitat. For example, by identifying areas and features essential to the conservation of the Beringia DPS, complementary protections may be developed under state or local regulations or voluntary conservation plans. These other forms of benefits may be economic in nature (whether market or non-market, consumptive, non-consumptive, or passive), educational, cultural, or sociological, or they may be expressed through enhanced or sustained ecological functioning of the species' habitat, which itself yields ancillary welfare benefits (*e.g.,* improved quality of life) to the region's human population. For example, because the critical habitat designation is expected to result in enhanced conservation of the Beringia DPS over time, residents of the region who value these seals, such as subsistence users, could experience indirect benefits by enjoying subsistence activities associated with this species. As another example, the geographic area identified as meeting the definition of critical habitat for the Beringia DPS overlaps substantially with the range of the polar bear (*Ursus maritimus*) in the United States, and the bearded seal is a prey species of the polar bear, so the designation may also enhance conservation of the polar bear, and in turn provide indirect benefits (*e.g.,* existence and option values). Indirect benefits may also be associated with enhanced habitat conditions for other co-occurring species, such as the Pacific walrus (*Odobenus rosmarus divergens*), the Arctic ringed seal, and other seal species.

It is not presently feasible to monetize, or even quantify, each component part of the benefits accruing from the designation of critical habitat for the Beringia DPS. Therefore, we augmented the quantitative measurements that are summarized here and discussed in detail in the Final Impact Analysis Report with qualitative and descriptive assessments, as provided for under 50 CFR 424.19(b) and in guidance set out in OMB Circular A–4. Although we cannot monetize or quantify all of the incremental benefits of the critical habitat designation, we conclude that they are not inconsequential.

Economic Impacts

Direct economic costs of the critical habitat designation accrue primarily through implementation of section 7(a)(2) of the ESA in consultations with Federal agencies (''section 7 consultations'') to ensure that their proposed actions are not likely to destroy or adversely modify critical habitat. Those economic impacts may include both administrative costs and costs associated with project modifications. Based on the best scientific and commercial data available and our assessment of the record of section 7 consultations from 2013 to 2019 on activities that may have affected the essential features (relatively few relevant consultations were identified for the 3 years prior to when the Beringia DPS was listed under the ESA), as well as available information on planned activities, we have not identified any likely incremental economic impacts associated with project modifications that would be required solely to avoid impacts to Beringia DPS critical habitat. The critical habitat designation is not likely to result in more requested project modifications because our section 7 consultations on potential effects to bearded seals and our incidental take authorizations for Arctic activities under section 101(a) of the Marine Mammal Protection Act (MMPA) both typically address habitat-associated effects to the seals even in the absence of a critical habitat designation. This is not to say such project modifications could not occur in situations we are unable to predict at this time, but based on the best information available for the 10-year period of the analysis, it is likely that any project modifications necessary to avoid impacts to critical habitat for the Beringia DPS would also be necessary to avoid impacts to the species in section 7 consultations that would occur irrespective of this designation. As a result, the direct incremental costs of this critical habitat designation are expected to be limited to the additional administrative costs of considering Beringia DPS critical habitat in future section 7 consultations.

To identify the types of Federal activities that may affect critical habitat for the Beringia DPS, and therefore would be subject to the ESA section 7 adverse modification standard, we

examined the record of section 7 consultations from 2013 to 2019. These activities include oil and gas related activities, dredge mining, navigation dredging, in-water construction, commercial fishing, oil spill response, and certain military activities. We projected the occurrence of these activities over the timeframe of the analysis (the next 10 years) using the best available information on planned activities and the frequency of recent consultations for particular activity types. Notably, all of the projected future Federal actions that may trigger an ESA section 7 consultation because of their potential to affect one or more of the essential habitat features also have the potential to affect bearded seals of the Beringia DPS. In other words, none of the activities we identified would trigger a section 7 consultation solely on the basis of the critical habitat designation. We recognize there is inherent uncertainty involved in predicting future Federal actions that may affect the essential features of critical habitat for the Beringia DPS; however, we did not receive any relevant new information that would change our projections in response to our specific request for comments and information regarding the types of activities that are likely to be subject to section 7 consultation as a result of the designation.

We expect that the majority of future ESA section 7 consultations analyzing potential effects on the essential habitat features will involve NMFS and BOEM authorizations and permitting of oil and gas related activities. In assessing costs associated with these consultations, we took a conservative approach by estimating that future section 7 consultations addressing these activities would be more complex than for other activities, and would therefore incur higher third party (*i.e.,* applicant/permittee) incremental administrative costs per consultation to consider effects to Beringia DPS bearded seal critical habitat (see Final Impact Analysis Report). These higher third party costs may not be realized in all cases because the administrative effort required for a specific consultation depends on factors such as the location, timing, nature, and scope of the potential effects of the proposed action on the essential features. There is also considerable uncertainty regarding the timing and extent of future oil and gas exploration and development in Alaska's Outer Continental Shelf (OCS) waters, as indicated by Shell's 2015 withdrawal from exploratory drilling in the Chukchi Sea, BOEM's 2017–2022 OCS Oil and Gas Leasing Program, and the reinstatement of the 2016 withdrawal of the Chukchi Sea and most of the Beaufort Sea from consideration for oil and gas leasing in January 2021 (Executive Order (E.O.) 13990). Although NMFS completed formal consultations for oil and gas exploration activities in the Chukchi Sea in all but 2 years between 2006 and 2015, no such activities or related consultations with NMFS have occurred since that time.

As detailed in the Final Impact Analysis Report, the total incremental costs associated with this critical habitat designation over the next 10 years, in discounted present value terms, are estimated to be $563,000 at 7 percent discount rate and $658,000 at a 3 percent discount rate, for an annualized cost of $74,900 at both a 7 percent and a 3 percent discount rate. About 81 percent of the incremental costs attributed to the critical habitat designation are expected to accrue from ESA section 7 consultations associated with oil and gas activities in the Chukchi and Beaufort seas and adjacent onshore areas.

We have concluded that the potential economic impacts associated with the critical habitat designation are modest both in absolute terms and relative to the level of economic activity expected to occur in the affected area, which is primarily associated with oil and gas activities that may occur in the Beaufort and Chukchi seas. As a result, and in light of the benefits of critical habitat designation discussed above and in the Final Impact Analysis Report, we are not exercising our discretion to further consider and weigh the benefits of excluding any particular area based on economic impacts against the benefits of designation.

National Security Impacts

Section 4(b)(2) of the ESA also requires consideration of national security impacts. As noted in the Application of ESA Section 4(a)(3)(B)(i) section above, before publication of this proposed rule, we contacted the DOD regarding any potential military operations impacts of designating critical habitat for the Beringia DPS. In a letter dated June 3, 2013, the DOD Regional Environmental Coordinator indicated that no impacts on national security were foreseen from such a designation. More recently, by letter dated March 17, 2020, the Navy submitted a request for exclusion of a particular area north of the Beaufort Sea shelf from the designation of critical habitat based on national security impacts. This area does not overlap with the specific area identified as meeting the definition of critical habitat for the Beringia DPS. In this letter, the Navy also provided information regarding its training and testing activities that currently occur or are planned to occur in U.S. waters inhabited by bearded seals. The Navy commented that based on the current and expected training and testing activities occurring in the Arctic region, it has determined that training and testing activities do not pose any substantial threat to the essential features of the habitat of the Beringia DPS.

In addition, by letter dated April 30, 2020, the Air Force provided information concerning its activities at radar sites located adjacent to the area under consideration for designation as critical habitat (relevant sites identified above in the Application of ESA Section 4(a)(3)(B)(i) section). The Air Force requested that we consider excluding critical habitat near these sites under section 4(b)(2) of the ESA due to impacts on national security. Although we do not exempt the radar sites pursuant to section 4(a)(3)(B)(i) of the ESA, as discussed above, here we consider whether to exclude critical habitat located adjacent to these sites under section 4(b)(2) based on national security impacts.

The Air Force noted that annual fuel and cargo resupply activities occur at these radar sites primarily in the summer, and installation beaches are used for offload. The Air Force indicated that coastal operations at these installations are limited, and when barge operations occur, protective measures are implemented per the Polar Bear and Pacific Walrus Avoidance Plan (preliminary final 2020) associated with the INRMP in place for these sites. The Air Force discussed that it also conducts sampling and monitoring at these sites as part of the DOD's Installation Restoration Program, and conducts larger scale contaminant or debris removal in some years that can require active disturbance of the shoreline. Coastal barge operations are a feature of both monitoring and removal actions.

Federal agencies have an existing obligation to consult with NMFS under section 7(a)(2) of the ESA to ensure the activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the Beringia DPS of bearded seals, regardless of whether or where critical habitat is designated for the species. The specific area identified as meeting the definition of critical for the Beringia DPS in this final rule includes marine habitat extending seaward from particular isobaths, rather than from the line of MLLW as we had proposed. Thus, waters adjacent to the

radar sites identified by the Air Force overlap to lesser extent with this specific area. The activities described in the Air Force's exclusion request are localized and small in scale, and it is unlikely that modifications to these activities would be needed to address impacts to critical habitat beyond any modifications that may be necessary to address impacts to Beringia DPS bearded seals. We therefore anticipate that the time and costs associated with consideration of the effects of future Air Force actions on critical habitat of the Beringia DPS under section 7(a)(2) of the ESA would be limited, if any, and the consequences for the Air Force's activities would be negligible even if we do not exclude the requested areas from critical habitat designation.

As a result, and in light of the benefits of critical habitat designation discussed above and in the Final Impact Analysis Report, we have concluded that the benefits of exclusion do not outweigh the benefits of designation and are therefore not exercising our discretionary authority to exclude these particular areas pursuant to section 4(b)(2) of the ESA based on national security impacts.

Other Relevant Impacts

Finally, under ESA section 4(b)(2) we consider any other relevant impacts of critical habitat designation. For example, we may consider potential adverse effects on existing management or conservation plans that benefit listed species, and we may consider potential adverse effects on tribal lands or trust resources. In preparing this critical habitat designation, we have not identified any such management or conservation plans, tribal lands or resources, or anything else that would be adversely affected by the critical habitat designation. Some Alaska Native organizations and tribes have expressed concern that the critical habitat designation might restrict subsistence hunting of bearded seals or other marine mammals, such that important hunting areas should be considered for exclusion, but no restrictions on subsistence hunting are associated with this designation. Accordingly, we are not exercising our discretion to conduct an exclusion analysis pursuant to section 4(b)(2) of the ESA based on other relevant impacts.

Final Critical Habitat Designation

We are designating as critical habitat a specific area of marine habitat in Alaska and offshore Federal waters of the Bering, Chukchi, and Beaufort seas, within the geographical area presently occupied by the Beringia DPS of bearded seals. This critical habitat area contains physical or biological features essential to the conservation of the Beringia DPS of bearded seals that may require special management considerations or protection. We are not excluding any areas based on economic impacts, impacts to national security, or other relevant impacts of this designation. We have not identified any unoccupied areas that are essential to the conservation of the Beringia DPS of bearded seals, and thus we are not designating any such areas as critical habitat. In accordance with our regulations regarding critical habitat designation (50 CFR 424.12(c)), the map we include in the regulation, clarified by the accompanying regulatory text, constitutes the official boundaries of the critical habitat designation.

Effects of Critical Habitat Designation

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 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 agency action that may affect listed species or critical habitat. During interagency consultation, we evaluate the agency action to determine whether the action is likely to adversely affect listed species or critical habitat. Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species (50 CFR 402.02). The potential effects of a proposed action may depend on, among other factors, the specific timing and location of the action relative to the seasonal presence of essential features or seasonal use of critical habitat by listed species for essential life history functions. Although the requirement to consult on an action that may affect critical habitat applies regardless of the season, NMFS addresses spatial-temporal considerations when evaluating the potential impacts of a proposed action during the ESA section 7 consultation process. For example, if an action with short-term effects is proposed during a time of year that sea ice is not present, we may advise that consequences to critical habitat are unlikely. If we conclude in a biological opinion pursuant to section 7(a)(2) of the ESA that the agency action would likely result in the destruction or adverse modification of critical habitat, we would recommend one or more reasonable and prudent alternatives to the action that avoid that result.

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. NMFS 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 reasons): (1) Critical habitat is subsequently designated; or (2) new information or changes to the action may result in effects to critical habitat not previously considered. Consequently, some Federal agencies may request reinitiation of consultation or conference with us on actions for which consultation has been completed if those actions may affect designated critical habitat for the Beringia DPS. 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 some other Federal action, including funding (*e.g.,* Federal Highway Administration or Federal Emergency Management Agency funding). Consultation under section 7 of the ESA would not be required for Federal actions that do not affect listed species or designated 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 by Critical Habitat Designation

Section 4(b)(8) of the ESA requires, to the maximum extent practicable, in any regulation to designate critical habitat, an evaluation and brief description of those activities that may adversely modify such habitat or that may be affected by such designation. A variety of activities may affect critical habitat

designated for the Beringia DPS of bearded seals and, if carried out, funded, or authorized by a Federal agency, may be subject to ESA section 7 consultation. Such activities include: In-water and coastal construction; activities that generate water pollution; dredging; commercial fishing; oil and gas exploration, development, and production; oil spill response; and certain military readiness activities. Section 7 consultations must be based on the best scientific and commercial information available, and outcomes are case-specific. Inclusion (or exclusion) from this list, therefore, does not predetermine the occurrence or outcome of any section 7 consultation. However, as explained above, based on our review of prior consultations in the area, we have not identified a circumstance in which project modifications would be necessary solely to avoid impacts to critical habitat for the Beringia DPS, as it is likely any such modifications would also be necessary to avoid impacts to the species.

Private or non-Federal entities may also be affected by the critical habitat designation if a Federal permit is required, Federal funding is received, or the entity is involved in or receives benefits from a Federal project. These activities would need to be evaluated with respect to their potential to destroy or adversely modify Beringia DPS critical habitat. For ongoing activities, this designation 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 require project modifications because habitat-related effects on Beringia DPS bearded seals would likely 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 final rule can be found on the NMFS website at *www.fisheries.noaa.gov/species/bearded-seal#conservation-management,* the Federal eRulemaking Portal at *www.regulations.gov/docket/NOAA-NMFS-2020-0029,* and is available upon request from the NMFS office in Juneau, Alaska (see **FOR FURTHER INFORMATION CONTACT**).

Summary of Comments and Responses

We solicited comments on the proposed rule to designate critical habitat for the Beringia DPS and the associated Draft Impact Analysis Report during a 90-day comment period and held three public hearings, as described above. We also contacted Federal, State, Tribal, and local agencies, and other interested parties by mail and invited them to comment on the proposed rule, and we issued news releases and published notices in local newspapers summarizing the proposed rule and inviting public comments. We received 31 unique written comment submissions and testimony from seven people during the public hearings.

In addition, we solicited peer review from four reviewers of our evaluation, interpretation, and use of available data regarding what areas meet the definition of critical habitat in the proposed rule. The peer reviewers generally agreed that we relied on the best available data regarding the habitat requirements of the Beringia DPS of bearded seals and generally concurred with our application of this information in determining specific areas that meet the definition of critical habitat, except for some particular aspects that we address below in our responses to peer reviewer comments. We also solicited peer review from three reviewers of the information we considered in the Draft Impact Analysis Report for the proposed designation. The peer reviewers found the information considered in the Draft Impact Analysis Report to be thorough and analyzed using appropriate methods.

Most of the peer reviewers provided additional information, clarifications, and suggestions to further inform and improve the analyses. Some peer reviewers provided comments of an editorial nature that noted minor errors in the proposed rule or Draft Impact Analysis Report and offered non-substantive but clarifying changes in wording. We have addressed these editorial comments in the final rule and the Final Impact Analysis Report, as appropriate. Because these editorial comments did not result in substantive changes to the final rule, we have not detailed them here. The peer reviewer comments are available online (see *Information Quality Act and Peer Review* section). A few peer reviewers volunteered comments related to aspects of the proposed designation that were outside the scope of the requested reviews. We address those comments below in our responses to public comments.

We have reviewed and fully considered all comments and significant new information received from peer reviewers and the public. Summaries of the substantive comments received and our responses are provided below. As some peer reviewer and public comments were similar, we have, in certain cases, combined the comments and responded to both the peer reviewer and public comments in the *Peer Review Comments* section below. General comments that did not provide information pertinent to the proposed rule have been noted but are not addressed further here. We have not responded to comments or concerns outside the scope of this rulemaking, such as comments disagreeing with NMFS's prior decision to list the Beringia DPS as threatened under the ESA.

Peer Review Comments

Evaluation of Critical Habitat

Comment 1: One peer reviewer commented that the bearded seal lifespan we identified is low relative to sample collections from the subsistence harvested bearded seals in Alaska between 2000 and 2019, which indicate that the life span and reproductively active age are likely longer, and the reviewer summarized other related information (Quakenbush 2020a; ADF&G, unpublished data).

Response: We have updated the Description and Natural History section of this final rule to reflect the peer reviewer's comment regarding bearded seal lifespan and reproductively active age.

Comment 2: In reference to the statement in the proposed rule that adult bearded seals have rarely been seen hauled out on land in Alaska, one peer reviewer commented this may no longer be the case. The peer reviewer stated that in September 2019, two adult bearded seals were captured for tagging while they were hauled out on land near Utqiaġvik, Alaska (ADF&G, unpublished data). Additionally, the peer reviewer noted that a recent study by Olnes *et al.* (2020) reported that during summer when sea ice was minimal, about half of the juvenile bearded seals tagged during the study hauled out on land in Kotzebue Sound and Norton Sound, while the others remained near and continued to haul out on sea ice; and a couple individuals used both strategies in different years.

Response: We appreciate the information provided by the peer reviewer. We have considered this information and have incorporated the additional reference and information

into the Description and Natural History section of this final rule. In addition, we have clarified in the preamble that although adult bearded seals have rarely been seen hauled out on land, two adults were captured for tagging while hauled out on land near Utqiaġvik.

Comment 3: In reference to the description in the proposed rule of sea ice used by bearded seals, one peer reviewer noted that a recently published study by Olnes *et al.* (2021) found that juvenile bearded seals selected intermediate ice concentrations, but in the later years of the study the selected ice concentrations occurred farther from the ice edge than during the earlier study years. Another peer reviewer pointed out that Olnes *et al.* (2021) suggested juvenile bearded seals ''are adjusting'' to changes in ice conditions, and stated that we should consider the significance of those behavioral adjustments in terms of expected impacts on lifetime reproductive success.

Response: We appreciate the information provided by the peer reviewer. We have considered and incorporated information from the recent publication by Olnes *et al.* (2021) into the preamble of this final rule where applicable and relevant. Although not directly relevant to determining critical habitat for this species, regarding the comment about implications of the adjustments to changing sea ice conditions reported by that study, the authors concluded that it is not clear at this time how the observed changes in juvenile bearded seal selection of sea ice habitat affect seal health or relate to adult bearded seal behavior.

Comment 4: We stated in the proposed rule that observations of some bearded seals remaining at sea for prolonged periods provides some evidence that bearded seals might not require sea ice for hauling out other than during reproduction and molting. One peer reviewer commented that it is a feature of habitat loss that species occupy suboptimal habitat, and thus these observations might instead reflect seals forced by habitat loss to remain at sea.

Response: We have clarified in the preamble to this final rule that there is some evidence that, other than during the critical life history periods related to reproduction and molting, bearded seals can remain at sea for extended periods without requiring the presence of sea ice for hauling out.

Comment 5: One peer reviewer stated that a recent study by Olnes *et al.* (2020) showed that north-south movements of tagged bearded seals (largely juveniles), relative to sea ice advance, differed by where seals were tagged, and some seals did not track sea ice advance at all, including one juvenile tagged in Kotzebue Sound that remained there during winter. The peer reviewer also noted that one juvenile female and one adult male bearded seal tagged in the Beaufort Sea overwintered in the vicinity of Barrow Canyon in two consecutive winters (Quakenbush *et al.* 2019, Quakenbush 2020b; ADF&G, unpublished data).

Response: We appreciate the information provided by the peer reviewer. We have considered this information and have incorporated it into the Description and Natural History section of this final rule.

Comment 6: One peer reviewer stated that a recently published paper corroborates that the bearded seal molt is protracted compared to ringed and spotted seals and documents that this behavior requires less energy than the shorter molting period of ringed and spotted seals (Thometz *et al.* 2021). The peer reviewer suggested that given this new information, along with greater evidence of bearded seals hauling out on land (Quakenbush *et al.* 2019, Olnes *et al.* 2020; ADF&G, 2020, unpublished data), sea ice may not be as critical to bearded seals for molting as previously thought.

Response: We appreciate the information provided by the peer reviewer. We have considered this information and have updated the Description and Natural History section of this final rule to include a brief summary of the findings of Thometz *et al.* (2021). We note that the reviewer's assertion that the protracted molt in bearded seals ''requires less energy'' than in spotted and ringed seals was not a finding of Thometz *et al.* (2021). While the bearded seal in that study showed only a slight elevation in metabolic rate during molt, its long molting period still implies that a large amount of energy is required overall. We also note that the authors observed the haul-out time of the bearded seal in their study to increase markedly during molting, which they suggested indicates benefits of increased skin temperatures for molting, even though there were minimal changes in daily energetic cost. Although we recognize that primarily juvenile bearded seals have been observed hauling out on land, typically during the open-water season following the peak period of their annual molt, this does not imply that bearded seals necessarily have potential to shift to use of haul-out sites on shore during molting, which would require bearded seals to adapt to novel conditions. Increased use of shorelines by bearded seals for molting may distance them from preferred foraging locations and expose them to greater predation risk (Thometz *et al.* 2021). Further, as compared to shorelines, sea ice provides a far more extensive substrate for bearded seals to haul out on during the molt, as well as isolation from terrestrial predators and disturbances (*e.g.,* from anthropogenic activities or presence of terrestrial animals). For example, Quakenbush *et al.* (2019) reported that haul-out duration for tagged bearded seals on land was lower than haul-outs on ice (about half the duration), which they suggested was likely because the incidence of disturbance was greater on land. We continue to conclude, based on the best scientific data available, that sea ice habitat suitable as a platform for molting is essential to the conservation of the Beringia DPS.

Comment 7: Two peer reviewers questioned the statement in the proposed rule that sea ice provides bearded seals some protection from predators. Both of the reviewers pointed out that sea ice actually makes the seals more accessible to polar bears, which are their primary predator. One of the peer reviewers added that, although sea ice provides bearded seals some protection from predation by killer whales, the magnitude of such predation is unknown.

Response: We agree that sea ice can facilitate polar bear access to bearded seals but under conditions of drastically reduced or absence of summer sea ice, bearded seals and polar bears would likely be forced into greater proximity on shore, where predation on the seals could well increase. Bearded seals, when they have a choice, select ice floes for hauling out that afford good visibility and quick access to the water. As summer ice in the Arctic continues to diminish, the remaining, reduced ice area is likely to be composed of greater proportions of multi-year ice with higher surface relief, favoring polar bears' hunting success. Sea ice also provides bearded seals isolation from other terrestrial predators, as well as some protection from predation by killer whales, although as noted by a peer reviewer, the magnitude of such predation is unknown (Cameron *et al.* 2010). Thus, our statement that sea ice provides some protection from predators is supported by the best available scientific data. Nevertheless, we clarified the statement in the preamble to this final rule, consistent with our explanation here.

Comment 8: One peer reviewer commented that although increased disease transmission is often cited as a

potential threat to ice-associated pinnipeds, there are many examples of pinnipeds using large terrestrial haulouts without serious disease transmission issues (*e.g.,* walrus, Steller sea lion, and northern fur seal). The peer reviewer suggested that because bearded seals are less gregarious and would likely haul out on land in low densities during molting, disease transmission would be even less likely.

Response: We re-examined this language in the preamble to the proposed rule and determined that we sufficiently qualified the statement concerning disease transmission, as we stated that there is the ''potential'' for disease transmission if molting occurs on land. Because coastal shorelines provide a far less extensive haulout substrate for bearded seals than sea ice, there may be greater tendency for intraspecific contact in use of haul-out sites on shore, and bearded seals hauled out on land could also be at risk of exposure to terrestrial pathogens that they would not be exposed to on sea ice.

