UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau Alaska 99802-1668

January 21, 2016

MEMORANDUM FOR: Glenn Merrill
Administrator for Sustainable Fisheries

FROM: Jon Kurland for
Administrator for Protected Resources

SUBJECT: Endangered Species Act (ESA) Section 7 Consultation on the Effects of Amending Bering Sea Pollock Fishery Seasonal Allocations on the Endangered Western Distinct Population Segment of Steller sea lions (WDPS) -- NMFS #AKR-2016-9515

The National Marine Fisheries Service (NMFS) Alaska Region Protected Resources Division (PRD) has completed informal consultation under section 7(a)(2) of the Endangered Species Act (ESA) regarding the proposed Amendment 110 in the Bering Sea pollock fishery. NMFS Alaska Region Sustainable Fisheries Division (SF) proposes to reallocate five percent of the pollock allocation from the "B" season to the "A" season resulting in a new seasonal apportionments of 45 percent in the A season and 55 percent in the B season. This action is one element in a suite of proposed changes intended to improve management of the Chinook and chum salmon prohibited species catch (PSC) in the Bering Sea Pollock fishery.

NMFS PRD received your August 28, 2015 request for written concurrence that the proposed action may affect, but is not likely to adversely affect, the endangered western Distinct Population Segment (WDPS) of the Steller sea lion (*Eumetopias jubatus*) or Steller sea lion critical habitat. Based on our analysis of the information you provided to us and additional literature cited below, NMFS PRD concurs with your determination. A complete administrative record of this consultation is on file in this office.

Consultation History

On November 24, 2010 NMFS issued a biological opinion on the authorization of the Alaska groundfish fisheries under the Fishery Management Plan for the Groundfish of the Bering Sea and Aleutian Islands Management Area (FMP), including the Bering Sea pollock fishery (2010 FMP Opinion). The 2010 FMP Opinion concluded that the groundfish fisheries, as authorized, were likely to jeopardize the continued existence of the WDPS and adversely modify designated critical habitat (NMFS 2010). However, the Bering Sea pollock fishery was not implicated in the jeopardy and adverse modification finding. Rather, the jeopardy and adverse modification finding in the 2010 FMP Opinion was based on potential connections between the continued decline of WDPS populations in the western and central Aleutian Islands and the Aleutian Islands Atka mackerel and Pacific cod fisheries. NMFS subsequently modified the Steller sea

lion protection measures in the Aleutian Islands Atka mackerel and Pacific cod fisheries in 2011 (75 FR 77535, December 13, 2010; corrected 75 FR 81921, December 29, 2010) and 2015 (79 FR 70286, November 25, 2014) to ensure the fisheries were not likely to jeopardize the continued existence of the WDPS or adversely modify designated critical habitat.

PRD received a request for informal consultation on August 28, 2015 (NMFS 2015). PRD requested additional information about the project on January 13 and 15, 2016. SF provided additional information on January 13 and 15, 2016.

Description of the Proposed Action and Action Area

SF is proposing to reallocate 5 percent of the Bering Sea pollock allocation from the B season to the A season for new seasonal apportionments of 45 and 55 percent, respectively. This action would solely address management of the pollock fishery in the Bering Sea subarea and does not affect the pollock fishery in the Aleutian Island subarea (Figure 1). This proposed change is one of several intended to decrease Chinook and chum bycatch under the proposed Amendment 110 to the FMP. The proposed seasonal total allowable catch (TAC) reallocation is intended to shift pollock fishing effort away from periods of high Chinook salmon abundance and allow for more effort during the low Chinook salmon abundance periods, based on abundance differences indicated by available data on salmon migration patterns and Chinook salmon bycatch rates. Under Amendment 110 the status quo provision that any unharvested TAC from the A season could be harvested in the B season would be maintained, and the existing harvest capacity in the Bering Sea pollock fishery would not change. Therefore the proposed seasonal reallocation of pollock does not mandate that more pollock be harvested in the A season, but it does provide the flexibility for up to 5 percent more pollock to be harvested in times when salmon PSC is lower.