Comment 9: One peer reviewer asked whether the edges of landfast ice are used by bearded seals of the Beringia DPS for whelping and molting, as documented in Svalbard (Kovacs *et al.* 1996), and stated that if so, the definitions of the sea ice essential features should be expanded to include this habitat.

Response: Although some bearded seals may use the edges of landfast ice for whelping and molting, we are not aware of available information indicating that this is common enough within the range of the Beringia DPS to be considered essential for the persistence of the DPS. Therefore, we did not expand the definitions of the sea ice essential features to include such ice.

Comment 10: One peer reviewer suggested that we consider expanding the brief discussion of differences in the diets of bearded seals among age classes (*e.g.,* Young *et al.* 2010, Crawford *et al.* 2015), particularly as it is applicable for defining foraging habitat as part of the critical habitat designation. The peer reviewer noted that diet may also be influenced by interannual variations in sea ice extent (*e.g.,* Hindell *et al.* 2012).

Response: We have updated the discussion of bearded seal diets in the preamble to this final rule to reflect the peer reviewer's suggestions. Rather than delineating particular areas bearded seals use for foraging, in accordance with ESA section 3(5)(A), we delineated a specific area within the geographical area occupied by the species where the primary prey resources essential feature occurs.

Comment 11: One peer reviewer commented they agreed that, as stated in the proposed rule, the diversity of prey consumed by bearded seals makes identification of particular essential prey species impracticable. However, the peer reviewer stated that they disagreed with our characterization of bearded seals as ''benthic specialists,'' arguing that because they feed on a wide variety of benthic prey taxa, bearded seals would be more accurately described as ''benthic generalists.'' The peer reviewer added that given the wide array of fish and invertebrate prey eaten by bearded seals, virtually the entire shallow Bering and Chukchi shelf provides feeding habitat. The peer reviewer further stated that our description of the diet of bearded seals in the ''Description and Natural History'' section of the proposed rule is too general and implies that there are few common prey items, giving a very different impression about their diets than has been documented for bearded seals harvested in Alaska. The peer reviewer suggested that it would be more useful to provide examples of the species of schooling pelagic fishes, demersal fishes, and invertebrates that are consumed by bearded seals in Alaska, and included a summary of related information regarding prey species consumed by bearded seals in the Alaskan Bering and Chukchi seas (Quakenbush *et al.* 2011, Crawford *et al.* 2015, Quakenbush 2020a).

Response: We appreciate the comments and information provided by the peer reviewer. We have revised the preamble text to state that bearded seals are benthic generalists. We have also updated our discussion of the primary prey resources essential feature in this final rule preamble to incorporate bearded seal diet information from the recent analysis by Quakenbush (2020a) (see Physical and Biological Features Essential to the Conservation of the Species section), which we considered as part of the best scientific data available to inform our analysis. We have provided a level of detail that is appropriate for this final rule and have cited the relevant sources of information regarding bearded seal diets.

Comment 12: One peer reviewer commented that the restriction of critical habitat to the area presently occupied by the species seems to be required by the ESA, but challenges conservation of a species whose habitat is rapidly diminishing, noting that for the Beringia DPS we cited recent reductions in sea ice in Kuskokwim Bay as a rationale for not including this area in the proposed designation.

Response: As we stated in the proposed rule, the ESA defines critical habitat as (1) 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; and (2) 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. As we explained in the preamble to our 2016 final rule with USFWS that amended the regulations for designating critical habitat, the ESA allows for flexibility to address the effects of climate change in a critical habitat designation in cases where the best scientific data available indicate that a species may be shifting habitats or habitat use (81 FR 7414, 7426; February 11, 2016). In such cases, it is permissible to include specific areas accommodating these changes in a designation, provided that we can explain why the areas meet the definition of critical habitat. In other words, we may find that an unoccupied area is currently essential for the conservation of the species even though the functions the habitat is expected to provide may not be used by the species until a point in the foreseeable future. However, we have not identified any such areas for bearded seals of the Beringia DPS, as they occupy their entire historical range, which in the Bering Sea extends south over the continental shelf and includes Kuskokwim Bay. Although our decision regarding the southern boundary of critical habitat relative to Kuskokwim Bay takes into consideration reductions in sea ice in this area, the designation includes the majority of reproductive and molting habitat in the Bering Sea.

Comment 13: To further describe acoustic conditions that allow for effective communication by bearded seals for breeding purposes, one peer reviewer asked whether it would be possible to analyze ''background'' acoustic noise in recordings collected by passive acoustic moorings where bearded seal trills were detected during the breeding season and where whelping has been observed, as these conditions would arguably be where effective communication is possible. The peer reviewer also asked whether it would be possible to analyze how reductions in sea ice extent and concentration have changed background acoustic noise during the breeding

period using the time series of passive acoustic data available from several mooring locations in the region, as this might provide insight into acoustic conditions and how they are changing. The peer reviewer commented that the reduced presence of sea ice will increase abiotic noises from wind and precipitation, lead to changes in the acoustic environment, and could conceivably lead to increases in anthropogenic noises such as from boats. The peer reviewer added that it should also be possible to quantify how much of the noise from such sources overlaps with the frequency ranges used by male bearded seals during the breeding period.

Response: We appreciate the suggestions of the peer reviewer. While we agree that analyses such as those suggested by the peer reviewer may enhance understanding of the acoustic ecology of bearded seals during the breeding season, the ESA requires us to designate critical habitat within a specific timeframe based on the best scientific data available. In light of this mandatory timeframe, conducting such additional analyses is not feasible. We will continue to support further research that generates knowledge needed to conserve this species, including with respect to understanding of bearded seal reproductive ecology. As discussed in more detail below, following consideration of public comments received, we have not retained the proposed essential habitat feature related to acoustic conditions for bearded seals in this final rule (*e.g.,* see our response to Comment 32).

Comment 14: Three peer reviewers and several other commenters, including the Marine Mammal Commission, identified a few recent scientific publications related to bearded seal acoustic communication and responses to noise that might provide additional relevant data. One peer reviewer also suggested that we include information on detection of bearded seal vocalizations outside of the breeding period, as bearded seal vocalizations may be used for communication during other parts of the year.

Response: We appreciate the additional information provided by the peer reviewers and other commenters. While we did not expand our discussion of bearded seal vocalizations in this final rule, we thoroughly considered this information in our re-evaluation of the proposed acoustic essential feature (see Summary of Changes From the Proposed Designation section).

Comment 15: Two peer reviewers questioned why we excluded tidally-influenced channels of tributary waters from proposed critical habitat, given that the information available indicates that some, primarily juvenile, bearded seals use this habitat. One of the peer reviewers noted that indigenous hunters have reported that bearded seals feed in estuaries in numerous locations along the Alaska coast, while the other noted that some of the juvenile bearded seals tagged in Alaska were captured in rivers. Another peer reviewer stated that although juvenile bearded seals are commonly seen up rivers in some areas, they are solitary and not present in large numbers, and noted that it is not likely all juveniles practice this behavior. Similarly, several other commenters, including Kawerak and the Native Village of Kotzebue, recommended that critical habitat include nearshore areas, river mouths, and extensive inshore estuaries/lagoon systems found throughout the Seward Peninsula and Norton Sound, as well as in Kotzebue Sound. Commenters stated that well-documented IK indicates that bearded seals, in particular juveniles, use these areas during the ice-free period, and described the capture of young bearded seals in rivers for tagging telemetry studies. Kawerak and another commenter stated that young seals use estuaries as sheltered calmer waters during adverse weather conditions, to escape large-bodied predators like killer whales, and to hone their fishing skills in these shallow waters during the ice-free months. Kawerak also noted that these estuaries have aquatic plants that young seals use as cover when stalking the variety of small-bodied fishes and invertebrates that reside in or travel through these waters.

Response: We recognize that bearded seal use of river mouths and inshore lagoons during the open-water period has been reported and documented, and we reviewed and thoroughly considered the references that were cited in these comments, along with information presented in other available reports and peer-reviewed publications (*e.g.,* Oceana and Kawerak 2014, Northwest Arctic Borough 2016, Huntington *et al.* 2017d) regarding this aspect of bearded seal habitat use. The ESA requires that we identify the physical or biological features that are essential to support the life-history needs of a particular species based on the best scientific data available. With regard to river mouths and inshore estuaries/lagoons, the best information available indicates that some juvenile bearded seals occur in these areas during the open-water period. However, we lack sufficient data to develop a description of the specific physical or biological features of this habitat that support bearded seal life history needs, and to assess how those features provide for the life history requirements of the species such that they are essential to the conservation of the Beringia DPS. Given this and our consideration of the best information available, in the Bering and Chukchi seas, including the areas referenced by the commenters, we are not designating any river mouths or shallow inshore estuaries/lagoon systems as critical habitat for the Beringia DPS. In the event that additional information becomes available indicating whether and what essential features occur in these or similar habitats, we can consider revising critical habitat accordingly. Although the critical habitat designation for bearded seals does not include those requested areas, ESA section 7 consultation requirements apply to any action that may affect bearded seals, including in river mouths or those shallow inshore estuaries/lagoon systems not identified as critical habitat. With regard to nearshore waters relative to the shoreward boundary of the designation, see our response below to Comment 39.

Comment 16: With regard to the proposed shoreward boundary of critical habitat, one peer reviewer requested that we provide a definition for the term mean lower low water (MLLW). The peer reviewer agreed that it is important to include habitat up to this shoreward boundary, as it is possible that the use of land by bearded seals may expand in the future, and noted that bearded seals have been observed hauling out on land in Svalbard during summer in areas with no drifting sea ice (Merkel *et al.* 2013).

Response: MLLW, a tidal datum defined and maintained by NOAA, is calculated as the average of the lower low water height of each tidal day observed over a given period (*e.g.,* the 19-year National Tidal Datum Epoch). Thus, the line of MLLW is the intersection of the water surface with the shore (land) at the elevation of MLLW. The ESA defines critical habitat within the geographical area occupied by the species in terms of essential physical and biological features, and the associated regulations require us to focus on those features in the designation process. Although we proposed to identify the shoreward boundary of the designation for the Beringia DPS as the line of MLLW, we have revised this boundary after considering public comments and re-evaluating the best scientific data available, as described below in the

section Summary of Changes From the Proposed Designation.

Comment 17: One peer reviewer suggested that we consider extending the proposed southern boundary of critical habitat to the continental shelf break in the Bering Sea given that some tagged juvenile bearded seals have used this habitat for foraging. However, the peer reviewer acknowledged that because a limited number of bearded seals have been tagged, it is hard to accurately know the proportion of juvenile bearded seals that use the southern continental shelf break as a foraging area. A related comment questioned whether our consideration of Bering Sea ice edge use by juvenile bearded seals relative to the proposed southern boundary of critical habitat suggested this habitat was an essential feature.

Response: As we discussed in the proposed rule, although some tagged juvenile bearded seals selected habitat near the ice edge (which, depending on ice conditions, may extend to near the shelf break) and the 100-m isobath in the Bering Sea, other tagged juveniles did not show this use pattern. Further, as noted in this final rule, a recent study by Olnes *et al.* (2021) reported that in the later years of their study, juvenile bearded seals selected ice concentrations that occurred well north of the southern ice edge in the Bering Sea, in contrast to earlier study years. The authors suggested that the contrasting pattern of habitat selection in the later period reflected changes in ice conditions that coincided with this period. While it seems likely that prey resources would also be an important factor, data are not available on this aspect of the habitat use patterns documented for these seals.

In response to public comments and concerns regarding our delineation of the boundaries of critical habitat with respect to bearded seal primary prey resources, as well as peer reviewer and public comments related to bearded seal use of habitat for foraging, we re-evaluated the best scientific data available and the approach we used to identify the specific area(s) that contain this essential feature. In the proposed rule, we identified one specific area in the Bering, Chukchi, and Beaufort seas containing the essential features. Although the same seaward boundaries were identified for this specific area with respect to both the primary prey resources essential feature and the sea ice essential features, the shoreward boundary was identified as the line of MLLW based on occurrence of the primary prey resources essential feature. However, in reviewing the comments and considering the available data, we recognized that available information on the distributions of bearded seal primary prey species indicates that these prey resources are widely distributed across the geographic area occupied by these seals, and as such, we concluded it was not possible to delineate the boundaries of critical habitat based on the description of this feature alone. We also have no information that suggests this portion of the species' occupied habitat contains primary prey resources that differ from those found within the specific area defined by the sea ice essential features. Given that the movements and habitat use of bearded seals are strongly influenced by the seasonality of sea ice, we determined that the best approach to identify the appropriate boundaries for the specific area(s) containing all of the essential features is to base the delineation on the same boundaries identified for the sea ice essential features (*i.e.,* sea ice essential for whelping, nursing, and molting). As a result of this change in our approach, we have revised the shoreward boundary of the designation (see Summary of Changes From the Proposed Designation section); the boundaries are otherwise unchanged from the proposed rule. We note that the southern extent of critical habitat designated for the Beringia DPS in the Bering Sea includes some areas near the 100-m isobath, and some portion of habitat near the ice edge may be located within the designated area during late winter and spring, depending upon ice conditions in a given year.

Comment 18: One peer reviewer suggested that it might be possible to create an index of bearded seal prey using existing data from benthic samples and fish trawls to better define foraging areas, similar to the approach used by Jay *et al.* (2017) to develop an index of walrus prey.

Response: While we appreciate this suggestion, suitable data on the distributions and abundances of bearded seal primary prey species within U.S. waters occupied by bearded seals are not available at this time to develop such an index for those prey. Although future research may enhance understanding of bearded seal foraging habitat, the ESA requires us to designate critical habitat based on the best scientific data available. This information is sufficient to support our determination that the specific area designated as critical habitat for the Beringia DPS contains the primary prey resources essential feature.

Comment 19: One peer reviewer stated that in our evaluation of climate change as a source of potential threats to the essential features that may require special management considerations or protection, more specific attention to ocean acidification would be appropriate.

Response: Although our evaluation does not consider an exhaustive list of threats that could impact the essential features, in response to this comment, as well as public comments (see our response to Comment 49), in the preamble to this final rule we have added ocean warming and acidification to our discussion of impacts on the essential features from climate change.

Comment 20: In reference to our discussion of primary sources of potential threats to the essential features that may require special management considerations or protection, one peer reviewer suggested that the analysis by Quakenbush *et al.* (2019) of tagged bearded seal movements relative to both oil and gas lease areas in the Chukchi and Beaufort seas, and shipping traffic in the northern Bering and Chukchi seas, could be used to describe the temporal overlap of bearded seals and these activities.

Response: We appreciate this suggestion. However, our evaluation of oil and gas activity and marine shipping and transportation as sources of threats that may require special management considerations or protection focuses on potential impacts to each of the essential features of bearded seal critical habitat. Because the analysis referenced by the peer reviewer does not pertain directly to effects of these activities on the essential features, we have not incorporated the suggested information into that evaluation.

Comment 21: One peer reviewer noted that, in addition to our reference to the Deep Water Horizon oil spill in discussing risks to the essential features associated with oil production in the Arctic, it might be useful to refer to information from studies on the long-term impacts of the 1989 Exxon Valdez oil spill in discussing risks of oil spills/discharges from vessels.

Response: We have updated our discussion of oil and gas activity in the preamble of this final rule to note that experience with spills in subarctic regions, such as in Prince William Sound, Alaska, have shown that large oil spills can have lasting ecological effects.

Comment 22: One peer reviewer commented that of the four sources of potential threats for which we concluded the essential features may require special management considerations or protection (climate change, oil and gas activity, marine

shipping and transportation, and commercial fisheries), only oil and gas activity and commercial fisheries typically have a Federal nexus requiring ESA section 7 consultation. The peer reviewer stated that although climate change is the source of the most serious habitat threats, it does not appear to lend itself to management that would benefit the Beringia DPS now or in the future. Similarly, several other commenters asserted that our finding that the essential features may require special management considerations or protection relied on threats that are nonexistent or minor compared to climate change. Commenters further asserted that this finding is not consistent with ESA requirements because we did not identify any specific management considerations or measures that would be useful in protecting the essential features or identify how such measures would be implemented. Commenters also stated that existing regulatory mechanisms such as the MMPA and other Federal, State and local regulatory mechanisms already sufficiently protect the species from threats and impacts. Two of the commenters further asserted that, therefore, the identified essential features do not support designation of critical habitat because there are no special management considerations or protections that would be useful in protecting these features.

Response: In accordance with section 3(5)(A)(i) of the ESA and our implementing regulations at 50 CFR 424.12(b)(1)(iv), we evaluated whether each of the essential features ''may require special management considerations or protection.'' An important word in this statutory phrase is ''may.'' We must show that such special management considerations or protection may be needed now or in the future, not that the habitat features definitively will require such considerations or protection. Moreover, 50 CFR 424.02 defines special management considerations or protection to ''mean any methods or procedures useful in protecting the physical and biological features of the environment for the conservation of listed species.'' In other words, any relevant method or procedure qualifies as special management considerations or protection. Even if specific management measures are presently undeterminable, they may become determinable in the future because of continuing advances in science and technology. (*See Alaska Oil & Gas Ass'n* v. *Salazar,* 916 F. Supp. 2d 974, 990–992 (D. AK 2013) (''The Service has shown that someday, not necessarily at this time, such considerations or protection *may* be required . . . For example, the evidence in the record showing that sea ice is melting and that it will continue to melt in the future, perhaps at an accelerated rate, is more than enough proof that protection *may* be needed at some point''), reversed on other grounds by *Alaska Oil & Gas Ass'n* v. *Jewell,* 815 F.3d 544 (9th Cir. 2016)). Additionally, the question is whether the essential features identified may require special management considerations or protection, not whether all threats to those features, including climate change, could be cured through management. For example, if sea ice suitable for whelping and nursing becomes more scarce in the future, special management considerations or protections for remaining ice may become necessary, not to prevent or reverse the effects of climate change, but to further protect use of the remaining essential features. As discussed in detail in the Special Management Considerations or Protection section of this final rule, the ''may require'' standard is met or exceeded with respect to each of the essential features of critical habitat for the Beringia DPS.

Comment 23: One peer reviewer stated that better use could have been made of IK despite its dispersed nature and the challenges of accessing it. A number of other commenters, including the Ice Seal Committee and the North Slope Borough, also indicated that we should further utilize IK in our determination of critical habitat for the Beringia DPS. The North Slope Borough stated that due to the amount of existing scientific uncertainty concerning bearded seal habitat requirements, IK constitutes the best scientific data available and should be used in developing and designating any critical habitat for the species. They further stated that we should solicit and collect IK about ice conditions used by bearded seals for whelping and nursing, and how flexible they are in the types of habitat they use for these activities, and we should use this information to modify the proposed designation.

Response: In developing this final rule, we considered the best scientific data available, including comments submitted from individuals who provided IK about bearded seal habitat use, and available publications and reports that documented IK for coastal communities located in western and northern Alaska. We also attempted to incorporate additional information from Alaska Native hunters into the determination of critical habitat by soliciting input from the Ice Seal Committee regarding the essential features of bearded seal critical habitat and specifically offering to consult with Alaska Native tribes and organizations regarding the development of the designation. Although we received some input in response, we recognize that additional IK exists that we have been unable to incorporate. However, the ESA does not allow us to defer the designation of critical habitat in order to collect additional data. Under a court-approved stipulated settlement agreement, we must complete a final critical habitat determination by March 15, 2022 (see Background section).

Draft Impact Analysis Report

Comment 24: One peer reviewer suggested that the analysis of the impacts of the critical habitat designation could be put into perspective by including a brief reference to the rate of climate change in the Arctic. The peer reviewer commented that oil and gas is the industry most affected by the critical habitat designation, and yet those activities are the ones most likely to negatively impact the seals, as well as other marine resources within the area under consideration for designation. Another peer reviewer questioned the language in the Draft Impact Analysis Report that referred to ''long-term reductions in sea ice expected to occur within the foreseeable future,'' given that rapid sea ice loss is already occurring at unprecedented rates. This peer reviewer advised that the analysis would be strengthened and more grounded in current science by acknowledging that GHG emissions are wholly responsible for Arctic sea ice loss. Further, the peer reviewer stated that activities that release GHGs into the atmosphere are ''the'' major contributing factor to climate change and sea ice loss, rather than ''a'' factor, as stated in the report. The peer reviewer noted that the effectiveness of the designation for the species' conservation is, however, most dependent on the elimination of GHG emissions by mid-century, keeping global temperatures from rising beyond 1.5 °C above pre-industrial levels, and consequently minimizing sea ice loss.

Response: We have incorporated a reference to the rate of climate change in the Arctic into the Final Impact Analysis Report, as suggested by the peer reviewer. Although the report contains a limited discussion of climate change and sea ice loss in the Arctic, we discuss this topic in more detail in the Special Management Considerations or Protection section of this final rule. We agree with the peer reviewer's comment

that activities that release GHGs are the major contributing factor to climate change and sea ice loss, and we have modified the preamble of this final rule and the Final Impact Analysis Report accordingly. We acknowledge that the critical habitat designation will not halt the ongoing loss of sea ice. However, the designation can help address other potential threats to the species' habitat and mitigate the effects of climate change. Furthermore, it is possible that actions may be taken that could reduce GHG emissions and slow the changes in sea ice habitat, particularly toward the latter part of this century. Bearded seals will increasingly experience the impacts of habitat alteration stemming from climate change and it is therefore important to identify and provide protection under ESA section 7 for the habitat features and areas essential to the species' conservation.

Comment 25: One peer reviewer suggested that it might be informative to compare the estimated incremental administrative costs of future section 7 consultations attributable to the critical habitat designation with financial data (*e.g.,* overall production costs, as well as profits) from certain industries, in particular the oil and gas industry. The peer reviewer commented that other industry expenditures associated with leasing, exploration, drilling, etc., surely must greatly exceed potential incremental administrative costs of consultations.

Response: Although the information suggested by the peer reviewer could provide additional perspective on the estimated incremental costs of future section 7 consultations for oil and gas related activities, we determined that the information considered in the Final Impact Analysis Report provides sufficient context for the analysis. We also note that this report includes information on average annual receipts for oil and gas operations identified as potentially subject to future section 7 consultations addressing the critical habitat.

Comment 26: One peer reviewer commented that it is important to underscore educational, scientific, and non-consumptive use benefits from increased public awareness generated by the critical habitat designation process itself. Similarly, another commenter stated that the designation process educates managers, state and local governments, and the public regarding the conservation value of critical habitat areas to listed species, which can inform management decisions, conservation programs, and recovery efforts. The peer reviewer also suggested that the potential role of marine mammals in general as the ''canary in the coal mine'' on climate change is something useful for scientists as well as the general public. In addition, the peer reviewer stated that the distributional impacts of the designation are importantly in favor of Alaska Native communities, who depend on marine resources for subsistence, employment, and income. Another peer reviewer commented that the discussion of the positive impacts of the designation to community resilience of underserved Arctic coastal communities could be strengthened.

Response: We agree with the peer reviewers and the other commenter that the critical habitat designation for the Beringia DPS can have a number of ancillary and indirect economic, socioeconomic, cultural, and educational benefits, such as those described in these comments. Such benefits are discussed in detail and Section 4 of the Final Impact Analysis Report and additional information regarding potential benefits has been incorporated into this section of the report as appropriate. As discussed in this report, all of the types of benefits identified are at least partially co-extensive with those afforded through the ESA listing of the species (*i.e.,* they are not attributable solely to critical habitat designation). Data are not available to determine the extent to which such benefits would be attributable specifically to critical habitat designation.

Comment 27: One peer reviewer stated that while they did not disagree with the conclusion in the Draft Impact Analysis Report that there are likely some incremental benefits from designating critical habitat for the Beringia DPS, they found it unclear if the information in the report supports finding that there is a net benefit (and also questioned whether such a finding is necessary). To address this, the peer reviewer suggested that the report clearly set out (qualitatively) how the designation would result in an incremental change in benefits from the baseline (without critical habitat). The peer reviewer also commented that for some of the benefits ascribed to the designation (*e.g.,* support of subsistence activities and commercial fishing), it would seem there needs to be an incremental change in the quality of the habitat from the baseline, which suggests the designation would result in a change to activities that impact the critical habitat, even though section 7 consultations are not expected to result in additional project modification requests attributable to the designation. The peer reviewer suggested that the report further characterize the ability of the designation to influence the design of projects prior to consultation, or include additional information regarding other ways that the designation could result in an incremental change in habitat quality. Alternatively, the peer reviewer suggested focusing on benefits they believe have stronger support (education, scientific knowledge, cultural support, and non-use values associated with habitat protection). In contrast, another peer reviewer stated that the report provided a very thorough summary of the expected costs and benefits and made a well-grounded assessment of the longer-term costs/benefits versus shorter-term costs/benefits.

Response: The ESA requires us to designate critical habitat to the maximum extent prudent and determinable for threatened and endangered species listed under the ESA (16 U.S.C. 1533(a)(3)(A)(i)). Section 4(b)(2) of the ESA requires us to designate critical habitat on the basis of the best scientific data available after taking into consideration the economic impact, the impact on national security, and any other relevant impact of specifying any particular area as critical habitat. In addition, section 4(b)(2) describes an optional process by which we may go beyond the mandatory consideration of impacts and weigh the benefits of excluding any particular area against the benefits of designating it. We did not intend to convey in the Draft Impact Analysis Report that the ESA requires any showing that a designation will result in net benefits. We have revised the Final Impact Analysis Report to better communicate the purpose and need for this analysis. In addition, in response to the peer reviewers' comments and suggestions, we expanded Section 4 of the Final Impact Analysis Report to incorporate additional details presented in the proposed rule regarding ways in which critical habitat designation for the Beringia DPS can result in incremental benefits. Although we do not anticipate modifications to Federal actions expressly to avoid impacts to the critical habitat as distinct from impacts to bearded seals, we note that this does not mean such modifications could not occur in situations we are unable to predict at this time.

Several non-regulatory benefits are expected to result from the designation. Critical habitat designation provides specific notice to Federal agencies and the public of the geographic areas and physical and biological features essential to the conservation of the

species, and information about the types of activities that may reduce the conservation value of the habitat. This information will focus future section 7 consultations on key habitat attributes. Designation of critical habitat can also inform Federal agencies of the habitat needs of the species, which may facilitate using their authorities to support the conservation of the species pursuant to section 7(a)(1) of the ESA, including to design proposed projects in ways that avoid, minimize, and/or mitigate adverse effects to critical habitat from the outset. Public awareness of critical habitat designations may also stimulate voluntary conservation actions by the public, as well as research, education, and outreach activities.

In addition to the benefits of critical habitat to the seals, as detailed in Section 4 of the Final Impact Analysis Report and summarized in the *Benefits of Designation* section of this final rule, other forms of benefits may also accrue. These benefits may be economic in nature (whether market or non-market, consumptive, non-consumptive, or passive), educational, cultural, or sociological, or they may be expressed through beneficial changes in the ecological functioning of the species' habitat, which itself yields ancillary welfare benefits (*e.g.,* improved quality of life) to the region's human population. For example, because the designation is expected to result in enhanced conservation of the Beringia DPS over time, residents of the region who value these seals, such as subsistence hunters, may experience indirect benefits. As discussed in Sections 4 and 6 of the Final Impact Analysis report, although available information is insufficient to quantify or monetize the benefits of designation, they are not inconsequential, and the potential incremental economic impacts associated with the designation are modest both in absolute terms and relative to the level of economic activity expected to occur in the affected area (see *Economic Impacts* section).

Public Comments

Essential Features

Comment 28: One commenter stated that although we identified areas of at least 15 percent ice concentration as essential for molting, this criterion does not appear to be based on any specific data regarding sea ice concentrations necessary for molting. They also pointed out that we indicated Ver Hoef *et al.* (2014) informed the conclusion in the status review of the bearded seal (Cameron *et al.* 2010) that 15 percent ice concentration would be minimally sufficient for molting, but stated we could not have relied on Ver Hoef *et al.* (2014) because it was in fact published several years after the status review was completed.

Response: As we explained in the proposed rule, the minimum 15 percent ice concentration identified for sea ice habitat essential as a platform for molting is consistent with the ice concentration considered by Cameron *et al.* (2010) to be minimally sufficient for molting in the status review of the bearded seal. They assumed that ice concentration requirements for molting would be less stringent than those for whelping and nursing, which they had concluded were 25 percent or greater, and they judged the minimum value for molting to be 15 percent, which also corresponds to the ice edge in many observation and modeling products for sea ice; it would be impractical to use a value below that which is typically used to denote areas of sea ice in satellite observations and modeling products. The authors determined the minimum ice concentration for whelping and nursing in light of available information from two studies, Simpkins *et al.* (2003) and Ver Hoef *et al.* (*In review*). Because the latter study was subsequently published in a scientific journal, the published version (Ver Hoef *et al.* 2014) was cited in the proposed rule. There were no substantive differences in the patterns of probability of occurrence of bearded seals among 25 percent ice classes between the published and in-review versions of this study that would change our conclusions that sea ice habitat essential as a platform for whelping and nursing has at least 25 percent ice concentrations and for molting has at least 15 percent ice concentration.

Comment 29: One commenter stated that the definition of the primary prey resources essential feature is exceedingly and impermissibly generic in that it includes all species that may be prey for bearded seals rather than the specific prey species that are essential to the conservation of the Beringia DPS. They also stated that although we indicated that bearded seals are considered ''benthic specialists,'' the best scientific information available demonstrates that the diet of bearded seals in Alaska has shifted over time, with bearded seals consuming a greater proportion and diversity of fish species (Quakenbush *et al.* 2011). They suggested that this further demonstrates that there is no particular prey species that is essential to the conservation of the Beringia DPS, diet is flexible, and that designating critical habitat based on primary prey resources may not be critical for bearded seals to forage in waters 200 m or less in depth.

Response: Because bearded seals rely on their primary prey resources in waters 200 m or less to support their annual energy budgets, we continue to conclude in this final rule that primary prey resources compose a habitat feature essential to the conservation of the Beringia DPS. We disagree that the definition of the primary prey essential feature is too generic. In the proposed rule, we identified those primary prey resources as benthic organisms, including epifaunal and infaunal invertebrates, and demersal and schooling pelagic fishes found in water depths of 200 m or less. Peer reviewer and public comments led us to re-evaluate and refine the definition of this essential feature to focus on benthic organisms specifically (see Summary of Changes From the Proposed Designation section). As we explained in our final rule, Implementing Changes to the Regulations for Designating Critical Habitat (81 FR 7414; February 11, 2016), the level of specificity in our description of essential features is primarily determined by the state of the best scientific information available for the species at issue. The best scientific data available indicate that the diet of bearded seals is taxonomically diverse, and thus specification of particular primary prey species is impracticable. Still, bearded seals do not consume every species of marine organism found within the range of the Beringia DPS; they are selective. We therefore find that the level of specificity provided in the regulatory definition of the primary prey resources essential feature adopted in this final rule is appropriate for defining this essential feature based on the best scientific data available. Consistent with the commenter's point about bearded seals being opportunistic feeders within their preferred habitats, in this final rule we refer to bearded seals as ''benthic generalists'' rather than the previous ''benthic specialists.''

Comment 30: One commenter stated that we should identify habitat for seasonal movements of bearded seals (*i.e.,* dispersal and migration) as an essential feature, given that we indicated in the proposed rule that many seals migrate seasonally to maintain access to sea ice and, and noted that they are also known to migrate between foraging patches. The commenter stated that we should overlay information from bearded seal telemetry studies off Alaska with the critical habitat map to ensure that important migratory and dispersal habitat falls within the critical habitat

boundaries, and then include such habitat as a separate essential feature.

Response: Many bearded seals do make north-south movements associated with the annual retreat and advance of sea ice, and as the commenter noted, studies that have inferred locations of foraging activity for bearded seals tagged in Alaska based on movement and dive data show some overlap in areas used extensively by individual seals. However, the spatial patterns of habitat use and locations of intensive use can vary substantially among individuals. The tracking information available also represents habitat use by primarily juvenile tagged bearded seals and it is unknown how representative it is for older animals. Moreover, bearded seals have a widespread distribution and can range widely. Thus, based on the best scientific data available, we are unable to identify specific physical or biological features indicating that a given area constitutes migratory and dispersal habitat. We note, however, that the late spring to early summer time period during which bearded seals use sea ice habitat essential for molting coincides with when the sea ice edge retreats northward. Thus, there is some temporal overlap between when this essential feature is used by bearded seals and seasonal movements of those seals that follow the receding ice edge northward.

Comment 31: Two commenters stated that the essential features and expansive area proposed for designation do not account for the observed flexibility and resilience of bearded seals, their wide-ranging movements, and their broad dietary preferences and behavior, due to widely variable conditions from year to year regardless of climate change.

Response: We acknowledge that bearded seals can make wide-ranging movements, have diverse diets, and inhabit a range of sea ice conditions. Nevertheless, as discussed elsewhere in this final rule, bearded seals require suitable sea ice for whelping, nursing, and molting, as well as primary prey resources in waters 200 m or less in depth to support their energetic requirements. We continue to find, based on the best scientific data available, that these physical or biological features are essential to the conservation of the species (see Physical and Biological Features Essential to the Conservation of the Species section), and that each of these essential features may require special management considerations or protection (see Special Management Considerations or Protection section).

Comment 32: We received several comments, including from the BOEM, Bureau of Land Management (BLM), and the North Slope Borough, recommending that we remove the proposed essential feature of acoustic conditions that allow for effective communication by bearded seals for breeding purposes. Commenters expressed the following concerns: (1) There is insufficient information currently available regarding bearded seal breeding behavior and acoustic conditions to determine whether this feature is essential or that its inclusion in the designation would benefit the species; (2) the area proposed for designation is too expansive with respect to this proposed essential feature; (3) the proposed definition of the feature is too vague and no criteria were specified that could be used to determine whether impacts to this proposed essential feature are likely to occur; and (4) there is insufficient information currently available to accurately assess the potential effects of noise-related activities on this proposed essential feature, or to identify project-specific mitigation measures, which would make it difficult to address effects of such activities on this feature through a destruction or adverse modification analysis. Additionally, commenters stated that this proposed essential feature is not consistent with the ESA, as it reflects the absence of certain sounds levels, and as such, they believe it is not a tangible physical or biological feature that can be found in a specific area. Further, these commenters stated that any potential effects of noise are properly considered in section 7 consultations as effects on the seals under the jeopardy standard. One commenter also stated that if this essential feature is included in the designation, we should exclude areas with existing anthropogenic noise (*e.g.,* ports, villages, other infrastructure, areas of shipping, etc.) because this feature would not be found in those areas. Finally, BLM stated that prior to including the acoustic environment as an essential feature of critical habitat, we should develop this concept further by perhaps initiating research into the acoustic needs of breeding bearded seals or establishing a working group to identify information needs and establish guidelines and metrics for understanding acoustic impacts to bearded seal habitat.

Response: In the proposed rule, we identified ''acoustic conditions that allow for effective communication by bearded seals for breeding purposes within waters used by breeding bearded seals'' as an essential feature because acoustic communication plays an important role in bearded seal reproductive behavior. However, we acknowledged the limited nature of the scientific data available to inform our identification of this feature, requested comment, and indicated that we would re-evaluate the feature in developing the final critical habitat designation for the Beringia DPS. After carefully considering public comments and the best scientific data available, we have concluded that at this time, we are unable to describe the acoustic feature in sufficient detail to provide a reasonable basis upon which to identify when and where the feature occurs or adequately assess the possible impacts of future activities on such a feature. We therefore are not including an acoustic feature in the critical habitat designation. However, we may in the future consider developing guidelines for understanding acoustic impacts to bearded seal habitat, as suggested by BLM.

We have included a qualitatively defined feature (or characteristic of a feature) pertaining to acoustic conditions in previous critical habitat designations for Main Hawaiian Islands insular false killer whales (83 FR 35062, July 24, 2018) and Cook Inlet beluga whales (76 FR 20180, April 11, 2011). For Cook Inlet beluga whale critical habitat, the feature is focused on noise levels that do not lead to abandonment of the area, and for Main Hawaiian Islands insular false killer whales, the characteristic of a feature is focused on sound levels that would not significantly impair whales' use or occupancy. Thus, in contrast to the acoustic feature we proposed for the Beringia DPS, the feature included in these designations relates to use or occupancy of critical habitat by a species with a limited range or area of occupancy.

The protections of the ESA and the need to consult apply when a proposed Federal action may affect a listed species and/or designated critical habitat. We will continue to consider and address the effects of anthropogenic noise on bearded seals in consultations under section 7 of the ESA (under the jeopardy standard). Scientific understanding of the acoustic ecology of bearded seals is continuing to advance and will enhance our ability to consider the impacts of sound in our analyses of effects to bearded seals through sections 7 consultations. For example, a recent study by Sills *et al.* (2020a) has quantified bearded seals' ability to detect specific sounds embedded within background noise.

Comment 33: Several commenters, including the Marine Mammal

Commission and the Native Village of Kotzebue, stated the proposed acoustic essential feature should be included in the designation, and two commenters suggested that we expand the proposed definition of this feature beyond the focus on bearded seal communication for breeding purposes because the seals rely on acoustic communication at other times as well. Most of the commenters expressed concerns about the potential for impacts on bearded seal communication from anthropogenic noise, and noted that reduced ice cover under a changing climate will result in an increasingly noisy environment, including from physical factors associated with ice cover changes, and potentially from increased intraspecific competition in shrinking areas of suitable habitat.

Response: As we explained in our previous response (to Comment 32), after carefully considering public comments and the best scientific data available, we have concluded that at this time, we are unable to adequately characterize the acoustic conditions that allow for effective communication by bearded seals for breeding purposes (or what constitutes ''effective communication'') and to thereby provide a reasonable basis upon which to identify when and where the feature occurs, and assess possible impacts to such a feature. We therefore are not including an acoustic feature in this critical habitat designation. We agree with the commenters that acoustic conditions that allow for effective communication and other uses of sound by bearded seals are important for the conservation of the species. We will continue to consider and address the effects of anthropogenic noise on bearded seals in consultations under section 7 of the ESA. We will also consider results of future studies related to acoustic conditions for bearded seals, and we can consider revising the critical habitat designation in the future as warranted.

Specific Areas

Comment 34: We received a number of comments that expressed support for the proposed designation, and several commenters including the Marine Mammal Commission and Kawerak indicated that they concurred that the proposed critical habitat contains the physical and biological features essential to the conservation of the Beringia DPS.

Response: We acknowledge these comments. We note that we made some changes to the proposed designation, which are described in the Summary of Changes From the Proposed Designation section of this final rule.

Comment 35: Several commenters stated that the proposed designation is overbroad because it includes most of the geographical area occupied by the Beringia DPS within the U.S. EEZ. The commenters asserted that as such, the proposed designation is inconsistent with congressional intent and the ESA requirement that critical habitat not include the entire geographical area occupied by the species. The commenters also referred to the 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 critical habitat must be designated more narrowly to include only those specific areas where the essential elements presently required for survival of the species are located.

In addition, the commenters stated that the proposed rule did not provide scientific data demonstrating with any specificity that the entirety of the area proposed for designation actually contains one or more of the identified essential features. ADF&G suggested that in the proposed rule, the description of the essential features as dynamic and variable on both temporal and spatial scales, and related language stating that critical habitat was identified based on the expected occurrence of the essential features, indicates that we identified the specific area proposed for designation without supporting data identifying the location of the essential features. They stated that although the designation is to be done at a scale determined by the Secretary, the proposed designation, at a huge scale, stretches the bounds of what is reasonable. They referred to the revised designation of critical habitat for North Atlantic right whales as an example of a designation that is compact and targeted relative to the species' range, even though it expanded the designated critical habitat. They also pointed to the critical habitat designation for North Pacific right whales as an example of a designation that they described as similarly compact and targeted, despite an acknowledged lack of data. They went on to assert that we did not fully analyze the report they provided on bearded seal movements (Quakenbush *et al.* 2019) as a primary source of spatial data. They stated that we should make the best use of all the available data to delineate the most essential areas within a species' range, and that we instead overcompensated for lack of data or difficulty in determining where essential feature are located by proposing an overly expansive designation. They also contended that based on statutory language, NMFS's goal must be to identify and designate those specific areas that demonstrably contain the highest value physical and biological features for the species. Related comments stated that establishing priority habitat areas for designation would be more manageable and efficient.

Response: Under the ESA, a specific area qualifies as critical habitat if it was occupied by the species at the time of listing and contains one or more of the physical or biological features essential to the conservation of the species and that may require special management considerations or protection. Specific areas are eligible for designation if they meet these criteria. Our regulations clarify that the geographical area occupied by the species 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; 50 CFR 424.02). Further, physical or biological features may include habitat characteristics that support ephemeral or dynamic habitat conditions, and thus, they need not be present throughout critical habitat at all times.

We have long interpreted ''geographical area occupied'' in the definition of critical habitat to mean the entire range of the species at the time it was listed, inclusive of all areas the species uses and moves through seasonally (45 FR 13011, February 27, 1980). Further, in *Arizona Cattle Grower's Assoc.* v. *Salazar,* 606 F.3d 1160 (9th Cir. 2010), the Ninth Circuit affirmed the interpretation of USFWS that ''occupied'' areas means areas that the species uses with sufficient regularity such that it is likely to be present during any reasonable span of time. As we discuss in the Geographical Area Occupied by the Species section of this final rule, based on the best scientific data available, the range of the Beringia DPS was identified in the final ESA listing rule (77 FR 76740; December 28, 2012) as the Arctic Ocean and adjacent seas in the Pacific Ocean between 145° E longitude and 130° W longitude, except west of 157° E longitude, or west of the Kamchatka Peninsula, where the Okhotsk DPS of the bearded seal is found. We cannot designate areas outside U.S. jurisdiction as critical habitat. Thus, the geographical area that was under consideration for this designation was limited to areas under the jurisdiction of

the United States that bearded seals of the Beringia DPS occupied at the time of listing. This occupied area extends to the outer boundary of the U.S. EEZ in the Chukchi and Beaufort seas, and south over the continental shelf in the Bering Sea.

We acknowledge that critical habitat constitutes a subset of what qualifies as ''habitat'' for a particular species. *See Weyerhaeuser* v. *U.S. Fish and Wildlife Serv.,* 139 S. Ct. 361 (2018). Consistent with the definition of critical habitat under the ESA and based on the best scientific data available, the specific area designated as critical habitat for the Beringia DPS in this final rule contains the physical and biological features identified as essential to the conservation of the Beringia DPS and that may require special management considerations or protection. This critical habitat is a subset of the habitat occupied and used by bearded seals of the Beringia DPS in U.S. waters, and it is also a subset of the habitat that is occupied and used by this species in their broader distribution beyond U.S. waters. Moreover, because all of the Beringia DPS's critical habitat is currently occupied by the species, the Supreme Court's decision in *Weyerhaeuser* v. *U.S. Fish and Wildlife Serv.* (139 S. Ct. 361 (2018))—which held in the context of unoccupied habitat that an area must logically be ''habitat'' in order to meet the narrower category of ''critical habitat'' as defined under the ESA—is not directly relevant to the designation of critical habitat for the Beringia DPS. Specific areas that are occupied by a species are inherently ''habitat.''

Delineation of specific areas that contain essential features is done at a scale determined by the Secretary (of Commerce) to be appropriate (50 CFR 424.12(b)(1)). In making decisions about the appropriate scale and boundaries for the specific areas we are designating as critical habitat, we considered, among other factors, the life history of the species and the scales at which data are available to inform our analysis. The seasonality of sea ice cover strongly influences the movements, foraging, and reproductive behavior of bearded seals, and the dynamic variations in sea ice cover result in individuals distributing broadly and using sea ice habitats within a range of suitable conditions. Therefore, our delineation of critical habitat for the Beringia DPS reflects the considerations described elsewhere in this final rule regarding the variability in the spatial and temporal distributions of the essential features, in particular of the sea ice essential features, the overlap in timing of whelping and nursing with molting, the widespread distribution of bearded seals using the essential features, and the spatial scale of the seals' movements in utilizing their habitat.

In that regard, our approach is similar to USFWS's designation of critical habitat for polar bears. Recognizing that sea ice is dynamic and highly variable on both temporal and spatial scales, and that polar bear use of specific areas of sea ice habitat varies daily and seasonally, the extent of the continental shelf within the area occupied by the polar bear in the United States was identified as the sea ice critical habitat unit containing the essential sea ice feature (75 FR 76086, December 7, 2010) (this designation was challenged and ultimately upheld by the Ninth Circuit, *see Alaska Oil & Gas Ass'n* v. *Jewell,* 815 F. 3d 544, 555–62 (9th Cir. 2016)). For Beringia DPS bearded seal critical habitat, the essential features are dynamic, and we identified where one or more of these essential features occurs at a coarse scale with as much specificity as the best scientific data available allows (see Specific Areas Containing the Essential Features section).

As stated above, under the ESA, an area qualifies as critical habitat if, based on the best scientific data available, it was occupied by the species at the time of listing and contains one or more of the physical or biological features essential to the conservation of the species and that may require special management considerations or protection. Specific areas are eligible for designation if they meet these criteria. Neither the ESA's definition of critical habitat nor our implementing regulations at 50 CFR part 424 restrict critical habitat to only the most important core habitats of the species. Further, where, as here, one or more essential features are not static, and their location changes both seasonally and annually, a critical habitat designation must be large enough to account for such changes in the locations of essential features and the particular species' habitat requirements throughout their life history, as discussed above. Following thorough consideration of peer reviewer and public comments and information submitted, we conclude, based on the best scientific data available, including the information reported by Quakenbush *et al.* (2019), that the specific area we are designating as critical habitat most accurately identifies where the physical and biological features essential to the conservation of the Beringia DPS occur. We acknowledge that this designation is much larger than the designations for the North Atlantic right whale and the North Pacific right whale. Each critical habitat designation reflects consideration of the best scientific data available at the time of designation regarding the particular species and its habitat characteristics and requirements.

Comment 36: Several commenters stated that critical habitat should be designated on a seasonal basis to reflect the specific times and places in which the essential features are used by bearded seals for critical life functions. Some commenters contended that the proposed rule would ''over-designate'' critical habitat and rely on subsequent section 7 consultations as a means to refine what constitutes critical habitat, which they stated would effectively remove the designation from notice and comment rulemaking and shift the burden of designation decisions to the consultation process. BOEM specifically recommended that the designation should identify continental shelf waters in depths over 3 m as critical habitat used in summer/fall, and the southern ice front and lead system as critical habitat used in winter/spring, stating that there are few bearded seals in the Beaufort Sea in winter/spring because they avoid fast ice, pack ice away from leads, and ice over deep water beyond the shelf break.

Response: The ESA focuses on the spatial presence of the essential features within occupied areas, but does not mention the temporal presence of those features. Under the ESA's definition of critical habitat, if an area is occupied by a listed species and one or more essential features can be found in that area, even if the features are present only seasonally, then that area qualifies as critical habitat. The statute does not allow critical habitat designations to fluctuate seasonally, nor does it specify that critical habitat must contain any particular essential feature at all times. In addition, our implementing regulations at 50 CFR 424.12(c) specify that ephemeral reference points cannot be used to clarify or refine the boundaries of critical habitat. A dynamic boundary based on seasonal presence of the essential features would be inconsistent with this requirement. Moreover, even if seasonal designations of critical habitat were authorized under the ESA or the implementing regulations, such designations could potentially miss an important aspect of critical habitat: The protection afforded by designation even when the species may not be present, thus ensuring that Federal actions are not likely to adversely modify or destroy critical habitat that is important to support

essential life history functions during particular times of the year.