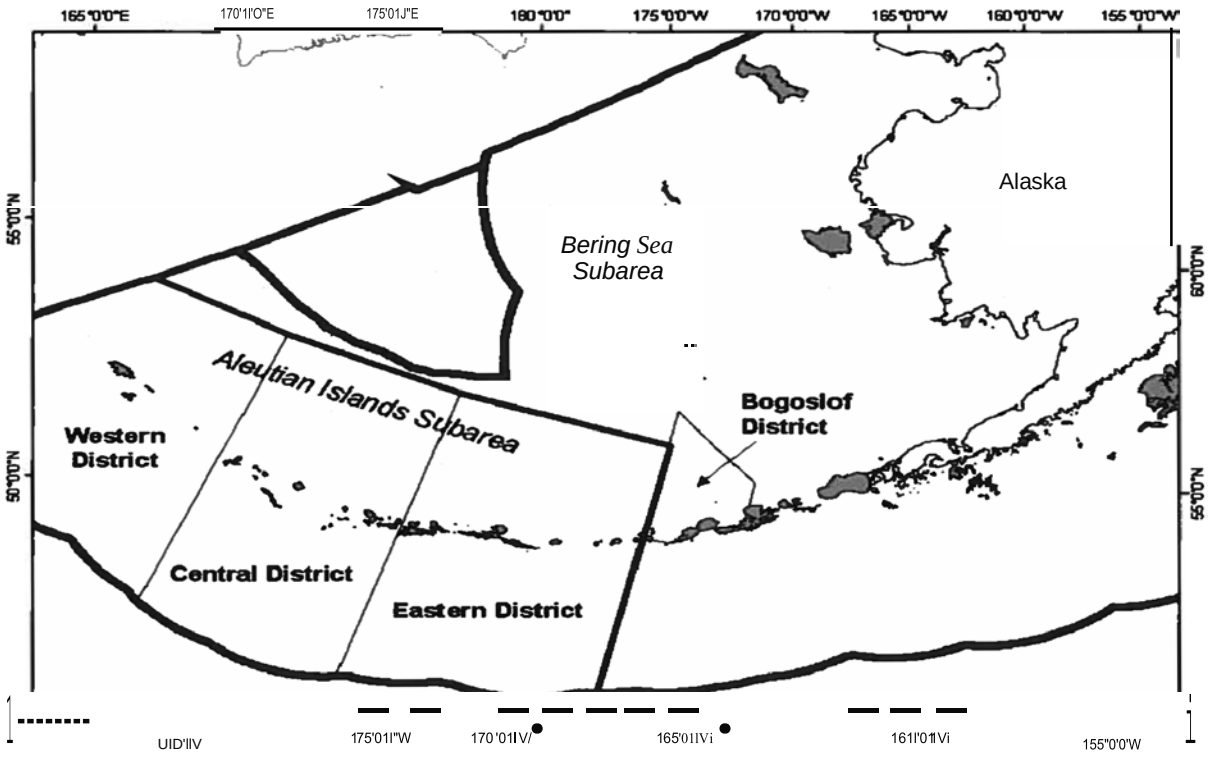

Figure 1. **Proposed Project Area: The Bering Sea and Aleutian Islands subareas. The proposed action would only affect the Bering Sea subarea pollock fishery, including the Bogoslof District (Merrill 2015).**

The action area is defined in the ESA regulations (50 CFR 402.02) as the area within which all direct and indirect effects of the project will occur. The action area is distinct from and larger than the project footprint because some elements of the project may affect listed species some distance from the project footprint. The action area, therefore, extends out to a point where no measurable effects from the project are expected to occur.

NMFS defines the action area for this project as the entire area within which the catch re-allocation would be effective, which is the entire Bering Sea subarea of the Bering Sea Aleutian Islands management area (Figure 1).