The size of the critical habitat designation is in no way related to shifting any burdens to the section 7 consultation process. Where, as here, one or more essential features are not static, and their location changes both seasonally and annually, a critical habitat designation must be large enough to account for such changes in the locations of essential features and the particular species' habitat requirements throughout their life history. The potential effects of a proposed Federal action 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 listed species for essential life history functions. It is therefore common practice in consultations under section 7 of the ESA to address spatial-temporal considerations as part of the analysis of how a particular Federal action would impact the conservation value of critical habitat, and these considerations can be effectively addressed for such analyses involving Beringia DPS bearded seal critical habitat. It is likely that most Federal actions that would occur outside the time periods when the sea ice essential features are present would not adversely affect those features. However, some actions that temporally avoid the presence of non-static essential features such as sea ice may still impact the habitat that bearded seals use or occupy. For example, the construction of an offshore facility when sea ice is not present could still render some bearded seal habitat unusable after the construction of the project. Thus, during consultation, NMFS considers the particular set of facts relevant to that consultation, such as the nature of the activities being conducted, the location of the action, and the spatial and temporal scale, in order to determine the potential effects of the activity on critical habitat and ultimately, whether the activity is likely to destroy or adversely modify critical habitat.

Comment 37: One commenter requested that we consider basing the southern boundary of critical habitat on the position of the ice edge in March instead of April because portions of the Bering Sea that are potentially crucial to bearded seal reproductive success would otherwise be excluded. The commenter stated that although we indicated that April is the peak month for bearded seal whelping, IK indicates that bearded seal pups are born by the end of March.

Response: As we explained in the proposed rule and the Specific Areas Containing the Essential Features section of this final rule, in determining the southern boundary, we focused on delineating the southern extent of where the sea ice essential feature that supports whelping and nursing is found on a consistent basis. Because bearded seals use nearly the entire extent of pack ice over the Bering Sea shelf in spring, depending upon ice conditions in a given year, some bearded seals may use sea ice for whelping south of this median ice edge. We acknowledge that, as discussed in the proposed rule, newborn pups have been observed in the Bering Sea from mid-March to early May Cameron *et al.* (2010). However, based on the best information available, we conclude the main period of bearded seal whelping occurs in April. We therefore continue to conclude that the best scientific data available suggests that median position of the ice edge for April provides the best estimate of the southern extent of where sea ice essential for whelping and nursing occurs on a consistent basis. This does not imply that habitat in the Bering Sea not included in the designation is unimportant to bearded seals, or may not support their conservation. Rather, the designation delineates the subset of habitat within the area occupied by the Beringia DPS in U.S. waters that meets the definition of critical habitat under the ESA based on the best scientific data currently available, and includes the majority of reproductive habitat, as well as molting habitat, in the Bering Sea.

Comment 38: One commenter asserted that designation of critical habitat in the Beaufort Sea east of Utqiaġvik would have little conservation value to the Beringia DPS and that this area should therefore not be included in the designation. The commenter stated that the data currently available on bearded seal use of this habitat, such as bearded seal sighting densities from aerial surveys, which the commenter summarized, indicate very few bearded seals are present in these waters, and that this indicates that the area does not does not provide essential features in enough quantity or quality to support a high number of seals. The commenter also noted that the passive acoustic studies cited in the proposed rule recorded only a small number of individuals in the western Beaufort Sea. The commenter also pointed out that suitable habitat for bearded seals is more limited in the Beaufort Sea than in the Chukchi and Bering seas, as the continental shelf is narrower and the pack ice edge frequently occurs seaward of the shelf over water too deep for the seals to forage, and as such, it provides marginal habitat in comparison.

Response: The ESA states that an area qualifies as critical habitat if, based on the best scientific data available, it was occupied by the species at the time of listing and contains one or more of the physical or biological features essential to the conservation of the species and that may require special management considerations or protection. Specific areas are eligible for designation if they meet these criteria, although we may elect to use our discretion delegated by the Secretary to consider exclusion of particular areas under section 4(b)(2) of the ESA. The ESA does not mandate the exclusion of particular areas, and for the reasons discussed in the Analysis of Impacts Under Section 4(b)(2) of the ESA section of this final rule, we have not exercised our discretion to exclude any particular areas from the designation of critical habitat for the Beringia DPS. We agree that the region that includes the Bering and Chukchi seas forms a much larger area of habitat that is known to be highly productive for bearded seal foraging and provides favorable conditions for bearded seals during winter and spring in comparison to the Beaufort Sea. However, the best scientific data available also indicates that critical habitat designated in the Beaufort Sea in this final rule is occupied by the species and contains one or more essential features that may require special management considerations or protection. As we explained in our response to Comment 17 and in further detail in the following response to Comment 39, in developing this final rule, we re-evaluated the best scientific data available and the approach we used to identify specific area(s) containing the primary prey resources essential feature. As a result of this evaluation, the shoreward boundary of critical habitat in the Beaufort Sea is now defined as the 20-m isobath (relative to MLLW).

Comment 39: BOEM commented that during winter/spring bearded seals do not use shallow nearshore areas, river deltas, or lagoons with water depths less than 3 m because the shorefast ice in these areas frequently freezes to the bottom and into the seabed. In addition, they stated that nearshore areas of the Beaufort and Chukchi seas included in the proposed designation, especially shorelines along the coast and around islands and some shoals, are surrounded by fast ice during winter/spring and thus do not meet the proposed definition of sea ice essential as a platform for molting. Another commenter stated that critical habitat should be delineated to exclude landfast

ice, which they suggested occurs to approximately the 20-m isobath (*e.g.,* Mahoney *et al.* 2005, Mahoney *et al.* 2007), as well as the transitional zone between stationary, landfast ice, and pack ice. The commenter noted, as did BOEM and BLM, that coastal areas where seasonal landfast ice occurs, some of which is grounded, do not have pack ice; therefore, these areas do not contain the sea ice essential features. BLM stated that if no additional information is forthcoming, we should reconsider the nearshore coastal area as critical habitat for the Beringia DPS.

Response: We proposed to designate as critical habitat for the Beringia DPS one specific area of marine habitat in the Bering, Chukchi, and Beaufort seas containing one or more of the physical and biological features essential to the conservation of this species. We identified the proposed shoreward boundary of this specific area as the line of MLLW based on occurrence of the primary prey resources essential feature, rather than on the sea ice essential feature. In response to these and other related peer reviewer and public comments, we re-evaluated the best scientific data available and the approach we used to identify specific area(s) containing the primary prey resources essential feature to determine if different boundaries may be appropriate. As a result of this evaluation, we now identify a single specific area that contains all of the essential features based on our delineation of the boundaries for the sea ice essential features (see also our response to Comment 17).

Our descriptions of sea ice habitat essential for whelping and nursing, as well as sea ice habitat essential for molting, identify such habitat as areas with waters 200 m or less in depth containing pack ice, *i.e.,* sea ice other than fast ice, of suitable concentrations. We therefore considered available information regarding the spatial extent of landfast and its seasonal cycle in the Beaufort, Chukchi, and Bering seas (Mahoney *et al.* 2007, Mahoney *et al.* 2014, Jensen *et al.* 2020) to inform our delineation of the shoreward boundary with respect to occurrence of one or both of the sea ice essential features. As described in more detail in the Specific Areas Containing the Essential Features section of this final rule, this information indicates that relationships between landfast ice and bathymetry differ regionally and locally, and there are significant inter-annual differences in the maximum extent of landfast ice. In addition, there is evidence of decreases in landfast ice extent in the Chukchi and Bering seas and trends in earlier landfast ice breakup. It is therefore impracticable to delineate a single isobath as the shoreward boundary for the specific area containing one or both of the sea ice essential features that accounts precisely for where landfast may occur in a given year during the period of whelping, nursing, and molting. However, we concluded that defining the nearshore boundary by a depth contour at a coarse level for each region is appropriate given that landfast ice forms in areas of shallow bathymetry and such ice is not identified as essential to the conservation of the Beringia DPS. Because the best scientific data available indicates that in the Beaufort region (northeastern Chukchi Sea and Beaufort Sea), the 20-m isobath provides a reasonable approximation of the average stable extent of landfast ice, and landfast ice extent has not changed significantly in the past several decades, we have identified the shoreward boundary of critical habitat in the Beaufort Sea as the 20-m isobath (relative to MLLW). The available information indicates that in the Chukchi and Bering regions (Chukchi extending south of Wainwright to the top of the northern Seward Peninsula and the Bering Sea extending to Kuskokwim Bay), landfast ice occupies shallower water overall. We considered the best available information on landfast ice in determining the shoreward boundary of critical habitat in each region, which is identified as the 10-m isobath (relative to MLLW) in the Chukchi region, and the 5-m isobath (relative to MLLW) in the Bering region. The shoreward boundary of the designation is not intended to delineate where landfast ice is uniformly present every year, but rather to define the specific area that contains all of the identified essential features at an appropriate scale based on the best scientific data available.

Comment 40: BOEM recommended that the designation focus on areas of greatest prey abundance and suggested that to address this we remove areas that do not support adequate prey resources, such as shallow nearshore areas that have bottom-fast ice or are subject to scour, and/or identify thresholds of minimum prey abundance for bearded seals to persist. They went on to state that many shallow nearshore areas are lacking in adequate prey resources because the benthic habitats and communities are subject to disturbance from bottom-fast ice, strudel scouring in spring, and frequent ice gouging throughout the year, which destroy benthos and prevent benthic communities from developing. They also noted that influxes of fresh water where rivers and streams empty into the ocean kill or drive off marine benthic organisms. BLM similarly noted the potential for bottom-fast ice and scouring effects on nearshore benthic communities, and requested that we provide information that supports that nearshore areas have a benthic community to support bearded seals such that those areas qualify as critical habitat. BLM stated that we should present a more comprehensive analysis of bearded seal prey resources by providing information on the ranges and distributions of bearded seal prey species (both fish and benthic species), and noted that there is a lack of information considered in the critical habitat analysis on benthic communities, especially in the nearshore. BLM added that we should include an analysis of this information relative to where prey species distributions overlap with bearded seal habitats, and where there is greatest prey species abundance, including seasonally. They stated that the proposed rule gives the impression that prey species are distributed homogenously throughout the Beringia DPS's range, although this is most likely not the case.

Response: As we explained in our responses above to Comments 17 and 39, we re-evaluated the best scientific data available and the approach we used to identify the proposed boundaries of critical habitat with respect to the primary prey resources essential feature to determine if they were drawn appropriately. As a result of this evaluation, we now identify as critical habitat the specific area that contains all of the essential features based on our delineation of the boundaries for the sea ice essential features, with the shoreward boundary of the designation defined by particular isobaths. As discussed previously, the movements of bearded seals and their use of habitat for foraging are influenced by a variety of factors, including the seasonality of ice cover, the seals forage throughout the year, and they are broadly distributed and can range widely. In addition, bearded seals have a diverse diet with a large variety of prey items, and diet can vary seasonally and geographically. Our delineation of critical habitat in this final rule is based on the best information available regarding the co-occurrence of bearded seal primary prey species and the sea ice essential features, including information on the distribution of prey and their documented occurrence within the

geographical area specified. The commenters did not provide any relevant literature or data that would support the identification of specific thresholds of minimum abundance for bearded seal primary prey species, nor of specific areas where concentrations of the prey species are found on a recurrent basis within bearded seal habitats in Alaska. Habitat selection by bearded seals with respect to prey is not well understood. While it is likely that bearded seal primary prey species are distributed unevenly, the limits of the available information on the distribution and abundance of these prey species, and more importantly, the considerations discussed above, make it infeasible to delineate critical habitat more finely than we describe in this final rule.

Comment 41: BLM stated that we should develop more detailed critical habitat maps that identify seasonal presence/absence of each essential feature in both nearshore and offshore waters to provide clarity regarding where each essential feature is found, rather than designating critical habitat as a single large unit. They stated that we should otherwise better explain why the boundary for each essential feature is the same, how the boundary for each essential feature overlaps with other essential features, or why they have all been incorporated into a single mapped unit.

Response: As we explained in the proposed rule, the temporal overlap of bearded seal molting with whelping and nursing, combined with the dynamic nature of sea ice, makes it impracticable to separately identify specific areas where each of the sea ice essential features occurs. Further, as we have previously stated, bearded seals forage throughout the year and their prey species are spatially dynamic due to the influences of various abiotic and biotic factors. Moreover, there is no requirement that we develop detailed maps depicting where each essential feature occurs.

Comment 42: BOEM stated that it is not clear whether certain areas proposed as critical habitat in the Bering and Chukchi seas contain enough suitable food resources to support the long-term survival of the Beringia DPS and that additional analyses are necessary to support designation for areas that are dominated by pelagic species. They stated that the northern Bering Sea underwent a regime shift in the 1980s to a pelagic system from what was previously a very productive benthic system, and referred to studies conducted in recent years in the Chukchi Sea indicating a similar regime shift is now occurring or has already occurred in the southern Chukchi Sea, south of Cape Lisburne.

Response: The ESA states that an area qualifies as critical habitat if, based on the best scientific data available, it was occupied by the species at the time of listing and contains one or more of the physical or biological features essential to the conservation of the species and that may require special management considerations or protection. Specific areas are eligible for designation if they meet these criteria. As we described in the Physical and Biological Features Essential to the Conservation of the Species section of this final rule, the best scientific data available indicate that bearded seals have a diverse diet with a large variety of prey items, and diet can vary seasonally and geographically. Further, these data indicate that the shallow seasonally ice-covered waters of the Bering and Chukchi, seas support an abundance of bearded seal benthic prey resources. Moreover, the habitat features that bearded seals rely upon are dynamic and variable on both spatial and temporal scales. While we acknowledge that bearded seals forage on patchily distributed benthic prey, there is insufficient information available about their prey distributions to be more specific about smaller areas. As such, we identified where one or more of the essential features occurs at a coarse scale, because this is as much specificity as the best scientific data available allow. Based on the best scientific data available, we determined that the prey resources essential to the conservation of the Beringia DPS occur throughout the specific area that we are designating as critical habitat, and that this feature may require special management considerations or protection.

Changes in the distribution, abundance, and/or species composition of bearded seal primary prey resources are likely due to changes in ocean conditions related to climate change (*e.g.,* ocean warming, decreases in ice cover, ocean acidification). However, the extent and timing of such changes remain uncertain, and the possibilities are complex (see, *e.g.,* review of bearded seal prey communities in the status review of the bearded seal by Cameron *et al.* (2010)). Thus, given that the quality and quantity of primary prey resources essential to support bearded seals may be diminished by the effects of climate change, we identify climate change as a source of threats to this essential feature that may require special management considerations or protection. Finally, while we recognize that reductions in sea ice coverage and increasing ocean temperatures could shift the benthic-dominated systems in the northern Bering and Chukchi seas to be more pelagic-dominated, we do not agree there is scientific consensus that the ''northern Bering Sea underwent a regime shift in the 1980s to a pelagic system,'' as suggested by the commenter.

Comment 43: One commenter suggested that we delineate primary prey resource units that identify presence/absence of each primary prey item to the extent possible within subsets of the larger designation. The commenter stated that this would be useful for future section 7 consultations and would serve as a means to identify priority areas and help support the adaptive management practices necessary for bearded seal conservation as the Arctic continues to experience changes.

Response: As we explained in our response to Comment 40, data limitations and considerations related to the dynamic nature of the primary prey resources essential feature make it infeasible to delineate critical habitat more finely than we describe in this final rule based on the best scientific data available. Regarding the comment concerning adaptive management, while this is a useful strategy for conservation of listed species and their habitats, under the ESA we designate critical habitat through a regulatory process that requires us to make decisions based on the best scientific data available at the time of designation. If new information becomes available concerning the effects of environmental changes on bearded seal primary prey resources that indicates revision of critical habitat may be appropriate to effectively provide for the conservation of the species, we can consider using the authority provided under section 4(a)(3)(A)(ii) of the ESA to revise the designation.

Comment 44: One commenter stated that identifying areas containing prey is not sufficiently precise to describe a specific area or feature that, by statute, is required to be both specific and essential to the conservation of the species. The commenter stated that they agree that certain prey species may occur in nearshore waters in the Bering, Chukchi, and Beaufort seas, but that we acknowledge that the diverse assemblage of prey species consumed by bearded seals includes both benthic and pelagic species, and such a diversity of prey may occur throughout the entire region of the Bering, Chukchi, and Beaufort seas. They asserted that we should revise the proposed designation to delineate a primary foraging area where these prey species are

concentrated instead of including areas where prey species may occur, and that this should reflect the best available science regarding limited presence of bearded seals in the western Beaufort Sea, preference of pack ice over landfast ice, and diversity of diet.

Response: Neither the ESA definition of critical habitat nor our implementing regulations at 50 CFR part 424 require that we designate critical habitat with the level of specificity asserted by the commenter. Rather, under the ESA we identify what prey are essential to the conservation of the Beringia DPS and then identify where those prey occur within the geographical area occupied by the species. The ESA does not require that before designating an area as critical habitat we demonstrate that bearded seals actively or substantially use the area, that they use it to a significant degree, or that we focus on areas of greatest prey abundance. *Alaska Oil & Gas Ass'n* v. *Jewell,* 815 F. 3d 544, 555–56 (9th Cir. 2016) (holding the ESA required USFWS to identify where the features essential to the conservation of a species occur, and does not require evidence a species currently uses those features in any particular area). The commenter did not provide any relevant literature or data that would support the identification of specific areas where concentrations of the primary prey species are found on a recurrent basis within habitat occupied by bearded seals in Alaska. Based on the best scientific data available, and consistent with the ESA, we determined that the primary prey resources essential to the conservation of the Beringia DPS occur throughout the specific area we are designating as critical habitat.

Comment 45: One commenter stated that we must identify the specific prey species and the specific locations (spatially and temporally) where foraging on those prey species is essential to the conservation of the Beringia DPS and in need of special management considerations or protection, and that the proposed rule did not provide a sufficiently specific delineation of critical habitat with respect to the proposed primary prey resources essential feature. They referred to the preamble to our 2016 final rule that amended the regulations for designating critical habitat, which said the descriptions of the physical and biological features essential to the conservation of the species would maintain the specificity of the primary constituent elements identified in previous designations (81 FR 7414, 7426; February 11, 2016). They stated that under the prior regulations (which used the term ''primary constituent elements''), we were required to identify ''feeding sites'' to support the designation of critical habitat based on prey species.

Response: We disagree. Neither the ESA's definition of critical habitat nor our implementing regulations at 50 CFR part 424 require that we designate critical habitat with the level of specificity asserted by the commenter, and this was also not required under the prior version of our regulations. The prior regulations listed ''feeding sites'' among examples of what may constitute primary constituent elements (referred to in our current regulations as physical or biological features) that may be defined and described as essential to the conservation of the species. Rather than identify where bearded seals actually feed on their primary prey, as we indicated earlier in our response to Comment 44, under the ESA we identify what prey are essential to the conservation of the Beringia DPS and then identify where those prey occur within the geographical area occupied by the species. Based on the best scientific data available, we determined that the primary prey resources essential to the conservation of the Beringia DPS occur throughout the specific area we are designating as critical habitat.

Comment 46: BLM stated that the proposed rule was unclear regarding the overlap in nearshore areas between the essential feature of acoustic conditions that allow for effective communication by bearded seals and the sea ice essential features. They stated that based on the description in the proposed rule, bearded seal breeding habitat does not appear to include nearshore, landfast ice areas. However, they asked us to clarify and explain with supporting information whether nearshore areas in the Beaufort Sea contain the acoustic essential feature. They also requested a detailed critical habitat map that represents the acoustic essential feature.

Response: As we explained in our earlier response to Comment 32, after carefully considering the best scientific data available, we have concluded that at this time, our scientific understanding is not adequate to sufficiently characterize an acoustic essential feature so as to provide a reasonable basis upon which to identify when and where such a feature occurs. Therefore, we have not included an acoustic feature in this designation.

Comment 47: BOEM stated that, although it is clear in the preamble to the proposed rule that critical habitat for the Beringia DPS may contain one or more of the essential features, we should clarify that this is the case in the regulatory language for the designation.

Response: We find the regulatory text contained in the proposed rule to be sufficiently clear—an area qualifies as critical habitat if it is occupied by the species and contains one or more physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection (16 U.S.C. 1532(5)(A)).

Special Management Considerations or Protection

Comment 48: BOEM stated that because sea ice is projected to continue to retreat northward, we should provide data and analysis of how the geography of the critical habitat for the Beringia DPS would change in the future with substantial sea ice loss. They also stated that we should highlight those areas within critical habitat that are expected to retain suitable sea ice conditions for bearded seals long into the future, as this would help emphasize the need for further development of geographic solutions for habitat conservation.

Response: In our evaluation of whether the essential features of critical habitat for the Beringia DPS may require special management considerations or protection, we indicated that the quantity and quality of these essential features, in particular sea ice, may be diminished by the effects of climate change. Although there will continue to be considerable annual variability in the rate and timing of the breakup and retreat of sea ice, trends are toward ice that is more susceptible to melt (Markus *et al.* 2009) and areas of earlier spring ice retreat (Stammerjohn *et al.* 2012, Frey *et al.* 2015). Thus, the earlier retreat of sea ice in the spring supports including the northern portion of the critical habitat in particular, as it retains sea ice suitable for whelping and nursing and/or molting the longest. Regarding the comment that we should explain how the geography of critical habitat may change in the future with substantial sea ice loss, the critical habitat boundaries will not automatically change in areal extent as sea ice distribution and extent diminish; they will remain fixed until such time as NMFS revises them based on new information.

Comment 49: One commenter stated that climate change, driven by anthropogenic emissions of GHGs, poses an existential threat to the Beringia DPS, and noted that climate change impacts on bearded seals include changing temperatures, rapid loss of sea ice, altered precipitation regimes, ocean acidification, extreme weather events,

and effects on key prey species. The commenter provided information and references regarding trends in GHG emissions, the relationship between GHG emissions and sea ice loss, and the impacts of climate change in the Arctic. In addition, another commenter stated that we should discuss ocean acidification and its effects on bearded seal prey. Several other commenters also expressed concerns over the impacts of climate change on the species, and one commenter, an Alaska Native hunter, reported their personal observations of sea ice loss and declines in the number of marine mammals.

Response: We appreciate the comments and references provided by the commenters, which we reviewed and considered in developing the final critical habitat designation. As discussed in the proposed rule, we identified climate change as one of four primary sources of threats to the identified essential features of critical habitat for the Beringia DPS that may require special management considerations or protection. Although our evaluation does not consider an exhaustive list of threats that could impact the essential features, in response to these and other peer reviewer and public comments, in this final rule we have added ocean warming and acidification to our discussion of impacts on the essential features from climate change.

Comment 50: One commenter requested that we remove the following statement in the proposed rule because it was unsupported and unnecessary: ''The best scientific data available do not allow us to identify a causal linkage between any particular single source of GHG emissions and identifiable effects on the physical and biological features essential to the conservation of the Beringia DPS.'' The commenter stated that scientific studies have documented continuing severe and rapid reductions in sea ice extent and thickness and increases in ocean acidification resulting from GHG emissions, citing related scientific publications. The commenter further stated that GHG emissions from individual projects cumulatively contribute to habitat degradation and loss for the Beringia DPS, and appreciable GHG emissions from large-scale projects can make a measurable difference in the amount of sea ice loss.

Response: We acknowledge that particular point sources, such as a single power plant, contribute incrementally to global indicators like atmospheric concentration of GHGs or global average temperature. In response to this comment, we have omitted the statement in question in the preamble of this final rule because it is not needed to support our identification of climate change as a primary source of threats to each of the essential features of critical habitat for the Beringia DPS.

Comment 51: Two commenters provided information concerning regulation of the commercial crab and groundfish fisheries and measures taken to minimize impacts of these fisheries on harvested species and benthic habitat and organisms. One of the commenters stated that with changing environmental conditions there could be more commercial fisheries moving north into designated critical habitat, but if commercial crab fisheries follow this pattern, they do not believe that it would have substantial impacts on bearded seals. The other commenter stated that the seafloor effects of trawl gear discussed in the proposed rule did not reflect the best available information because, with the required gear modification for flatfish trawls developed through the essential fish habitat process, it is highly unlikely that these fisheries would have any significant effect on seafloor habitat that would affect bearded seal prey species. The commenter also noted that of the bearded seal prey species identified, sculpins are most often encountered by their fleet, but they are not targeted or retained, and that observer data indicate, on average, less than one metric ton of saffron cod catch annually and essentially no catch of Arctic cod.

Response: In determining whether the essential features of critical habitat for the Beringia DPS may require special management considerations or protection, we base our determination on whether such management or protection may be required, rather than whether management is currently in place, or whether that management is adequate. As we discussed in the proposed rule, given the potential changes in commercial fishing that may occur with the expected increasing length of the open-water season and range expansion of some commercially valuable species responding to climate change, we concluded that the primary prey resources essential feature may require special management considerations or protection in the future to address potential adverse effects of commercial fishing on this feature.

Comment 53: Several commenters expressed concerns over potential impacts to bearded seals from commercial fisheries, in particular from bottom trawling activities. Specifically, they expressed concerns about the risk of incidental mortality of bearded seals if bottom trawlers are allowed further north into the northern Bering Sea and Bering Strait region. They noted that there is also concern about potential impacts on bearded seals from hook injuries due to the 2019 arrival of a large-scale Pacific cod longline fleet to this region. Two other commenters expressed concern about potential impacts of commercial bottom trawl fishing on bearded seal prey species, such as yellowfin sole, in the Bristol Bay region. One of the commenters, an Alaska Native hunter, reported past observations of bearded seals feeding on herring in bays located south of the proposed critical habitat and expressed concern that fishing activities have reduced herring biomass.

Response: We understand the concern expressed by the commenters that commercial fisheries may impact bearded seal prey resources. Designation of critical habitat does not, in and of itself, regulate or restrict any activities. Rather, through the section 7 consultation process, Federal agencies must ensure that their actions are not likely to destroy or adversely modify designated critical habitat. Therefore, once the critical habitat designation for the Beringia DPS becomes effective, any section 7 consultations on federally managed fisheries will be required to address the additional requirement that Federal agencies ensure that their actions are not likely to adversely modify or destroy designated critical habitat. We note, however, that we consult on Federal actions and thus not every fishery is subject to section 7 consultation, as there are fisheries with no Federal nexus. Although we acknowledge the concerns regarding the risks posed to bearded seals by direct interactions with commercial fishing gear (*e.g.,* hookings or entanglements), such impacts are considered threats to individual bearded seals themselves and not the habitat. To date, section 7 consultations completed on the effects of Federal groundfish fisheries in the Bering Sea and Aleutian Islands Management Area on bearded seals have concluded that the seals are only occasionally taken in those fisheries, and that the fisheries are not likely to jeopardize the continued existence of the Beringia DPS.

Comment 53: Several commenters expressed concerns over the potential impacts of vessel traffic, in particular icebreakers, on bearded seals, *e.g.,* during the whelping and nursing period. One commenter requested that we expand the discussion of special management considerations or protection to include Arctic marine tourism, and stated that we should

consider and discuss how marine tourism differs from other types of shipping traffic, as ice-reinforced vessels reportedly under construction may facilitate purposefully seeking out icy waters and areas with wildlife. In addition, several commenters specifically noted concerns over potential impacts from vessel discharges, spills of oil or other hazardous materials, and release of marine debris.

Response: We agree that vessel traffic, in particular icebreaking activities, may affect the essential features of critical habitat for the Beringia DPS, and we addressed those potential effects in our evaluation of whether these features may require special management considerations or protection. As we discuss in the Special Management Considerations or Protection section of this final rule, in addition to the potential effects of icebreaking on the essential features, the most significant threat posed by marine shipping and transportation is considered to be the accidental or illegal discharge of oil or other toxic materials. Regarding marine tourism, in this evaluation we identified cruise ships as part of the maritime traffic along the western and northern Alaska coasts, and in the draft and final versions of the impact analysis reports for this designation (NMFS 2020, 2021), we discussed that a limited but increasing number of cruise ships bring tourists to waters within Beringia DPS critical habitat. As previously explained, section 7 consultation requirements apply only when a Federal action is involved (*i.e.,* an action authorized, funded, or carried out by a Federal agency). For icebreaking or other vessel-based activities with a Federal nexus, NMFS and the action agency would evaluate potential effects on a case-by-case basis.

Comment 54: BLM recommended that we provide a more thorough oil spill and oil spill response analysis, specifically for the North Slope of Alaska, to frame the possibility of this impact more accurately with current information. They stated that we need to acknowledge the progress that has occurred since AMAP (2007) to prevent and minimize oil spills in the Arctic and current response mechanisms in place. They specifically requested that we review and incorporate appropriate Alaska Clean Seas policies and protocols, including response and training infrastructure. They also stated that we should update the information on the risk of oil spills, and provide additional context by acknowledging that the most common development of oil fields would most likely be near existing nearshore oil and gas infrastructure in the Beaufort Sea, rather than in remote areas, and that there are offshore producing fields there that have been operating for many years with no major oil spills.

Response: We recognize that there are existing oil spill prevention and response mechanisms in place; however, as we explained in the proposed rule, in determining whether the essential features may require special management considerations or protection, we do not base our decisions on whether management is currently in place or whether such management is adequate. We are required to make a determination about whether the essential features *may* require special management considerations or protection either now or in the future, and the existence of oil spill prevention and response mechanisms is evidence that the essential features do in fact require special management considerations. Our evaluation of oil and gas activities in the Special Management Considerations or Protection section of this final rule is sufficient to establish that the ''may require'' standard is met or exceeded with respect to the risk posed to the essential features of critical habitat for the Beringia DPS by these activities, primarily through pollution (particularly the possibility of large oil spills), noise, and physical alteration of the species' habitat.

Impacts of Critical Habitat Designation

Comment 55: Two commenters stated that the timeframe used in the Draft Impact Analysis Report was arbitrarily truncated at 10 years, and thus failed to account for costs associated with the designation that will undoubtedly accrue beyond this timeframe. One of the commenters noted that USFWS considered economic impacts of designation of critical habitat for the polar bear over a 30-year timeframe. This commenter also contended that the use of a 10-year timeframe is inherently contradictory and arbitrary given that the listing determination for the Beringia DPS was based on ''a 100-year foreseeable future.'' The other commenter stated that the analysis of economic impacts should be revised to use a timeframe coextensive with the anticipated duration of the designation, citing in support of this contention a court decision involving the limited timeframe considered in a particular biological opinion (*Wild Fish Conservancy* v. *Salazar,* 628 F.3d. 513 (9th Cir. 2010)).

Response: As discussed in Section 2.4 of both the draft and final versions of the impact analysis reports for this designation, guidance from 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'' (OMB 2011). Because rules designating critical habitat have no predetermined sunset, we determined the endpoint for our analysis based on a judgment regarding the foreseeable future economic effects and, in particular, the difficulty in making reliable forecasts of Federal activities and costs beyond this timeframe. The information upon which the analysis of impacts of the designation is based includes NMFS's record of section 7 consultations from 2013 to 2019 on activities that may have affected the essential features of critical habitat for the Beringia DPS (relatively few relevant consultations were identified for the 3 years prior to when the Beringia DPS was listed under the ESA), as well as available information on planned activities that may affect these essential features. We acknowledge that the critical habitat designation for the Beringia DPS is expected to result in costs that will be incurred more than 10 years into the future, and although we do not quantify the probable economic impacts beyond the 10-year time period, we believe that the estimated economic impacts of the designation over the next 10 years generally reflect the nature and relative magnitude of costs beyond this timeframe. This timeframe is also consistent with OMB guidance stating that ''[f]or most agencies, a standard time period of analysis is 10 to 20 years, and rarely exceeds 50 years'' (OMB 2011), and longstanding NMFS practice (*e.g.,* economic analyses of critical habitat designations for the Central America, Mexico, and Western North Pacific distinct population segments (DPSs) of humpback whales, Main Hawaiian Islands insular false killer whales, Northwest Atlantic DPS of loggerhead sea turtles, Cook Inlet beluga, and smalltooth sawfish). Although not relevant to the timeframe used in the economic analysis, we note that in the listing analysis for this species, we did not identify a single specific time as the foreseeable future. Rather, we addressed the foreseeable future based on the available data for each respective threat, and we had sufficient information to establish that threats stemming from climate change were foreseeable through approximately the end of the 21st century (77 FR 76740, December 28, 2012).

Comment 56: Several commenters, including the Alaska Department of Natural Resources (ADNR), stated that the Draft Impact Analysis Report substantially underestimated the impacts of the proposed critical habitat designation because it primarily identified the incremental administrative costs associated with conducting section 7 consultations that include the critical habitat. The commenters stated that the analysis did not sufficiently account for the full range of likely consequences of the designation, including costs that could result under other Federal regulatory programs, threatened and actual lawsuits, delay and impediment of activities, and effects related to increased regulatory uncertainty. Commenters asserted that because these additional costs are likely to occur, can be assessed and calculated, and would have significant impacts on activities that occur on and adjacent to the North Slope, the draft report should be revised to include an analysis of these impacts, both quantitative and qualitative.

Commenters also noted that the U.S. Army Corps of Engineers (USACE) can impose significantly higher mitigation costs for Clean Water Act (CWA) section 404 permits on projects located in critical habitat compared to projects located outside of critical habitat. They added that the CWA's National Pollution Discharge Elimination System (NPDES) permit program mandates special considerations and protections for areas designated as critical habitat. ADNR and another commenter stated this was also the case under the Outer Continental Shelf Lands Act. Additionally, a commenter noted that areas designated as critical habitat have informed the imposition of additional mitigation measures and modifications to proposed activities in authorizations issued under the MMPA. ADNR and another commenter described that areas designated as critical habitat have been expressly excluded from coverage in at least two Alaska-related NPDES permits. In addition, regarding section 404 permits, ADNR described as a specific example that compensatory mitigation for the Point Thomson project involved significantly greater total acreage and therefore greater costs solely because affected wetlands were located in polar bear critical habitat.

Regarding the potential for litigation, commenters stated that oil and gas and other activities on the North Slope and in the Chukchi and Beaufort seas are already frequently the subject of lawsuits intended to delay, impede, and prevent projects from proceeding. ADNR cited as examples lawsuits regarding the polar bear critical habitat designation (*Alaska Oil and Gas Ass'n* v. *Jewell,* Case No. 13–35919 (9th Cir. 2016)), and the Cook Inlet beluga whale critical habitat designation. ADNR stated that time delays and uncertainty could add significant costs (perhaps millions of dollars) to projects requiring Federal permits. ADNR added that because of the limited time window available when construction may occur, depending on the project, delays could have cascading effects on the timing of construction, the start of operations, and the ability to produce oil, gas, or other resources. In addition, ADNR stated that the designation will devalue acquired and future oil and gas leases due to increased risks associated with the developing those leases.

Response: As described in Section 3 of the Final Impact Analysis Report, the analysis of economic impacts of the critical habitat designation considers direct, incremental costs associated with section 7 consultations (*i.e.,* administrative costs of consultations and any project modifications requested by NMFS to avoid or minimize potential destruction or adverse modification of critical habitat), as well as the potential for indirect impacts (*i.e.,* not related to section 7 outcomes), such as time delays or regulatory uncertainty. This analysis considered all relevant incremental costs associated with the designation, and these costs were monetized to the fullest extent that reasonable estimates could be made, and were otherwise treated qualitatively when monetization was not possible. Section 6 of the Draft Impact Analysis report recognized that some potential exists for the designation to result in costs associated with indirect impacts. However, the incremental costs associated with such effects were not quantified in the analysis due to significant uncertainty and information limitations. In response to public comments, the Final Impact Analysis Report (see Section 6.10 of the report) provides an expanded discussion of the concerns expressed by the commenters regarding the potential for indirect incremental impacts, such as the potential for future third-party litigation over specific section 7 consultations, time delays, and other sources of regulatory uncertainty, as we describe in more detail below. We considered both the quantitative and qualitative information presented in that report in developing the final critical habitat designation for the Beringia DPS.

The Final Impact Analysis Report acknowledges the concern expressed by commenters that, under certain circumstances, Federal agencies such as USACE (as well as local and State agencies) may choose to manage areas differently after critical habitat is designated. However, we are not aware of plans by any agency to institute future restrictions to provide specific protections for Beringia DPS critical habitat. We note that in the specific NPDES general permits cited as examples by commenters, the critical habitat excluded from coverage reflected the U.S. Environmental Protection Agency's consideration of potential effects of permitted discharges to one particular listed species and its critical habitat. Not all designated critical habitat was excluded from coverage in these permits, and there is no basis to assume that the critical habitat designated for the Beringia DPS in this rule would be excluded. With regard to the concern related to requirements for authorizations that NMFS may issue under the MMPA, as discussed in Section 6 of this report, our review of recent actions in the critical habitat area has not identified a circumstance in which a section 7 consultation would likely result in project modifications solely to avoid impacts to critical habitat for the Beringia DPS. Because it is not possible to predict the timing, frequency, or extent to which this critical habitat designation may trigger specific additional requirements under non-ESA regulatory programs, the report concludes that attempting to forecast such hypothetical outcomes would be speculative.

With regard to comments concerning the potential for the critical habitat to be used in litigation, we note that the specific court case cited by ADNR as an example (*Alaska Oil and Gas Ass'n* v. *Jewell,* Case No. 13–35919 (9th Cir. 2016)) challenged the polar bear critical habitat rule itself. However, when considering the economic impacts of the designation, we do not consider costs of litigation associated with challenging the critical habitat rule. Historical precedent does exist for third-party lawsuits to challenge activities occurring in designated critical habitat. However, these lawsuits typically include claims regarding effects to both listed species and critical habitat, and may include claims under other laws, *e.g.,* the MMPA, the National Environmental Policy Act, etc. Moreover, it is not possible to predict the nature, frequency, timing, or outcome of such lawsuits, and as such, attempting to do so would involve significant speculation. The Final Impact Analysis Report describes the concern and the potential for lawsuits but concludes that determining the

outcomes of such third-party litigation would be speculative.

Regarding concerns related to time delays specifically associated with the need to address critical habitat in future section 7 consultations, Federal agencies are already required to consult with NMFS under section 7 for actions that may affect bearded seals. These consultations typically analyze habitat-related effects to the seals, such as effects to prey, even in the absence of a critical habitat designation. While Federal actions that may affect the essential features of the critical habitat will require an analysis to ensure that these actions are not likely to result in the destruction or adverse modification of the critical habitat, which will impose some minor incremental costs to consultations, we do not expect that this will require substantial additional time or resources, especially for new consultations (see also our response to Comment 57). Further, timelines for section 7 consultations are specified in statute and our implementing regulations and the number of listed species or critical habitats considered in any given consultation does not affect these timelines.

Although there is potential for regulatory uncertainty, whether and to what extent projects or associated economic behavior may be affected due to regulatory uncertainty stemming from the critical habitat designation is significantly uncertain. The types of data that would be necessary to quantify costs associated with regulatory uncertainty, such as data linking the designation to changes in industry economic behavior, are unavailable. As for ADNR's concern that the designation will devalue oil and gas leases, we are not aware of any empirical evidence or studies of such effects for the areas included in the designation, and none were identified in these comments. Therefore, the Final Impact Analysis Report describes the commenters' concerns about potential indirect effects stemming from regulatory uncertainty, as well as the concern expressed by ADNR over potential devaluation of oil and gas leases. However, due to the significant uncertainty and information limitations, it concludes that attempting to forecast changes in economic behavior resulting from regulatory uncertainty on the part of industry relative to this critical habitat designation would be speculative.

Comment 57: One commenter stated that the impacts associated with a critical habitat designation cannot be simply dismissed as mere additional administrative costs in the section 7 consultation context. They noted that section 7 consultations typically require, for example, the preparation of biological assessments, consultant services to identify potential effects of the proposed action and potential mitigation or conservation measures, robust engagement with the relevant federal agencies, and frequent litigation regarding the outcome. They stated that the addition of critical habitat to the consultation process creates additional analytical components with additional potential modifications to the proposed action to avoid any destruction or adverse modification of critical habitat, and that these factors increase the duration of project reviews, impose additional regulatory burdens, and create additional legal risks.

Response: As we stated in our response to Comment 56, Federal agencies have an existing obligation to consult with NMFS to ensure that any action authorized, funded, or carried out by them (*i.e.,* Federal action) is not likely to jeopardize the continued existence of the Beringia DPS. As discussed in Section 6 of the Final Impact Analysis Report, based on the best information available, the Federal actions projected to occur within the timeframe of the analysis that may trigger a section 7 consultation due to the potential to affect one or more of the essential features of the critical habitat also have the potential to affect bearded seals. Thus, we expect that none of the activities we identified would trigger a consultation solely on the basis of this critical habitat designation. Public comments did not provide any new information that could be used to revise this analysis. In addition, as discussed in Section 6 of the Final Impact Analysis Report and in the *Economic Impacts* section of this final rule, at this time, we do not anticipate that section 7 consultations would result in additional requests for project modifications to avoid or minimize adverse modification of critical habitat for the Beringia DPS beyond any modifications that may be necessary to address impacts to the seals (*i.e.,* under the jeopardy standard). In particular, this is because section 7 analyses of the effects of proposed Federal actions on listed species, which are triggered by the threatened status of the Beringia DPS under the ESA, already consider habitat-related impacts to the seals. Although each proposed Federal action must be reviewed at the time of consultation based on the best scientific and commercial data available at that time, it is unlikely that any project modifications are likely to result from such consultations that would be attributable solely to the critical habitat designation, since any modifications required to avoid jeopardy for this species would likely be identical to measures needed to avoid adverse modification of critical habitat. While we recognize that Federal actions that may affect the essential features of critical habitat for the Beringia DPS will require an analysis to ensure that these actions are not likely to result in the destruction or adverse modification of the critical habitat, which will impose some minor additional costs, we do not expect that this will require substantial additional time or resources. Further, timelines for section 7 consultations are specified in statute and our implementing regulations, and the number of listed species or critical habitats considered in any given consultation does not affect these timelines.

As discussed in Section 3.1 of the Final Impact Analysis Report, the estimates of administrative consultation costs applied in the economic analysis are based on a review of consultation records from several field offices across the country, and modifications to reflect our experience with consultations in Alaska. These cost estimates take into consideration the anticipated level of effort that would be required to address potential effects on critical habitat in consultations, as well as the complexity of the consultations (*e.g.,* formal versus informal).

With regard to the comment on legal risks and other indirect impacts of the designation, see our response above to Comment 56.

Comment 58: Several commenters emphasized that oil and gas exploration, development, and production on the North Slope and in adjacent offshore areas provide very substantial economic benefits, and ADNR and another commenter stressed that these activities are of national strategic significance and provide important energy, economic and national security benefits. ADNR and another commenter expressed that Congress established, and courts have affirmed, that leasing, exploration, and development of these resources are a national priority and in the public interest. They added that the present and future contribution of oil and gas from the North Slope of Alaska and from adjacent state and Federal waters meets a substantial portion of our national energy needs. Further, they stated that development of domestic energy resources, including oil and gas located in, and adjacent to, Alaska, is a well-documented matter of national security and is consistent with the well-established mandates of Federal law.

All of these commenters asserted that the proposed critical habitat designation will result in additional section 7 consultations, project modifications, and likely litigation, and that project delays and increased costs may thus result in impediment of oil and gas activities, less exploration, fewer opportunities to discover economic reserves, and therefore, less development and production of domestic oil and gas resources in these areas, to the detriment of local communities, the State of Alaska, and the United States. ADNR expressed similar concerns regarding potential impacts of the designation on development of critical minerals, citing as an example the Graphite One mine project north of Nome. The North Slope Borough commented that the development of natural resources in and adjacent to the North Slope largely supports the regional economy, allows the Borough to provide essential services and other benefits to its residents, and supports the municipal tax base. The Borough expressed concern that because a significant portion of its revenue is derived from taxes on oil and gas infrastructure, additional impacts to these projects as a result of the designation would be felt by the Borough.

Response: As discussed in the *Economic Impacts* section of this final rule and detailed in the Final Impact Analysis Report, the total incremental costs associated with the critical habitat designation for the Beringia DPS within the 10-year post-designation timeframe, in discounted present value terms, were estimated at $563,000 (discounted at 7 percent) to $658,000 (discounted at 3 percent). About 81 percent of the incremental costs attributed to the critical habitat designation are expected to accrue from ESA section 7 consultations associated with oil and gas related activities in the Chukchi and Beaufort seas. To avoid understating the cost estimates, we assumed that a high projected level of oil and gas activity will occur annually, although such a high level of activity is unlikely to occur in each and every year. As detailed in the Final Impact Analysis Report, the costs associated with the designation of critical habitat for the Beringia DPS are expected to primarily consist of additional administrative costs to consider the critical habitat as part of future section 7 consultations, with third-party costs primarily borne by the oil and gas sector. Costs to the oil and gas industry are expected to be limited to administrative costs of adding bearded seal critical habitat to section 7 consultations that are already required to address effects to bearded seals (and potentially other listed species). At this time, we have no information to suggest incremental project modification requests are likely to result from these consultations above and beyond any modification requests related to addressing impacts to bearded seals. Including a critical habitat analysis in consultations would slightly increase permitting costs for oil and gas sector activities, but such costs attributable to this designation are not anticipated to change the level of oil and gas sector activities within critical habitat. As discussed in Section 9.2 of the Final Impact Analysis Report, ESA section 7 consultations have occurred for numerous oil and gas projects within the area of the designation (*e.g.,* regarding possible effects on endangered bowhead whales) without adversely affecting energy supply, distribution, or use. The same outcome is expected relative to critical habitat for the Beringia DPS. This designation is not expected to significantly affect oil and gas production decisions, subsequent oil and gas supply, or the cost of energy production. We have therefore determined that the energy effects of this designation of critical habitat are unlikely to exceed the thresholds in E.O. 13211, and that this rulemaking is not a significant energy action (see *Executive Order 13211, Energy Supply, Distribution, and Use* section). Also, see our responses above to Comment 56 regarding potential indirect impacts of the designation, and Comment 57, regarding section 7 consultation costs, generally.

Comment 59: The North Slope Borough stated that we failed to consider impacts on municipal and village activities, such as construction of sea walls, repair and maintenance of roads, water treatment activities, and building and other infrastructure construction. The Borough commented that these activities will likely require a Federal permit or involve Federal funding, and thus will likely require section 7 consultation and mitigation and/or modifications to avoid adverse modification or destruction of the critical habitat. The Borough stated that the additional effort for consultations and implementation of mitigation measures will add possible delays and substantial costs to local projects such that many of them will no longer be affordable.

Response: The Draft Impact Analysis Report projected the occurrence of Federal activities by level of consultation (formal or informal) over the timeframe of the analysis, including for coastal construction projects, as well as for activities involving ports and harbors (see Table 5–16 and Section 6 of this report). The commenter did not provide specific relevant information or examples of planned municipal or village activities with a Federal nexus that could be used to revise this analysis. As summarized in Table 5–16 of the draft and final versions of the impact analysis report (NMFS 2020, 2021), most of the forecasted consultations for these types of activities are expected to conclude informally (*i.e.,* conclude with a letter of concurrence that the action is not likely to adversely affect the critical habitat rather than requiring a biological opinion). Further, it is not likely that section 7 consultations involving these types of activities would result in additional requests for project modifications attributable to the critical habitat designation given the nature of these activities, their potential to affect the essential features, and the existing need to consider effects on the seals due to the threatened status of the species (which typically includes consideration of habitat-associated threats). With respect to incremental costs of consultations, also see our response to Comment 57.

Comment 60: Several commenters asserted that we failed to fully consider or analyze the economic and other impacts of the critical habitat designation on Alaska Natives, the North Slope Borough, coastal communities in western and northern Alaska, and municipal and village activities in these regions. The commenters stated these impacts would be unreasonably and disproportionately imposed upon Alaska Natives, and in particular, upon residents of the North Slope. The North Slope Borough stated that the development of natural resources in and adjacent to the North Slope largely supports the regional economy, allows for the provision of essential services, supports the municipal tax base, and allows the Borough to provide other benefits to its residents. The Borough stressed that any impact on the development of these natural resources will therefore also impact the Borough and its residents. The Borough added that the proposed rule did not address any of the requirements of E.O. 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations). The Borough noted that the Draft Impact Analysis Report briefly addressed these requirements, but disagreed with the conclusion in the report that no

disproportionate adverse economic impacts are anticipated.