Mitigation Measures

SF has implemented protection measures to reduce potential competition for prey between the Bering Sea pollock fishery and the WDPS since 1992. The current protection measures in the Bering Sea pollock fishery, analyzed in the October 19, 2001 Biological Opinion (NMFS 2001) and 2010 FMP Opinion and described in the proposed (67 FR 56692, September 4, 2002) and final (68 FR 204, January 2, 2003) rules, are designed to implement actions to reduce spatial and temporal overlap with fisheries, as well as with fisheries that are both spatially and temporally concentrated. The protection measures for the pollock fishery in the Bering Sea are summarized below:

Harvest Control Rule

To protect overall prey abundance for Steller sea lions, the harvest control rule stipulates that the pollock acceptable biological catch be reduced when pollock spawning biomass is estimated to be less than 40 percent of the unfished biomass. Pollock fishing would be prohibited in the unlikely event the estimated spawning biomass is below 20 percent of the projected unfished biomass.

Area Closures

Numerous areas are closed to pollock fishing in the Bering Sea to protect prey availability in important sea lion foraging areas (see Table l and Figure 2).

Table 1. Area closures in the Bering Sea pollock fishery to protect Steller sea lion prey availability (Merrill 2015).

Area	Restriction	Season	Exceptions
Rookeries and haulouts*	No directed fishing for pollock 0-10 nm	All year	Pribilof Island Haulouts (see below)
Pribilof Island Haulouts	No directed fishing for pollock 0-3 nm	All year	None
St. Lawrence Island, Hall Island, Cape Newenham, and Round Island Haulouts	No directed fishing for pollock 0-20 nm	All year	None
Bogoslof	No directed fishing for pollock in Area	All year	None for pollock fishing
South Bering Sea Pollock Restriction Area	No directed fishing for pollock in Area	A season: January 20 -June 10	None
Catcher Vessel Operation Area	No directed fishing for pollock by catcher processors	B season: June 10 -November I	None

Pollock is harvested with trawl gear, thus areas closed to trawling are de facto closures to pollock fishing. In addition to the areas closed to protect foraging Steller sea lions, NMFS closed the Pribilof Islands Habitat Conservation Zone (Figure 10 to 50 CFR 679) and the Bristol Bay Trawl Closure Area (Figure 12 to 50 CFR 679) to trawling to protect king crab in 1995 and 1996, respectively. These areas are described in 50 CFR 679.22 and shown as "No Trawling Areas" in Figure 2 below.