Response: We understand that the potential for impacts of the designation is of significant concern to the commenters. As discussed in the *Economic Analysis* section of this final rule, we have considered and evaluated the potential economic impact of the critical habitat designation under section 4(b)(2) of the ESA, as identified in the Final Impact Analysis Report. Based on this evaluation, we concluded that the potential economic impacts associated with the critical habitat designation are modest both in absolute terms and relative to the level of economic activity expected to occur in the affected area, which is primarily associated with oil and gas activities that may occur in the Chukchi and Beaufort seas. As indicated in our response above to Comment 57, the costs associated with the designation are expected to primarily consist of additional administrative costs to consider the critical habitat as part of future section 7 consultations, with third-party costs primarily borne by the oil and gas sector. The designation is not expected to significantly affect oil and gas production decisions, subsequent oil and gas supply, or the cost of energy production. In addition, as detailed in Section 9.1 of the Final Impact Analysis Report, based on the best information available, the critical habitat designation is expected to result in minimal impacts to small entities. We therefore do not expect the critical habitat designation to have a disproportionately high effect on low income or minority populations and this designation is consistent with the requirements of E.O. 12898. We also underscore here that no restrictions on subsistence hunting by Alaska Natives are associated with the critical habitat designation for the Beringia DPS.

Comment 61: ADNR stated that we neglected to identify Alaska as a potentially affected economic sector or group in the Draft Impact Analysis Report. They stressed that there are substantial economic benefits to Alaska and its citizens from mining, oil and gas, and other activities on the North Slope and in the adjacent state and Federal waters of the Chukchi and Beaufort seas, and additionally, that Alaska has interest in access to and transportation in the proposed critical habitat areas. ADNR and ADF&G expressed concerns that the critical habitat designation will place disproportionate regulatory burdens and economic costs on Alaskans and may result in less mining, oil, gas, and other activities, to the detriment of Alaska.

Response: The draft and final versions of the impact analysis report (NMFS 2020, 2021) analyze in detail the incremental and other relevant impacts of the proposed critical habitat designation for the Beringia DPS. Section 5.4 of these reports describes the economic and social activities within, and in the vicinity of, the critical habitat designation, including Arctic North Slope oil and gas exploration, development and production, mining, ports and coastal construction, commercial fisheries, Alaska Native subsistence, recreation and tourism, commercial shipping and transportation, military activities, and education and scientific activities. These reports considered all relevant economic impacts, and developed cost (and benefit) estimates at an appropriate scale based on the best data available. As discussed in the *Economic Impacts* section of the proposed rule and this final rule, the direct incremental costs of this critical habitat designation are expected to be limited to the additional administrative costs of considering critical habitat for the Beringia DPS in future section 7 consultations. We conclude in the final rule that the potential economic impacts associated with the designation of critical habitat for the Beringia DPS are modest both in absolute terms and relative to the level of economic activity expected to occur in the affected areas. This conclusion has not changed from the proposed rule.

Comment 62: BLM stated that the costs associated with the proposed critical habitat designation were underestimated because we did not address the potential costs of acoustic studies, including the development of acoustic models, that they believe would be needed to understand and mitigate impacts to the proposed acoustic environment essential feature. They recommended that we revise the economic analysis to incorporate estimates of these potential costs and to identify the parties that would bear such costs.

Response: As we explained in our response above to Comment 32, this final rule does not include the proposed acoustic essential feature, and we have therefore evaluated the impacts of the critical habitat designation based solely on the sea ice essential features and the primary prey resources essential feature.

Comment 63: One commenter stated that portions of the proposed critical habitat, particularly along its southern edge and southwest of Nunivak Island, can be important to the groundfish fisheries in some years, in particular for species such as yellowfin sole. The commenter noted that variability in the harvest in recent years seems to be partially related to annual climate conditions, especially the extent of the Bering Sea cold pool, and recommended that given this variability, commercial fisheries data for additional years be included in the analysis of impacts of the designation.

Response: In response to this comment, we have incorporated groundfish fisheries harvest data for additional years into the Final Impact Analysis Report.

Comment 64: Two commenters indicated that they appreciated that we clearly stated in the proposed rule that no restrictions on subsistence hunting are associated with the critical habitat designation. Still, the Marine Mammal Commission recommended that we discuss and highlight in the final rule and in other appropriate outreach materials and fora that the critical habitat designation is not expected to have any adverse impact on Alaska Native subsistence activities. The Commission commented that there is a widely held perception that designating critical habitat has adverse consequences for Alaska Natives who hunt marine mammals, but that is not the case.

Response: As indicated by the commenters and stated in this final rule, although this critical habitat designation overlaps with areas used by Alaska Natives for subsistence, cultural, and other purposes, no restrictions are associated with the designation. We have emphasized this point in public venues, such as the public hearings on the proposed designation, and in our communications with the Ice Seal Committee, the Alaska Native organization with which we co-manage the subsistence use of ice-associated seals under section 119 of the MMPA. We have also conveyed this message in letters sent to tribes and Alaska Native corporations concerning the critical habitat designation. We agree with the Marine Mammal Commission that it is important to continue to highlight this information in appropriate outreach materials and fora.

Benefits of Critical Habitat Designation

Comment 65: Several commenters, including the State of Alaska (ADNR and ADF&G) stated that bearded seals are already sufficiently protected from adverse impacts by the MMPA, CWA, Clean Air Act, Outer Continental Shelf Lands Act, National Environmental Policy Act, Oil Pollution Act of 1990; and other Federal, state, and local regulations. Commenters emphasized that activities such as oil and gas exploration and development are

regulated pursuant to the MMPA to ensure that they have no more than a negligible impact on bearded seals, and referred to the record of incidental take authorizations issued for Arctic oil and gas activities. One commenter stated that USFWS has already determined, and courts have agreed, that the provisions of the MMPA provide a greater level of protection to marine mammals than the ESA. In addition, ADNR stated that the oil and gas industry has coexisted with bowhead whales under MMPA protections for decades, and there has been no attempt to designate critical habitat for this species. ADF&G and another commenter stated that moreover, the proposed designation is redundant with existing habitat protections for polar bears, notwithstanding differences in habitat use between the two species, as there is substantial overlap between the area proposed for designation and the area already designated for polar bears.

Response: We recognize that certain laws and regulatory regimes already protect, to different degrees and for various purposes, U.S. waters occupied by the Beringia DPS, and therefore, to a certain extent, the essential features. However, the existing laws and regulations do not ensure that current and proposed Federal actions are not likely to adversely modify or destroy Beringia DPS critical habitat. For example, regulations under the MMPA provide specific protections for bearded seals but they do not specifically protect the essential features and conservation value of critical habitat for the Beringia DPS. Moreover, critical habitat must be designated regardless of whether other laws or measures already provide protection. *See Natural Res. Def. Council* v. *U.S. Dep't of the Interior,* 113 F.3d 1121, 1127 (9th Cir. 1997) (''Neither the Act nor the implementing regulations sanctions [sic] nondesignation of habitat when designation would be merely *less* beneficial to the species than another type of protection.'').

Regarding the comment that the critical habitat designation is redundant with existing habitat protections for polar bears, we disagree. Bearded seals may use some of the same habitat in the northern Bering, Chukchi, and Beaufort seas used by polar bears, but the critical habitat designation and listing protections for polar bears are established to promote the conservation and recovery of that species specifically. Polar bear critical habitat does not explicitly protect the physical and biological features essential to the conservation of the Beringia DPS. Further, section 7 consultations involving polar bear critical habitat would not address impacts to bearded seals' habitat.

Comment 66: ADF&G asserted that designating very large areas as critical habitat dilutes or undermines the conservation benefits it supplies compared with targeting designations toward areas with higher documented conservation value, and results in designations with little or no benefits to listed species. They stated that this is because the evaluation of whether a proposed Federal action is likely to destroy or adversely modify critical habitat under section 7 of the ESA is based on impacts to the whole of the designated critical habitat. They argued that as a result, when evaluating the impacts of a Federal action on a large critical habitat designation in a section 7 consultation, negative impacts to a ''genuinely critical'' area within a species' range are ''swamped'' by the sheer size of the designated critical habitat. They stated that therefore, the proposed designation for the Beringia DPS would simply add a regulatory layer under section 7 of the ESA, while providing little or no educational or other benefits. They added that their analysis provided to NMFS to inform the designation of critical habitat for listed DPSs of humpback whales demonstrates that designating very large areas will likely provide no conservation benefits to these populations while adding unnecessary regulatory burdens to oil and gas operations, transportation, and other uses. Two commenters also stated that because we do not anticipate that additional requests for project modifications will result specifically from designation of critical habitat for the Beringia DPS, the designation would provide little or no conservation benefit to the species beyond what is already afforded by virtue of its listing under the ESA.

Response: The ESA requires us to designate critical habitat to the maximum extent prudent and determinable. Critical habitat within the geographical area occupied by the species as defined in section 3 of the ESA includes areas on which are found those physical or biological features that are essential to the conservation of the listed species and may require special management considerations or protection (16 U.S.C. 1532(5)(A)). The term ''conservation'' is further defined in section 3 of the ESA as 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)). Therefore, a critical habitat designation must be determined based on consideration of the nature of the habitat features that support the life history and conservation needs of the particular listed species. As we discussed in the proposed rule and in our response above to Comment 35, bearded seals have a widespread distribution, their movements and habitat use are strongly influenced by the seasonality of sea ice cover, and they can range widely. Moreover, the habitat features they rely upon, in particular the sea ice essential features, are dynamic and variable on both spatial and temporal scales. As such, we identified where the essential features occur at a coarse scale, as this is as much specificity as the best scientific data available allows.

Our critical habitat determination for the Beringia DPS reflects these factors, and our analysis is appropriate and sufficient to designate critical habitat as defined by the ESA. Although we reviewed the analysis ADF&G provided to NMFS to inform the designation of critical habitat for listed DPSs of humpback whales, as we discussed in detail in the preamble to the final rule for that designation (75 FR 21082, April 21, 2021), the ESA, implementing regulations at 50 CFR 424.12, and case law guide us in our evaluation of areas that meet the definition of critical habitat, and none of these sources provide support for the analytical approach advocated by the commenter.

We also disagree with the assumption that the conservation benefits of critical habitat are strictly limited to any changes to Federal actions that are made to avoid destruction or adverse modification of critical habitat. Once designated, critical habitat provides specific notice to Federal agencies and the public of the geographic areas and physical and biological features essential the conservation of the species, as well as information about the types of activities that may reduce the conservation value of that habitat. Thus, designation of critical habitat can inform Federal agencies of the habitat needs of the species, which may facilitate using their authorities to support the conservation of the species pursuant to section 7(a)(1) of the ESA, including to design proposed projects in ways that avoid, minimize, and/or mitigate adverse effects to critical habitat from the outset. As discussed in the *Benefits of Designation* section of this final rule and in more detail in the Final Impact Analysis report, in addition, other benefits are recognized, such as public awareness of the status of the species and its habitat needs,

which can stimulate research, as well as outreach and education activities.

Comment 67: One commenter expressed concern that because we indicated that the critical habitat designation is not likely to result in additional requests for project modifications, we have made a preemptive determination that no changes to projects will be necessary in any future section 7 consultation to avoid adverse modification or destruction of the critical habitat. The commenter stated that this also conveys the impression that NMFS will not meaningfully evaluate the effects of proposed Federal action on the critical habitat in future consultations. The commenter added that given the way that NMFS conducts consultations on a case-by-case basis with an extremely restrictive definition of cumulative effects, and that there have been very few consultations in which NMFS has issued an adverse modification finding, it is unlikely that the designation will provide additional protection to the ecosystem upon which bearded seals of the Beringia DPS depend.

Response: We disagree with these comments. We are making no preemptive determinations about future section 7 consultations in this critical habitat designation. While we cannot predict the outcome of future consultations with certainty, on the basis of the best scientific and commercial data available, we have not identified a circumstance in which this critical habitat designation would be likely to result in additional requests for project modifications in section 7 consultations. This does not mean that Federal actions will not undergo meaningful and rigorous review through the section 7 consultation process or that project modifications specifically designed to avoid impacts to critical habitat could never occur. Rather, it means only that we have no basis to conclude that such modifications are likely to occur and that therefore incremental impacts of this critical habitat designation should be forecasted in our impacts analysis. Based on the best information available regarding potential future Federal actions, and given the high level of existing baseline protections for the seals under the MMPA and due to their listing under the ESA, project modifications made to lessen impacts to bearded seals or to avoid jeopardy would likely encompass measures needed to reduce impacts to (and potentially avoid adverse modification of) critical habitat. That is, while section 7 consultations may result in project modifications, such modifications would likely be necessary to protect bearded seals in addition to protecting the essential features on which the species relies.

In addition, as we explained in our response above to Comment 66, the benefits of critical habitat designation cannot simply be measured by the outcome of section 7 consultations, as there are other benefits of critical habitat that extend beyond the direct benefits through section 7 consultations. Regarding consideration of cumulative effects, in formulating our biological opinion as to whether or not a particular proposed Federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat, our regulations at 50 CFR 424.14 require that we assess the status of the species and the critical habitat (including threats and trends), the environmental baseline of the action area, and cumulative effects, which in this context are defined to be the effects of any unrelated future non-Federal activities that are reasonably certain to occur within the action area. The summary of the status of the critical habitat considers the historical and past impacts of activities across time and space. The effects of any particular action are thus evaluated in the context of this assessment, which incorporates the effects of all current and previous actions. This avoids situations where each individual action is viewed as causing only relatively minor adverse effects but, over time, the aggregated effects of these actions would erode the conservation value of the critical habitat (81 FR 7214, February 11, 2016; 84 FR 44976, August 27, 2019).

Comment 68: A number of commenters stated that critical habitat is important to supporting the conservation of bearded seals. Some commenters noted the greater protective standard afforded to critical habitat under section 7 of the ESA will help address threats associated with activities such as oil and gas development, which can help increase the species' resilience to climate change. Some commenters also stated that critical habitat provides important public outreach and education opportunities that enhance conservation, including furthering awareness of the impacts of climate change, the plight of listed species, and the conservation value of critical habitat areas. In addition, some commenters suggested that benefits resulting from the designation could extend to other species that rely on the habitat, such as polar bears and ringed seals.

Response: We agree with these comments.

Comment 69: One commenter stated that the proposed designation would provide no meaningful public education benefits because Alaska Native communities and regulated industries that undertake activities within the potentially designated areas are already fully familiar with the species and have implemented protective measures pursuant to the MMPA for decades, and these areas are otherwise largely devoid of human activity. Another commenter also questioned how non-regulatory benefits discussed in the proposed rule, such as enhanced conservation or indirect benefits to subsistence users, would actually materialize, and stated that the overlap of critical habitat and its protections for bearded seals, Arctic ringed seals, and polar bears seems purely redundant and without the benefit of any additional protection.

Response: As discussed in the *Benefits of Designation* section of this final rule, and in more detail in the Final Impact Analysis Report, we conclude that designation of critical habitat for the Beringia DPS can have a number of indirect benefits. We recognize that Alaska Native subsistence hunting communities adjacent to the Beaufort, Chukchi, and northern Bering seas are very familiar with the species and its habitat, as are certain other entities operating within Beringia DPS critical habitat. Still, it is our experience that after critical habitat has been designated for listed species, increased awareness of the habitat needs of listed species on the part of the public as well as planners, government entities, and others, has promoted the conservation of the species. For example, the designation provides specific notice of the habitat features essential to the conservation of the Beringia DPS, which can facilitate the design of proposed projects by Federal agencies in ways that minimize or avoid effects to critical habitat. However, we also note that the ESA requires designation of critical habitat for listed species to the maximum extent prudent and determinable, regardless of protections afforded by other environmental laws or increased public awareness of the habitat needs of listed species associated with critical habitat designations.

Comments Concerning Exclusions

Comment 70: A group of oil and gas trade associations stated that all critical habitat proposed for designation should be excluded, or alternatively, at least all areas in which human activities occur, or will foreseeably occur, should be excluded from designation because of the importance to the Alaska economy

and national energy needs of oil and gas exploration and development, and the strong potential for the designation to impose unnecessary costs and litigation risks on the oil and gas industry, Alaska Native communities, and state and local governments. They asserted that the economic impacts of designation substantially outweigh any very marginal benefits of designation, and stated that: (1) Oil and gas activities, as well as Alaska Native subsistence harvest of bearded seals, are not expected to threaten the species or its habitat in the foreseeable future, as evidenced in the final rule listing the Beringia DPS as threatened; (2) oil and gas activities, as well as other activities, are regulated pursuant to the MMPA and other Federal and state laws to ensure that they have no more than a negligible impact on bearded seals; and (3) the designation will result in no benefits to the species under section 7 of the ESA in that there are no measures or protections necessary for conservation of bearded seals that are not already imposed by the MMPA, and NMFS does not anticipate that the designation will result in additional project modifications.

Response: Section 4(b)(2) of the ESA provides that the Secretary shall designate critical habitat on the basis of the best scientific data available after taking into consideration the economic impact, impact on national security, and any other relevant impacts of specifying any particular area as critical habitat. The economic analysis included in the Final Impact Analysis Report was developed to address the potential economic impacts of the critical habitat designation. As discussed in the *Economic Impacts* section of this final rule and detailed in the Final Impact Analysis Report, the total incremental costs associated with the critical habitat designation for the Beringia DPS within the 10-year post-designation timeframe, in discounted present value terms, were estimated at $563,000 (discounted at 7 percent) to $658,000 (discounted at 3 percent). About 81 percent of the incremental costs attributed to the critical habitat designation are expected to accrue from ESA section 7 consultations associated with oil and gas related activities in the Chukchi and Beaufort seas. To avoid understating the cost estimates, we assumed that a high projected level of oil and gas activity will occur annually, although such a high level of activity is unlikely to occur in each and every year. After thoroughly considering the available information, we conclude that the potential economic impacts associated with this designation are modest both in absolute terms and relative to the level of economic activity expected to occur in the affected area. This has not changed from the proposed rule.

We disagree with the characterization of the benefits of the critical habitat designation as ''very marginal.'' The designation of critical habitat and identification of essential features will provide substantive benefits to the conservation of the Beringia DPS. At a minimum, the designation ensures that Federal agencies, through the consultation process under section 7 of the ESA, consider the impacts of their projects and activities on critical habitat for the Beringia DPS, and will focus such future consultations on the essential features of the critical habitat. Designation of critical habitat thus provides clarity and consistency to Federal action agencies regarding specific areas and habitat features that should be considered and addressed during these consultations. Designation of critical habitat can also inform Federal agencies of the habitat needs of the species, which may facilitate using their authorities to support the conservation of the species pursuant to section 7(a)(1) of the ESA, including to design proposed projects in ways that avoid, minimize, and/or mitigate adverse effects to critical habitat. Other benefits of the designation include enhanced public awareness of the habitat needs of the species, which can help focus conservation efforts (for additional details, see *Benefits of Designation* section, as well as the Final Impact Analysis Report). We have therefore not exercised the discretion delegated to us by the Secretary to conduct an exclusion analysis to further consider and weigh the benefits of designation and exclusion of any particular area based on economic impacts.

Comment 71: A group of oil and gas trade associations stated that we should clarify that the proposed regulatory language indicating that permanent manmade structures such as boat ramps, docks, and pilings that were in existence by the effective date of the rule are not part of critical habitat also applies to existing infrastructure associated with North Slope and adjacent Outer Continental Shelf (OCS) oil and gas activities. In addition, they stated that we should exclude from designation the infrastructure, ice roads, trails, pads, and surrounding waters necessary to maintain safe access to the facilities identified and described in their comments, including Milne Point Unit F-Pad, Oliktok Point and Spy Island Drill Site, Oooguruk Drill Site, and Northstar Unit Seal Island). They stated that the benefits of excluding these areas from designation far outweigh any benefits of designation, and are justified because they are fundamental to continuity and safety of oil and gas operations and: (1) The identified areas are not essential to the conservation of bearded seals, nor do they require special management considerations or protection; (2) the areas are extremely small relative to the amount of habitat available to bearded seals; and (3) these types of facilities have been constructed and maintained for decades without any indication that these exclusions would impede recovery or have any population level impacts on bearded seals.

Response: With regard to the proposed regulatory language indicating that permanent manmade structures in existence are not a part of the designation, we find that this language provides sufficient clarity, as it applies to any such permanent manmade structures, including those in existence that are associated with oil and gas activities, and the final rule includes that same language. While activities such as dredging and screeding occur in association with the areas requested for exclusion, this does not necessarily indicate that there are likely to be significant additional costs or other indirect impacts from including these areas in the designation. Where there is a Federal nexus for an activity occurring in these areas, we expect that there will in most, if not all cases, be an existing need to address the impacts of these activities on bearded seals themselves. In other words, for activities such as dredging and screeding, the requirement to consult under section 7 of the ESA would be triggered even in the absence of Beringia DPS critical habitat. These consultations typically analyze habitat-related effects to the seals, even in the absence of a critical habitat designation. While Federal actions that may affect the essential features of critical habitat for the Beringia DPS will require an analysis to ensure that these actions are not likely to result in the destruction or adverse modification of the critical habitat, we do not expect that this will require substantial additional time or resources, especially for new consultations. We have therefore not exercised the discretion delegated to us by the Secretary to conduct an exclusion analysis to further consider and weigh the benefits of designation and exclusion of the identified areas based on economic impacts. Further, under the ESA, the relevant question is whether the identified areas contain

physical or biological features essential to the conservation of the Beringia DPS, not whether use of these areas is essential to conservation of bearded seals or whether these areas (as opposed to the features within them) require special protection. Because we find that one or more essential features occur in all parts of the specific area designated as critical habitat, to the extent these comments are suggesting the identified areas do not meet the definition of critical habitat, we disagree. Finally, because we have revised the proposed shoreward boundary of critical habitat in this final rule, the areas that the commenter requested be excluded are not included in the final designation, as the shoreward boundary in the Beaufort Sea is now defined as the 20-m isobath (relative to MLLW) rather than as the line of MLLW (see Summary of Changed From the Proposed Designation).

Comment 72: The North Slope Borough stated that we should exclude from designation 10-mile buffer zones around all North Slope villages and all lands conveyed to the North Slope Borough or Alaska Native corporations in order to prevent detrimental economic impacts and possible delays in municipal-type projects or other developments that require Federal approval or rely on Federal funding. They indicated that such activities include, but are not limited to, erosion protection, road construction, water treatment activities, port infrastructure, and municipal expansion. They stated that although these activities may not rise to the level of adverse modification, Borough communities and residents should not be forced to bear the additional section 7 consultation costs or possible delays in development of projects associated with maintaining basic services. In addition, they stated that we should exclude from designation similar areas around locations that are currently being developed for oil and gas, as a significant portion of the Borough's revenue is derived from taxes on oil and gas infrastructure. They also commented that without the collaboration of seal hunters and Alaska Native communities who live in those areas, NMFS would be unable to adequately monitor bearded seals. They suggested that designating critical habitat adjacent to coastal villages could alienate residents of subsistence communities, and thus there is a real collaborative benefit to such exclusions. The Ice Seal Committee similarly stated that we must exclude from designation aquatic areas around villages, Alaska Native corporation lands, and other lands where development and infrastructure-related activities are occurring in consideration of the harmful effects of the designation on Alaska Native communities. Additionally, ADF&G requested that a distance of 20 miles around communities and the Beaufort Sea coast be excluded from designation to avoid unnecessary disproportionate regulatory burdens to those areas that are not balanced by the limited conservation benefits provided to bearded seals.

Response: While we recognize that the proximity of a number of coastal communities and certain other developed sites to Beringia DPS critical habitat raises concerns about potential impacts on human activities, our final economic analysis did not indicate any disproportionate or significant economic impacts are likely to result from the designation. The critical habitat designation includes no regulatory restrictions on human activities, and where no Federal authorization, permit, or funding is involved, activities are not subject to section 7 consultation. For the types of actions we expect to occur in coastal villages or on Alaska Native lands that have a Federal nexus, based on our experience consulting on such activities, we do not expect that the additional need to consult on the critical habitat would result in additional or novel project modifications beyond those that result from consultations that are already required due to the threatened status of the species and the MMPA (see also our response to Comment 59). We have therefore not exercised the discretion delegated to us by the Secretary to conduct an exclusion analysis to further consider and weigh the benefits of designation and exclusion of buffers around the requested areas based on economic or any other relevant impacts. In addition, waters adjacent to coastal villages within the 10-mile and 20-mile distances requested for exclusion by the commenters overlap to lesser extent with the final critical habitat because the shoreward boundary of the designation has been shifted seaward to the 20-m isobath (relative to MLLW) in the Beaufort Sea and northeastern Chukchi Sea, the 10-m isobath (relative to MLLW) in the remainder of the Chukchi Sea, and the 5-m isobath (relative to MLLW) in the Bering Sea, from the proposed boundary of MLLW (see Summary of Changes From the Proposed Designation section).

With regard to the comment concerning the effect of the critical habitat designation on NMFS's working relationships with seal hunters and Alaska Native communities, we recognize that Alaska Natives make important contributions to the conservation and management of bearded seals. NMFS works closely with the North Slope Borough and other partners to implement co-management and conserve marine mammals. We understand that a number of parties have concerns about ESA listings and critical habitat designations, but we are optimistic that such concerns will not impair our working relationships with co-management partners and other stakeholders over the long term, especially given our continued efforts to provide accurate information regarding the effects of this designation.

Regarding exclusions from critical habitat of buffers around locations where oil and gas development is occurring, we do not consider exclusion from critical habitat to be appropriate in this case. The primary industrial activities occurring within Beringia DPS's critical habitat are associated with the oil and gas industry. Areas of importance to the oil and gas industry within the critical habitat include the physical and biological features essential to the conservation of the Beringia DPS, and there are conservation benefits to bearded seals if the areas requested for exclusion remain in the designation. Moreover, the presence of designated critical habitat for other marine mammal species has not resulted in the inability of the oil and gas industry to engage in exploration, development, and production activities. Regarding benefits of the designation, also see our response to Comment 27.

Comment 73: Two commenters stated that we should exclude from designation areas that are ice-free at certain times of the year and that support activities that are vital and necessary for residents in northern coastal communities, such as shipping lanes used by vessels to transport the vast majority of goods and services, to ensure that there are no impacts on such activities. One commenter stated that from approximately mid-June in some regions through September this shipping not only transports goods, but also serves as a cultural link among coastal Alaska Native communities.

Response: The critical habitat designation would not preclude or restrict shipping activities. Section 7 consultation requirements apply only when a Federal action is involved (*i.e.,* an action authorized, funded, or carried out by a Federal agency). We are not aware of a Federal nexus for the vessel traffic referred to by the commenters such that this activity would be subject

to section 7 consultation. As summarized in the *Economic Impacts* section of this final rule, and discussed in more detail in the Final Impact Analysis Report, we anticipate that the impacts of the designation will be limited to incremental administrative effort to consider potential adverse modification of Beringia DPS critical habitat as part of future section 7 consultations, and that most of these consultations will be associated with oil and gas activities. Therefore, we find that there is not a clear basis to exercise the discretion delegated to us by the Secretary to conduct an exclusion analysis to further consider and weigh the benefits of designation and exclusion of shipping lanes.

Legal and Procedural Comments

Comment 74: Several commenters cited our regulations at 50 CFR 424.12(a)(1)(ii) in stating that we should determine that designation of critical habitat is not prudent for the Beringia DPS, in particular, because the primary threats to the species stem solely from climate change, and therefore, they cannot be addressed through management actions resulting from section 7 consultations. Commenters also referred to the preamble to the 2019 final rule that revised portions of the regulations at 50 CFR part 424, which discussed this newly added provision relative to listed species experiencing threats stemming from climate change. Additionally, one commenter pointed to our statement in the proposed critical habitat rule regarding our inability to draw a causal linkage between any particular single source of GHG emissions and identifiable effects on the proposed essential features. Commenters added that there is a strong basis for determining that designation would not be prudent because: (1) The Beringia DPS is sufficiently protected under existing laws and regulations, including the MMPA; (2) the species is not threatened or otherwise negatively impacted by any of the regulated activities that occur within its range; (3) NMFS anticipates that the designation will not result in additional project modifications through section 7 consultations; and (4) there are insufficient data available to support the identification of critical habitat. ADF&G also contended that critical habitat is not determinable, citing some similar considerations. The Ice Seal Committee likewise indicated that they believe designation of critical habitat for the Beringia DPS is not necessary or prudent at this time.

Response: Section 4(a)(3)(A) of the ESA requires that we designate critical habitat to the maximum extent prudent and determinable at the time a species is listed. Finding that critical habitat is not determinable at the time of listing allows NMFS to extend the deadline for finalizing a critical habitat designation by one year under section 4(b)(6)(C)(ii) of the ESA (16 U.S.C. 1533(b)(6)(C)(ii)). At the end of the 1-year extension, NMFS must use the best scientific data available to make the critical habitat determination. When we listed the Beringia DPS as threatened in December 2012, critical habitat was not determinable. Subsequently, we researched, reviewed, and compiled the best scientific data available to develop a critical habitat designation for the Beringia DPS. Critical habitat is now determinable.

With regard to making a ''not prudent'' determination, our regulations at 50 CFR 424.12(a)(1) provide a non-exhaustive list of circumstances in which we may, but are not required to, find that it would not be prudent designate critical habitat. In 2019, several revisions to this regulatory provision were finalized, including the addition of the following circumstance, cited by commenters, in § 424.12(a)(1)(ii): The present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or threats to the species' habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the ESA (84 FR 45020, August 27, 2019). Here, the Beringia DPS is threatened throughout all of its range by ongoing and projected reductions in sea ice habitat (77 FR 76740, December 28, 2012). Further, the threats to the essential features of Beringia DPS critical habitat do not stem solely from causes that cannot be addressed through management actions from consultations under section 7(a)(2) of the ESA. Rather, as we discussed in the proposed rule, we identified four primary sources of threats to the essential features of Beringia DPS critical habitat—climate change, oil and gas activity, marine shipping and transportation, and commercial fisheries—that may require special management considerations or protection for the essential features. The situation for the Beringia DPS thus differs from the scenarios discussed in the preamble to the 2019 revisions to the ESA regulations in which threats to the listed species' habitat stem solely from climate change. Additionally, if a listed species does fall into that category, a not prudent finding is not mandatory, as we may determine that designating critical habitat could still contribute to the conservation of the species. Moreover, the other reasons given by the commenters in support of making a ''not prudent'' determination (*e.g.,* whether existing protections are sufficient and whether project modifications in section 7 consultations result from the designation) do not provide any basis for determining that the Beringia DPS falls within any of the other circumstances identified in our regulations at 50 CFR 424.12(a)(1) in which we may determine a designation would not be prudent. The identification of critical habitat is not expected to increase the degree of threat to the species, areas within U.S. jurisdiction provide more than negligible conservation value for this species, and a specific area meets the definition of critical habitat.

Comment 75: Several commenters stated that critical habitat is unnecessary to conserve the Beringia DPS because the species is healthy and abundant, widely distributed throughout its historical range, and has not shown any indication of a decline in population. They stated that moreover, the Beringia DPS was listed as threatened under the ESA based on impacts to habitat from climate change projected to occur decades into the future. They questioned expending resources on developing a critical habitat designation in this circumstance.

Response: As we indicated in our response to Comment 74, the ESA requires that we designate critical habitat to the maximum extent prudent and determinable at the time a species is listed under the ESA, or within one year of listing if critical habitat is not determinable at that time. The comments regarding abundance, distribution, and population trends are relevant to ESA listing decisions (and were addressed in the final rule listing the Beringia DPS as threatened; see 77 FR 76740, December 28, 2012), but they do not have any bearing on whether critical habitat should be designated. Habitat is a fundamental aspect of conserving any species, and as discussed above, we are required to designate critical habitat for listed species except in the very limited circumstances in which it is determined not to be prudent.

Comment 76: One commenter stated that we should delay designation of critical habitat until after completing the ongoing 5-year review of the species under the ESA.

Response: The ESA requires us to designate critical habitat, to the maximum extent prudent and determinable, at the time species are

listed (16 U.S.C. 1533(a)(3)(A)(i)). If designation is not then determinable, we may extend this deadline by not more than one additional year. A lawsuit was filed in Federal court alleging we did not meet the statutory deadline to designate critical habitat, and under a court-approved stipulated settlement agreement, we must complete a final critical habitat determination by March 15, 2022 (see Background section). We cannot further delay the statutory requirement to designate critical habitat in order to complete the 5-year review.

Comment 77: One commenter stated that because the recent amendments to our joint NMFS/USFWS regulations implementing section 4 of the ESA (84 FR 45020, August 27, 2019; 85 FR 81411, December 16, 2020) are currently the subject of several lawsuits and are included in a list of regulatory actions that are being reviewed by the current administration, we should not rely on those regulatory amendments in designating critical habitat for the Beringia DPS.

Response: In designating critical habitat, we are required to adhere to the ESA implementing regulations that are currently in effect. The regulatory amendments published on August 27, 2019, became effective and applicable for proposed critical habitat rules published after September 26, 2019. However, those recent revisions did not materially change our determination of critical habitat for the Beringia DPS because they involve the procedures and criteria used for designating unoccupied areas and making discretionary determinations that designating critical habitat would not be prudent. A regulatory amendment published on December 16, 2020, which added a definition of ''habitat'' to our ESA implementing regulations, became effective on January 15, 2021, and is applicable to critical habitat rulemakings for which a proposed critical habitat rule is published after that date. As a result, that rule does not apply to the critical habitat rulemaking for the Beringia DPS. We note, however, that the new regulatory definition of ''habitat'' is consistent with our consideration of habitat in designating critical habitat for the Beringia DPS.

Comment 78: The North Slope Borough and the Ice Seal Committee expressed concern that we did not adequately inform or consult with the Ice Seal Committee during preparation of the proposed rule, and stated that the Ice Seal Committee membership has a significant amount of IK and experience that is directly relevant to various elements of the designation. They requested that we consult with the Ice Seal Committee and provide the opportunity to provide recommendations concerning the critical habitat designation prior to proceeding further with the designation. The Ice Seal Committee further commented that given that bearded seals are essential for subsistence and the continuation of traditional ways of life, this consultation and any subsequent regulatory actions must be based on IK of threats to the species and the conservation actions considered necessary. In addition, another commenter urged us to conduct additional meaningful outreach that engages local Alaska Native hunters and other experts and consider their input in developing the critical habitat designation. In addition, one commenter stated that it appeared that no Alaska Native Indigenous experts provided review and input on the proposed designation prior to its publication.

Response: We understand the concerns expressed by the Ice Seal Committee about coordination and input on the designation of critical habitat for the Beringia DPS, and recognize that Alaska Native subsistence hunting communities have unique knowledge of bearded seals, which are an essential traditional subsistence resource. We gave presentations and updates to the Ice Seal Committee on the designation of critical habitat for bearded seals and sought their input beginning in 2013. Prior to developing a proposed critical habitat designation, we discussed the process for developing the proposal during the Ice Seal Committee co-management meeting in January 2020, where we reviewed a list of relevant questions regarding the identification of critical habitat for the Ice Seal Committee's consideration and input. At that meeting, we also distributed an informational flyer that addressed the designation process and related topics. In September 2020, we provided an update to the Ice Seal Committee by email about the schedule for issuing the proposed designation and related information. In January 2021, we notified the Ice Seal Committee by email in advance of the scheduled publication of the proposed rule, and we subsequently followed up by letter regarding the proposed designation and the comment period on the proposal. During the Ice Seal Committee co-management meeting in February 2021, we presented information regarding the proposed designation, the comment period, and the schedule for hearings, and we highlighted the types of data and information we were particularly seeking to inform development of the final designation. We also provided information to the Ice Seal Committee regarding the public hearings by email. In response to their requests to do more to publicize the proposed designation and the scheduled hearings, we provided a flyer to the Ice Seal Committee to share and we arranged to run public service announcements on the radio to inform people about the upcoming hearings. During the Ice Seal Committee meeting in September 2021, we provided an update on the status of development of the final critical habitat designation and sought input about our efforts to coordinate with, and gain input from, the Ice Seal Committee regarding the designation. We will continue to make efforts to improve our communications with the Ice Seal Committee on matters pertaining to the conservation and management of ice seals in Alaska. With regard to the comments concerning our consideration of IK, also see our response to Comment 23.

Regarding the comment concerning review of the proposed designation by Alaska Native Indigenous experts prior to publication, we sought such input from Alaska Native hunters, including some elders with considerable IK, during Ice Seal Committee meetings as discussed in the preceding paragraph. In developing the final critical habitat designation, we fully considered all of the comments received on the proposed rule, including from the Ice Seal Committee, some Ice Seal Committee partner organizations, Alaska Native hunters, and residents of western and northern coastal communities.

Comment 79: The Ice Seal Committee expressed concern that NMFS is not sufficiently providing notice of regulatory actions or engaging with Alaska Native ice seal hunters. To promote outreach and engagement with the Alaska Native community, the Ice Seal Committee suggested that we prepare and distribute handouts that summarize proposed and final regulatory measures that clearly identify implications and requirements for affected Alaska Native hunters. The Ice Seal Committee committed to assisting NMFS in these efforts. Another commenter similarly urged NMFS to work with Alaska Native organizations to develop improved processes to ensure meaningful outreach and consultation. In addition, another commenter urged NMFS to engage in consultation with Tribes and Alaska Native corporations going forward before drafting and publishing proposed rules, so the proposed rules can

incorporate and reflect the expertise of Indigenous Alaskans from the start.

Response: We understand and welcome the Ice Seal Committee's interest in furthering our communications and engagement with Alaska Native communities and ice seal hunters, and we will continue to work closely with them regarding conservation and management issues related to ice seals. We note that the primary regulatory impact of critical habitat designation is that actions authorized, funded, or carried out by Federal agencies, and that may affect critical habitat, must undergo consultation under section 7 of the ESA to assess the effects of such actions on critical habitat, and must ensure that their actions are not likely to destroy or adversely modify critical habitat. We do not expect this critical habitat designation to have any adverse impact on Alaska Native subsistence activities. We also do not expect the critical habitat designation to result in any new reporting, sampling, or other procedural requirements for Alaska Native subsistence harvests. Regarding the comment about consultations with Tribes and Alaska Native Corporations, we contacted potentially affected tribes and Alaska Native Corporation by mail and offered them the opportunity to consult on the designation of critical habitat for the Beringia DPS and discuss any concerns they may have. We received no requests for consultation in response to that mailing.

Comment 80: One commenter stated that navigating the NMFS website was challenging and made it more difficult to review all the relevant information and submit written comments on the proposed critical habitat designation.

Response: The commenter may be referring to the eRulemaking Portal where we accepted electronic comments on the proposed rule and the documents associated with the proposal could be accessed. This website transitioned to a new interface during the comment period on the proposed rule, which may have complicated use by the commenter. Although electronic comments on the proposal were accepted during the comment period via the eRulemaking Portal, we also provided links to the documents associated with this rulemaking on our website, and we accepted written comments by mail.

Other Comments

Comment 81: The Marine Mammal Commission and two others commenters noted that as sea ice extent continues to decline substantially Arctic-wide, and the timing, rate, and extent of seasonal sea ice loss and formation in the Bering and Chukchi seas continue to shift, areas currently considered to be critical habitat may change. They recommended that we therefore review the critical habitat designation for the Beringia DPS every 5 years, or as substantial new information becomes available, to evaluate whether there is a need to revise the designation.

Response: We anticipate that future research will add to our knowledge of the habitat needs of bearded seals and how changing sea ice and ocean conditions are affecting the seals and the habitat features essential to their conservation. If additional data become available that support a revision to this critical habitat designation, we can consider using the authority provided under section 4(a)(3)(A)(ii) of the ESA to revise the designation, as appropriate.

Comment 82: The Marine Mammal Commission stated that finding an effective way of addressing the risks posed by climate change is likely the only way to fulfill the ESA's mandate to conserve the Beringia DPS and the ecosystem on which they depend. The Commission recommended that we work with key Federal agencies on a coordinated strategy to address the broader underlying problem—the need to reduce GHG emissions, thereby mitigating the negative impacts of climate change on Arctic marine mammals, including bearded seals, and their habitat. They noted that this strategy should be supported by work with Federal and state agencies, co-management partners, and local communities via existing research partnerships to foster routine inclusion of IK along with conventional science in assessing and predicting habitat transformation in the Arctic. In addition, other commenters stated that addressing loss of sea ice habitat would require international collaboration.

Response: We agree that addressing the effects of climate change on bearded seals and their habitat will require continued monitoring and research, and we look forward to working with our partners and stakeholders in furthering the conservation of this species. In addition to ongoing research on bearded seals conducted by NOAA's Marine Mammal Laboratory, NOAA provides climate analyses, sea ice forecasts, and other information to help other agencies and the public understand changes in the Earth's atmosphere and climate. These types of information products are used by a variety of state, Federal, and international bodies to inform decisions related to the root causes of climate change. NOAA also provides funding to and works cooperatively with other agencies on these efforts.

Comment 83: Two commenters stated that although there are sufficient data available to support the designation, additional studies and data are needed.

Response: As we explain elsewhere in this final rule (see Critical Habitat Definition and Process section), the ESA requires that we base critical habitat designations on the best scientific data available, provided that these data form a sufficient basis to determine that the ESA's standards are met for the specific area designated, and we have done so in this final rule. Nonetheless, we agree that additional research would add to the ecological knowledge of this species and potentially improve conservation efforts and management decisions.

Comment 84: One commenter cited several references pertaining to sea ice extent and dynamics that they stated provide additional recent information we should consider relative to bearded seal seasonal movements.

Response: We reviewed and considered the references provided by the commenter; however, we found they do not provide new information that changed our understanding of bearded seal seasonal movements.

Summary of Changes From the Proposed Designation

Based on our consideration of comments and information received from peer reviewers and the public on our January 9, 2021, proposed rule (86 FR 1433), and additional information we reviewed as part of our reconsideration of issues discussed in the proposed rule, we made several changes from the proposed critical habitat designation. These changes are briefly summarized below and discussed in further detail in the relevant responses to comments and other sections of the preamble of this final rule.

(1) *Eliminated as an essential feature* ''*acoustic conditions that allow for effective communication by bearded seals for breeding purposes within waters used by breeding bearded seals.*'' In the proposed rule, we identified an acoustic-related essential feature because acoustic communication plays an important role in bearded seal reproductive behavior. We explained that, although we recognized the limited nature of the scientific data available to inform our identification of acoustic conditions as an essential feature, this information represented the best scientific information available, and we were not aware of any other data that would allow us to describe in greater detail the acoustic conditions necessary

to avoid impairing affective communication by bearded seals for breeding purposes. We indicated that we would re-evaluate this proposed essential feature in developing the final critical habitat designation for the Beringia DPS. We specifically solicited comments concerning the proposed inclusion of acoustic conditions as an essential feature, as well as additional data that would assist Federal action agencies and NMFS in determining characteristics of noise that result in adverse effects on the feature. Several public comments expressed support for inclusion of this proposed essential feature, and most noted concerns about potential impacts on bearded seal communication from anthropogenic noise and other factors. In addition, some peer reviewers and commenters identified scientific literature that they suggested might provide relevant data. Other public comments questioned the validity of acoustic conditions as an essential feature, arguing that our qualitative description was too vague, and that lack of available information regarding the relevant acoustic conditions would make it difficult to identify and meaningfully evaluate when an activity may have an effect or to determine what management actions and mitigation measures for acoustic conditions would benefit the conservation of the species.

In conducting our re-evaluation of the proposed acoustic conditions essential feature, we re-examined the information supporting the identification of this feature and where it occurs. We also reviewed and considered comments and additional relevant information received from peer reviewers and the public, including new information that became available after we developed the proposed rule, to determine whether additional relevant scientific data were available to further support or refine our approach in the proposed rule. Throughout our review, we considered whether we could sufficiently characterize the acoustic conditions that are essential to bearded seal communication for breeding purposes, in light of what is known.

As we described in the proposed rule, male bearded seals vocalize intensively during the breeding season, and their vocalizations have been studied in detail. Male vocalizations are thought to advertise breeding condition, signal competing males of a claim on a female, or proclaim a territory (Ray *et al.* 1969, Cleator *et al.* 1989, Van Parijs 2003, Van Parijs and Clark 2006, Risch *et al.* 2007). The studies we reviewed and considered in re-evaluating the proposed acoustic conditions essential feature, many of which are cited above or in the proposed rule, document the vocal activity of bearded seals during the breeding season, including bearded seal call characteristics and spatial and temporal patterns of vocalizations. Results of recent research that became available after the proposed rule was developed also provide information on seasonal variation in bearded seal vocal activity during the breeding season in a variety of habitats and differing ice conditions (Boye *et al.* 2020, Heimrich *et al.* 2021, Llobet *et al.* 2021), underwater hearing capabilities in bearded seals, and auditory effects of impulsive noise exposure in bearded seals (Sills *et al.* 2020a, Sills *et al.* 2020b). In addition, a recent study by Fournet *et al.* (2021) reported results suggesting that male bearded seals may have a limited capability to compensate for elevated ambient noise by increasing the level of their calls, in that vocalizing bearded seals increased their call levels until ambient noise reached an observable threshold.

We anticipate that the findings of these studies will enhance our ability to consider the potential effects of in-water sound levels on bearded seal detection of acoustic communication in consultations with Federal action agencies. However, after carefully reviewing and considering the comments received and the best scientific data available, we were unable to sufficiently characterize acoustic conditions as an essential feature so as to provide a reasonable basis upon which to identify when and where the essential feature occurs. Based on public comments received, including from other Federal agencies, we recognize that without better understanding of the acoustic conditions needed by Beringia DPS bearded seals to communicate for breeding purposes it would be difficult to determine what measures might be needed to avoid or minimize impacts to these acoustic conditions.

In our proposed rule, we concluded that because the best information available indicates that bearded seals are widely distributed, and there is overlap in the annual timing of the bearded seal breeding season with bearded seal whelping, nursing, and molting, the specific area identified for the sea ice essential features also defines the specific area associated with the acoustic conditions essential feature. However, we acknowledged the limited nature of the data available to describe this proposed essential feature, and as noted above, we indicated that we would re-evaluate the proposed essential feature in developing this final rule. In order to protect an essential feature, the feature needs to be reasonably specific and identifiable. We recognize that, while the available scientific information for the Beringia DPS is evolving, we still need additional relevant data in order to adequately define the acoustic conditions that allow for effective communication by bearded seals for breeding purposes and thereby provide a reasonable basis upon which to identify when and where the essential feature occurs. As public commenters pointed out, without this level of specificity it would be difficult to assess possible impacts to an acoustic conditions essential feature during section 7 consultations or for Federal action agencies to design projects to avoid or minimize impacts to the proposed essential feature. We considered the possible impact on conservation of the Beringia DPS of not identifying an acoustic-related essential feature of critical habitat, and we determined that we can consider and address the effects of anthropogenic noise on bearded seals to the extent possible in consultations under section 7 of the ESA, although we remain constrained by the limited scientific information available.

Based on our re-evaluation of the best scientific data available and public comments, we have not included an acoustic conditions essential feature in this final rule. We will, however, continue to consider results of future studies and if additional information becomes available that would enable us to describe an acoustic-related essential feature appropriately, we may consider revising the critical habitat designation accordingly.

(2) *Refined the primary prey resources essential feature.* In the proposed rule, we identified primary prey resources to support bearded seals in waters 200 m or less in depth as benthic organisms, including epifaunal and infaunal invertebrates, and demersal and schooling pelagic fishes. In response to peer reviewer and public comments that raised questions related to the proposed designation of critical habitat for this proposed essential feature, we re-evaluated the best scientific data available, including a recent analysis identified by a peer reviewer (Quakenbush 2020a), to determine if revision of the proposed definition of this feature may be appropriate.

As we stated in the proposed rule, the broad number of prey species consumed by bearded seals makes specification of particular essential prey species impracticable. However, after re-evaluating the best scientific data available on the diets of bearded seals in Alaska, we recognized that the high

prevalence of benthic invertebrates and demersal fishes reported reflects the seals' reliance on seafloor prey communities in particular to meet their annual energy budgets. We therefore concluded that the primary prey resources to support bearded seals are specifically benthic organisms, including epifaunal and infaunal invertebrates, and demersal fishes. Accordingly, we have refined the regulatory definition of this essential feature in this final rule. The refined description of the essential feature is as follows: Primary prey resources to support bearded seals: Waters 200 m or less in depth containing benthic organisms, including epifaunal and infaunal invertebrates, and demersal fishes.