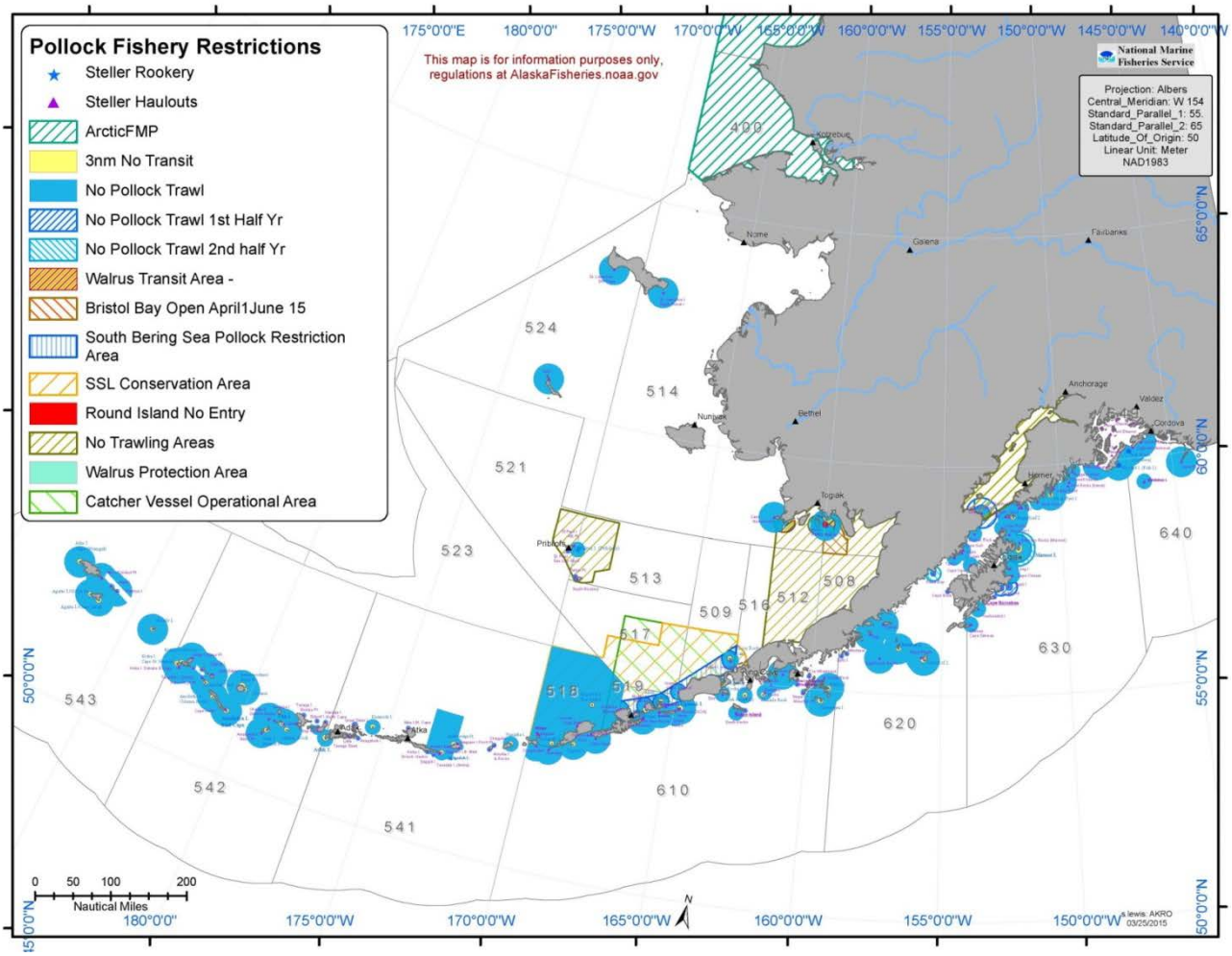

Figure 2. **Areas where Pollock fishing is closed or restricted. Areas 508-524 comprise the Bering Sea subarea (Merrill 2015).**

Vessel Monitoring Any vessel participating in the Bering Sea pollock fishery is required to have an operable vessel monitoring system onboard when the directed pollock fishery is open to ensure compliance with the Steller sea lion protection area restrictions.

Fishing Seasons The annual Bering Sea pollock fishery is divided into two seasons: the A season, from January 20 through June 10, and the B season, from June 10 from November 1 (50 CFR 679.23(e)(2)). Directed fishing for pollock is not authorized from November 1 through January 19.

Seasonal Allocations The catch allocation for the Bering Sea Pollock fishery is currently divided into two seasons: A season, 40 percent, and B season, 60 percent. The proposed action would redistribute that allocation to allow 45 percent harvested in the A season and the 55 percent harvested in B season.

Steller Sea Lion Conservation Area Pollock harvest is limited to 28 percent of the annual directed fishery allowance inside the Steller sea lion Conservation Area (see Figure 2) before April 1.

Listed Species and Critical Habitat

Endangered WDPS Steller sea lions occur in the action area, and the action area overlaps with designated critical habitat has been designated for the Steller sea lions (see Figure 3).

Western DPS Steller Sea Lions

Population Structure/Status. There are two Steller sea lion populations in Alaska: the western DPS is listed as endangered and generally occurs west of Cape Suckling, and the eastern DPS generally occurs east of Cape Suckling, Alaska (144°W longitude). However, large movements by individual Steller sea lions on either side of the 144°W longitude demarcation are not rare. Steller sea lions are not known to migrate annually, but individuals may widely disperse outside of the breeding season (late-May to early-July) (Jemison et al. 2013, Allen and Angliss 2014). Steller sea lions in the action area for the proposed action are expected to be from the western DPS (Jemison et al. 2013).