(3) *Revised shoreward boundary of critical habitat.* In the proposed rule, we identified one specific area in the Bering, Chukchi, and Beaufort seas containing the essential features. Although the same seaward boundaries were identified for this specific area with respect to both the primary prey resources essential feature and the sea ice essential features, the shoreward boundary was identified as the line of MLLW based on occurrence of the proposed primary prey resources essential feature. We expressed in the proposed rule that data to determine the specific area containing the essential features are limited, and we specifically requested data and comments on our proposed delineation of these boundaries. In response to public comments that raised concerns regarding the proposed boundaries of the critical habitat designation with respect to the primary prey resources essential feature (as well as to peer reviewer and public comments related to bearded seal primary prey resources and their use of habitat for foraging), we re-evaluated the best scientific data available and the approach we had used to identify the proposed boundaries to ensure that they were drawn appropriately.

In reviewing these comments and considering the available data, we recognized that the available information on the distributions of bearded seal primary prey species indicate that these prey resources are widely distributed across the geographic area occupied by these seals. We concluded it was not possible to delineate the boundaries of critical habitat based solely on the description of the primary prey essential feature without implying the species' entire occupied range qualifies as critical habitat. We also have no information that suggests any portions of the species' occupied habitat contains prey species that are of greater importance or otherwise differ from those found within the specific area defined by the sea ice essential features. The best information available indicates that bearded seal movements and their use of habitat for foraging are influenced by a variety of factors and the seals' spatial patterns of habitat use and locations of intensive use can vary substantially among individuals. Most importantly, the movements and habitat use of bearded seals are strongly influenced by the seasonality of ice cover and they forage throughout the year. Given this and our consideration of the best scientific data available, we concluded that the best approach to determine the appropriate boundaries for critical habitat is to identify the specific area(s) in which both the primary prey essential feature and the sea ice essential features occur, and that this specific area contains sufficient primary prey resources to support the conservation of the Beringia DPS of bearded seals. Because, as noted above, the proposed shoreward boundary of critical habitat was based on occurrence of the primary prey resources essential feature, we re-evaluated the best available information to determine the appropriate shoreward boundary of critical habitat based on the sea ice essential features.

Sea ice habitat identified as essential for bearded seal whelping, nursing, and molting is found in waters 200 m or less in depth containing pack ice, *i.e.,* sea ice other than fast ice, of suitable concentrations. We therefore considered available information regarding the spatial extent of landfast ice and its seasonal cycle in the Beaufort, Chukchi, and Bering seas (Mahoney *et al.* 2007, Mahoney *et al.* 2012, Mahoney *et al.* 2014, Jensen *et al.* 2020) to inform our delineation of the shoreward boundary of critical habitat. Here we refer to the north northeastern Chukchi Sea (from Wainwright to Point Barrow) and Beaufort Sea as the Beaufort region, the Chukchi Sea extending south of Wainwright to the tip of the northern Seward Peninsula as the Chukchi region, and the Bering Sea from there south to Kuskokwim Bay as the Bering region. This information indicates that relationships between landfast ice and bathymetry in the Beaufort, Chukchi, and Bering regions differ regionally and locally. Significant inter-annual differences in the maximum extent of landfast ice were also documented, in particular in the Beaufort region. In addition, there is evidence of a decrease in the extent of landfast ice and trends in earlier breakup of this ice in the Chukchi region, and information from IK similarly indicates such trends in the Bering region (Oceana and Kawerak 2014, Huntington *et al.* 2017e). It is therefore impracticable to delineate a single isobath as the shoreward boundary for the entire specific area containing the sea ice essential features that accounts precisely for where landfast may occur in a given year during the period of whelping, nursing, and molting. However, we concluded that defining the nearshore boundary by a depth contour at a coarse level for each region is appropriate given that landfast ice forms in areas of shallow bathymetry and such ice is not identified as essential to the conservation of the Beringia DPS.

Because the best scientific data available indicate that in the Beaufort Sea, the 20-m isobath provides a reasonable approximation of the average stable extent of landfast ice, and landfast ice extent has not changed significantly in the past several decades (Mahoney *et al.* 2012, Mahoney *et al.* 2014), we selected the 20-m isobath (relative to MLLW) as the shoreward boundary in the Beaufort region. The available information indicates that in the Chukchi and Bering regions, landfast ice occupies shallower water overall, and water depths at the landfast ice edge are more variable and locally specific. In addition, as noted above, there is evidence of decreases in the extent of landfast ice and trends in earlier breakup of this ice in the Chukchi region, as well as of changes in landfast ice conditions in the Bering region in recent years. Therefore, in determining the shoreward boundary in the Chukchi and Bering regions, we considered the available information on landfast ice in these regions and examined existing information on the spring distribution of bearded seals from aerial surveys of the Bering Sea (in 2012 and 2013) and parts of the Chukchi Sea (in 2016) (NMFS Marine Mammal Laboratory, unpublished data). After considering the available data, we selected the 10-m isobath (relative to MLLW) as the shoreward boundary in the Chukchi Sea, and the 5-m isobath (relative to MLLW) as the shoreward boundary in the Bering Sea. We note that we adjusted the shoreward boundary to form a continuous line crossing the entrance to Port Clarence Bay because available information does not indicate this area contains the sea ice essential features. For the purpose of delineating the shoreward boundary, we defined the division between the Beaufort and Chukchi regions as the line

of latitude south of Wainwright at 70°36′ N, and the division between the Chukchi and Bering regions as the line of latitude south of Cape Prince of Wales (tip of the Seward Peninsula) at 65°35′ N.

(5) *Final Impact Analysis Report.* In response to peer reviewer and public comments, we revised and updated the Draft Impact Analysis Report to further explain and clarify our analysis of the economic costs and benefits of the designation, and to correct typographical and other minor errors. We also revised the analysis of the incremental administrative costs of section 7 consultations associated with the critical habitat designation based on the revised delineation of the shoreward boundary of the designation explained above. In addition, we updated the timeframe, wage schedule, and dollar year of the analysis to reflect the implementation schedule of the final rule.

(6) *New information.* In this final rule, we have made minor updates and incorporated additional information and references as appropriate, including information from IK documented for coastal communities located in western and northern Alaska, based on peer reviewer and public comments, new information we received or reviewed after publication of the proposed rule, and our internal review of the proposed rule.

Classifications

National Environmental Policy Act

We have determined that an environmental assessment as provided for under the National Environmental Policy Act is not required for critical habitat designations made pursuant to the ESA. *See Douglas Cnty.* v. *Babbitt,* 48 F.3d 1495, 1502–08 (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 not-for-profit organizations, and small government jurisdictions). We have prepared a final regulatory flexibility act analysis (FRFA) that is included as part of the Final Impact Analysis Report for this rule. The FRFA estimates the potential number of small businesses that may be directly regulated by rule, and the impact (incremental costs) per small entity for a given activity type. Specifically, based on an examination of the North American Industry Classification System (NAICS), this analysis classifies the economic activities potentially directly regulated by this action into industry sectors and provides an estimate of their number in each sector, based on the applicable NAICS codes. A summary of the FRFA follows.

A description of the action (*i.e.,* designation of critical habitat), why it is being considered, and its legal basis are included in the preamble of this rule. This action does not impose new recordkeeping or reporting requirements on small entities. The analysis did not reveal any Federal rules that duplicate, overlap, or conflict with this action. Existing Federal laws and regulations overlap with this rule only to the extent that they provide protection to natural resources within the area designated as critical habitat generally. However, no existing regulations specifically prohibit destruction or adverse modification of critical habitat for the Beringia DPS of bearded seals.

This critical habitat designation rule does not directly apply to any particular entity, small or large. The regulatory mechanism through which critical habitat protections are enforced is section 7 of the ESA, which directly regulates only those activities carried out, funded, or permitted by a Federal agency. By definition, Federal agencies are not considered small entities, although the activities they fund or permit may be proposed or carried out by small entities. In some cases, small entities may participate as third parties (*e.g.,* permittees, applicants, grantees) during ESA section 7 consultations (the primary parties being the Federal action agency and NMFS) and thus they may be indirectly affected by the critical habitat designation.

Based on the best information currently available, the Federal actions projected to occur within the timeframe of the analysis (*i.e.,* the next 10 years) that may trigger an ESA section 7 consultation due to the potential to affect one or more of the essential habitat features also have the potential to affect the Beringia DPS of bearded seals. Thus, as discussed above, we expect that none of the activities we identified would trigger a consultation solely on the basis of this critical habitat designation; in addition, we have no information to suggest that additional requests for project modifications are likely to result specifically from this designation of critical habitat. Therefore, the direct incremental costs of this critical habitat designation are expected to be limited to the additional administrative costs of considering bearded seal critical habitat in future section 7 consultations that would occur regardless, based on the listing of the Beringia DPS of bearded seals.

As detailed in the Final Impact Analysis Report, the oil and gas exploration, development, and production industries participate in activities that are likely to require consideration of critical habitat in ESA section 7 consultations. The Small Business Administration size standards used to define small businesses in these cases are: (1) An average of no more than 1,250 employees (crude petroleum and natural gas extraction industry); or (2) average annual receipts of no more than $41.5 million (support activities for oil and gas operations industry). Only two of the parties identified in the oil and gas category appear to qualify as small businesses based on these criteria. Based on past ESA section 7 consultations, the additional third party administrative costs in future consultations involving Beringia DPS critical habitat over the next 10 years are expected to be borne principally by large oil and gas operations. The estimated range of annual third party costs over this 10 year period is $22,900 to $42,100 (discounted at 7 percent), virtually all of which is expected to be associated with oil and gas activities. It is possible that a limited portion of these administrative costs may be borne by small entities (based on past consultations, an estimated maximum of two entities). Two government jurisdictions with ports appear to qualify as small government jurisdictions (serving populations of fewer than 50,000). The total third-party costs that may be borne by these small government jurisdictions over 10 years are estimated to be less than $1,000 (discounted at 7 percent) for the additional administrative effort to consider Beringia DPS critical habitat as part of a future ESA section 7 consultation involving one port. In addition, the analysis anticipates three section 7 consultations on coastal construction activities over 10 years that may include third parties. It is not known whether the third parties are likely to be large or small entities. The total administrative costs associated with these three consultations that may be borne by third parties over 10 years are estimated to be $2,000 (discounted at 7 percent).

As required by the RFA (as amended by the SBREFA), we considered alternatives to the proposed critical

habitat designation for the Beringia DPS. Under section 4(b)(2) of the ESA, NMFS must consider the economic impacts, impacts to national security, and other relevant impacts of designating any particular area as critical habitat. NMFS has the discretion to exclude any area from 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 Beringia DPS if an area were designated), as long as exclusion of the area will not result in extinction of the species. However, based on the best information currently available, we concluded that this rule would result in minimal impacts to small entities and the economic impacts associated with the critical habitat designation would be modest. Therefore, we are not excluding any areas from the critical habitat designation pursuant to section 4(b)(2) of the ESA. Instead, we selected the alternative of designating as critical habitat the entire specific area that contains at least one identified essential feature because it would result in a critical habitat designation that provides for the conservation of the species and is consistent with the ESA and joint NMFS and USFWS regulations concerning critical habitat at 50 CFR part 424.

Paperwork Reduction Act

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

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

This rule will not produce a Federal mandate.

Information Quality Act and Peer Review

The data and analyses supporting this action have undergone a pre-dissemination review and have been determined to be in compliance with applicable information quality guidelines implementing the Information Quality Act (Section 515 of Pub. L. 106–554).

On December 16, 2004, the OMB issued its Final Information Quality Bulletin for Peer Review (Bulletin) establishing minimum peer review standards, a transparent process for public disclosure of peer review planning, and opportunities for public participation. The Bulletin was published in the **Federal Register** on January 14, 2005 (70 FR 2664). The primary purpose of the Bulletin, which was implemented under the Information Quality Act, is to improve the quality and credibility of scientific information disseminated by the Federal government by requiring peer review of ''influential scientific information'' and ''highly influential scientific information'' prior to public dissemination. Influential scientific information is defined as information the agency reasonably can determine will have or does have a clear and substantial impact on important public policies or private sector decisions. The Bulletin provides agencies broad discretion in determining the appropriate process and level of peer review. Stricter standards were established for the peer review of ''highly influential scientific assessments,'' defined as information whose dissemination could have a potential impact of more than $500 million in any one year on either the public or private sector or that the information is novel, controversial, or precedent-setting, or has significant interagency interest.

The evaluation of critical habitat presented in this final rule and the information presented in the supporting Final Impact Analysis Report are considered influential scientific information subject to peer review. To satisfy our requirements under the OMB Bulletin, we obtained independent peer review from four reviewers of our evaluation of available data, and our use and interpretation of this information, in making conclusions regarding what areas meet the definition of critical habitat in the proposed rule; and from three reviewers of the information considered in the Draft Impact Analysis Report for the proposed rule. The peer reviewer comments are addressed in this rule and in the Final Impact Analysis Report, and were compiled into two reports that are available at: *www.noaa.gov/organization/information-technology/peer-review-plans*.

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, E.O.s, 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. E.O. 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.

As the entire critical habitat area is located seaward of the 5-m isobath, no tribal-owned lands overlap with the designation. Although this designation overlaps with areas used by Alaska Natives for subsistence, cultural, and other purposes, no restrictions on subsistence hunting are associated with the critical habitat designation. We coordinate with Alaska Native hunters regarding management issues related to bearded seals through the Ice Seal Committee, a co-management organization under section 119 of the MMPA. We discussed the designation of critical habitat for the Beringia DPS of bearded seals with the Ice Seal Committee and provided updates regarding the timeline for publication of this rule. We also contacted potentially affected tribes and Alaska Native corporations by mail and offered them the opportunity to consult on the proposed designation of critical habitat for the Beringia DPS and discuss any concerns they may have. We did not receive any requests from potentially affected tribes or Alaska Native corporations in response to the proposed rule.

Executive Order 12898, Environmental Justice

The designation of critical habitat is not expected to have a disproportionately high effect on minority populations or low-income populations.

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, and regulations imposed on 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 directly affects only Federal agency actions (*i.e.,* those actions authorized, funded, or

carried out by Federal agencies). Further, no areas of private property exist within the critical habitat and hence 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. A Final Impact Analysis Report has been prepared that considers the economic costs and benefits of this critical habitat designation and alternatives to this rulemaking as required under E.O. 12866. To review this report, see the **ADDRESSES** section above.

Based on the Final Impact Analysis Report, the total estimated present value of the incremental impacts of the critical habitat designation is approximately $563,000 over the next 10 years (discounted at 7 percent) for an annualized cost of $74,900. Overall, economic impacts are expected to be small and Federal agencies are anticipated to bear at least 44 percent of these costs. While there are expected beneficial economic impacts of designating critical habitat for the Beringia DPS, there are insufficient data available to monetize those impacts (see *Benefits of Designation* section).

Executive Order 13132, Federalism

E.O. 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 this critical habitat designation 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 ESA section 7 consultation as a third party. One of the key conclusions of the economic impact analysis is that the incremental impacts of the critical habitat designation 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. The designation of critical habitat is 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 Statements of Energy Effects when undertaking any 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 critical habitat designation on the supply, distribution, or use of energy (see Final Impact Analysis Report for this rule). This critical habitat designation overlaps with five BOEM planning areas for Outer Continental Shelf oil and gas leasing; however, the Beaufort and Chukchi Sea planning areas are the only areas with existing or planned leases.

Currently, the majority of oil and gas production occurs on land adjacent to the Beaufort Sea and the critical habitat area. Any proposed offshore oil and gas projects would likely undergo an ESA section 7 consultation to ensure that the project would not likely destroy or adversely modify designated critical habitat. However, as discussed in the Final Impact Analysis Report for this rule, such consultations will not result in any new and significant effects on energy supply, distribution, or use. ESA section 7 consultations have occurred for numerous oil and gas projects within the area of the critical habitat designation (*e.g.,* regarding possible effects on endangered bowhead whales, a species without designated critical habitat) without adversely affecting energy supply, distribution, or use, and we would expect the same relative to critical habitat for the Beringia DPS of bearded seals. We have, therefore, determined that the energy effects of this rule are unlikely to exceed the impact thresholds identified in E.O. 13211, and that this rulemaking is not a significant energy action.

List of Subjects

50 CFR Part 223

Endangered and threatened species.

50 CFR Part 226

Endangered and threatened species.

Dated: March 18, 2022.

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 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), under Marine Mammals revise the entry for ''Seal, bearded (Beringia DPS)'' 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					
*	*	*	*	*	*
Seal, bearded (Beringia DPS).	*Erignathus barbatus nauticus.*	Bearded seals originating from breeding areas in the Arctic Ocean and adjacent seas in the Pacific Ocean between 145° E Long. (Novosibirskiye) and 130° W Long., and east of 157° E Long. or east of the Kamchatka Peninsula.	77 FR 76740, Dec. 28, 2012.	226.229	NA
*	*	*	*	*	*

[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

■ 3. The authority citation for part 226 continues to read as follows:

Authority: 16 U.S.C. 1533.

■ 4. Add § 226.229 to read as follows:

§ 226.229 Critical Habitat for the Beringia Distinct Population Segment of the Bearded Seal Subspecies *Erignathus barbatus nauticus.*

Critical habitat is designated for the Beringia distinct population segment of the bearded seal subspecies *Erignathus barbatus nauticus* (Beringia DPS) as described in this section. The map and textual descriptions in this section are the definitive sources for determining the critical habitat boundaries.

(a) *Critical habitat boundaries.* Critical habitat for the Beringia DPS includes marine waters within one specific area in the Bering, Chukchi, and Beaufort seas, extending from the shoreward boundary to an offshore limit with a maximum water depth of 200 m from the ocean surface within the U.S. Exclusive Economic Zone (EEZ). The shoreward boundary follows the 20-m isobath (relative to MLLW) westward from the eastern limit of the U.S. EEZ in the Beaufort Sea and continuing into the northeastern Chukchi Sea to its intersection with latitude 70°36′ N south of Wainwright; then follows the 10-m isobath (relative to MLLW) to its intersection with latitude 65°35′ N near Cape Prince of Wales; then follows the 5-m isobath (relative to MLLW) to its intersection with longitude 164°46′ W near the mouth of the Kolovinerak River in the Bering Sea, except at Port Clarence Bay where the shoreward boundary is defined as a continuous line across the entrance. The eastern boundary in the Beaufort Sea follows the eastern limit of the U.S. EEZ beginning at the nearshore boundary defined by the 20-m isobath (relative to MLLW), extends offshore to the 200-m isobath, and then follows this isobath generally westward and northwestward to its intersection with the seaward limit of the U.S EEZ in the Chukchi Sea. The boundary then follows the limit of the U.S. EEZ southwestward and south to the intersection of the southern boundary of the critical habitat in the Bering Sea at 60°32′26″ N/179°9′53″ W. The southern boundary extends southeastward from this intersection point to 57°58′ N/170°25′ W, then eastward to 58°29′ N/164°46′ W, then follows longitude 164°46′ W to its intersection with the nearshore boundary defined by the 5-m isobath (relative to MLLW) near the mouth of the Kolovinerak River. This includes waters off the coasts of the Bethel, Kusilvak, and Nome Census Areas, and the Northwest Arctic and North Slope Boroughs, Alaska. Critical habitat does not include permanent manmade structures such as boat ramps, docks, and pilings that were in existence within the legal boundaries as of May 2, 2022.

(b) *Essential features.* The essential features for the conservation of the Beringia DPS are:

(1) Sea ice habitat suitable for whelping and nursing, which is defined as areas with waters 200 m or less in depth containing pack ice of at least 25 percent concentration and providing bearded seals access to those waters from the ice.

(2) Sea ice habitat suitable as a platform for molting, which is defined as areas with waters 200 m or less in depth containing pack ice of at least 15 percent concentration and providing bearded seals access to those waters from the ice.

(3) Primary prey resources to support bearded seals: Waters 200 m or less in depth containing benthic organisms, including epifaunal and infaunal invertebrates, and demersal fishes.

(c) *Map of Beringia DPS critical habitat* follows.

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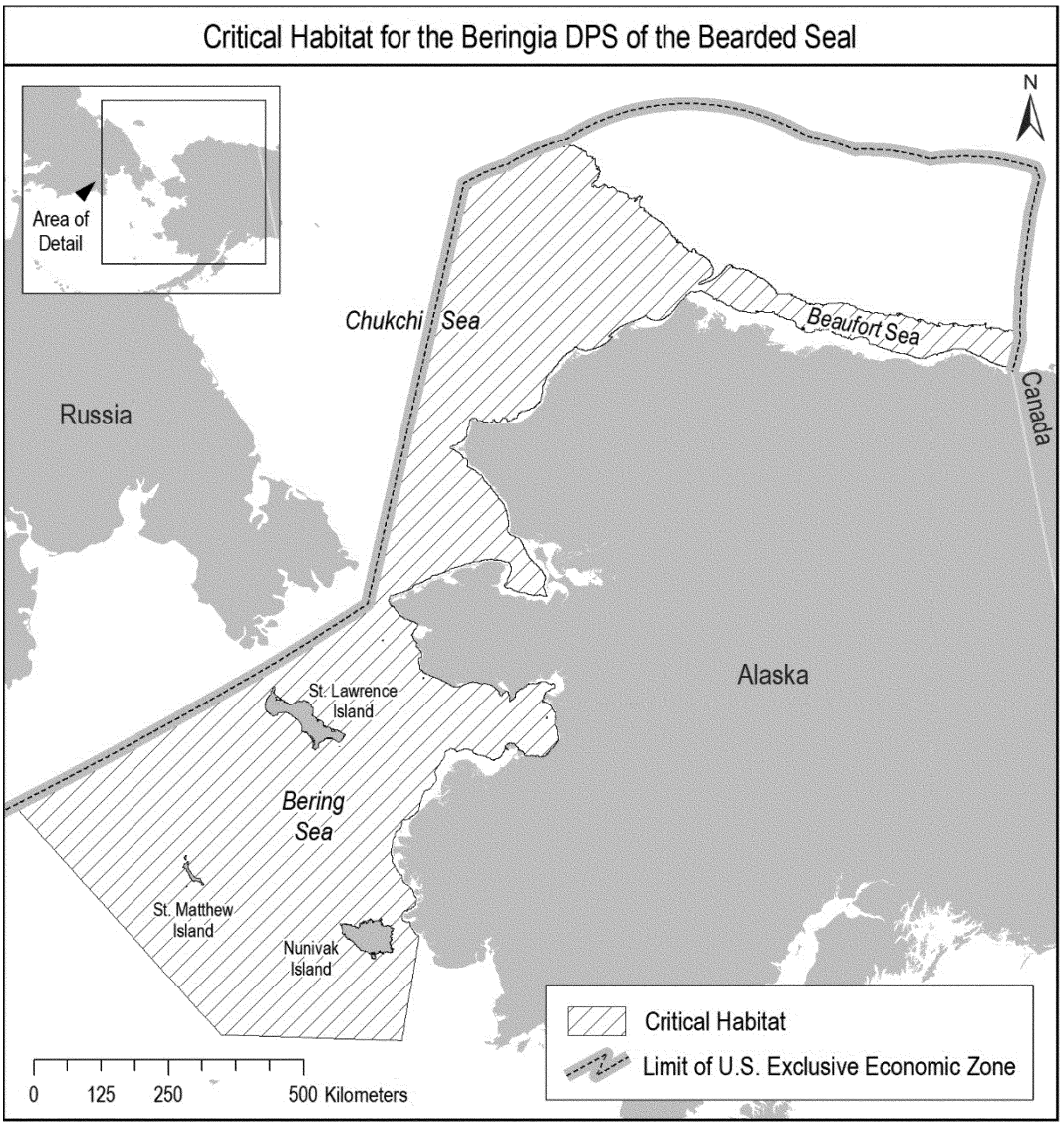
Figure 1 to paragraph (c)



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