The Steller sea lion was listed as a threatened species under the ESA in 1990 following declines of 63% on certain rookeries since 1985, and declines of 82% since 1960 (NMFS 2012). In 1997, NMFS reclassified the Steller sea lion into the two current DPSs and designated the western DPS as endangered (May 5, 1997; 62 FR 24345). A number of protective measures were implemented to aid recovery (NMFS 2012), and between the 1970s and 2002 eastern DPS Steller sea lions increased on average by 3.1% per year (Pitcher et al. 2007). This is one factor that led to NMFS's decision to delist the eastern DPS (November 4, 2013; 78 FR 66140).

The most recent comprehensive estimate (pups and non-pups) for the western DPS abundance in Alaska is 55,422 sea lions based on aerial and land-based surveys conducted in June and July 2008-2011, and aerial and ground-based pup counts conducted in June and July 2008-2013. Populations east of Samalga Pass in the Aleutian Islands are generally increasing, while those to the west are decreasing (Allen and Angliss 2015). The western DPS declined in abundance by about 70% between the late 1970s and 1990, with evidence that the decline had begun even earlier. Factors that may have contributed to this decline or affected recovery include 1) incidental take in fisheries, 2) legal and illegal shooting, 3) predation, 4) contaminants, 5) disease, 6) environmental change or variability, and 7) nutritional stress related to competition with commercial fisheries (NMFS 2008, Allen and Angliss 2015). Although Steller sea lion abundance continues to decline in the western Aleutians, numbers are thought to be increasing in the eastern part of the western DPS range (DeMaster 2011).

Description/Natural History. Steller sea lions are the largest of the eared seals (*Otariidae*) and range throughout the North Pacific Ocean from Japan, east to Alaska, and south to central California (Loughlin et al. 1984). They range north to the Bering Strait, with significant numbers at haul outs on St. Lawrence Island in the spring and fall (Kenyon and Rice 1961, Sheffield and

Jemison 2010). Breeding range extends along the northern edge of the North Pacific Ocean from the Kuril Islands, Japan, through the Aleutian Islands and Southeast Alaska, south to California (Loughlin et al. 1984). Steller sea lions that breed in Asia are considered part of the western stock, and an estimated abundance for the entire western stock is 82,516 (Allen and Angliss 2015). Whereas Steller sea lions seasonally inhabit coastal waters of Japan in the winter, breeding rookeries outside of the U.S. are currently only located in Russia. Historically, Steller sea lion abundance worldwide had an estimated worldwide population of 245,000 to 290,000 animals in the late 1970s (Loughlin et al. 1984).

Land sites used by Steller sea lions are referred to as rookeries and haulouts. Rookeries are used by adult sea lions for pupping, nursing, and mating during the reproductive season (generally from late May to early July). Haulouts are used by all age classes of both genders but are generally not where sea lions reproduce. At the end of the reproductive season, some females may move with their pups to other haulout sites and males may migrate to distant foraging locations (Spalding 1964, Pitcher and Calkins 1981). Sea lions may make semi-permanent or permanent one-way movements from one site to another (Chumbley et al. 1997, Burkanov and Loughlin 2005). Round trip migrations of greater than 6,500 km by individual Steller sea lions have been documented (Jemison et al. 2013).

Adult female Steller sea lions in a natural situation do not generally eat every day, but tend to forage every 1-2 days and return to haulouts to rest between foraging trips (Merrick and Loughlin 1997, Rehberg et al. 2009). Sea lions move on and offshore for feeding excursions. The foraging strategy of Steller sea lions is strongly influenced by seasonality of sea lion reproductive activities on rookeries, and the ephemeral nature of many prey species. Steller sea lions are generalist predators that eat a variety of fishes and cephalopods (Pitcher 1981, Calkins and Goodwin 1988, NMFS 2008), and occasionally other marine mammals and birds (Pitcher and Fay 1982, NMFS 2008).

Most adult Steller sea lions occupy rookeries during the pupping and breeding season, which extends from late May to early July (Pitcher and Calkins 1981, Gisiner 1985), and exhibit high site fidelity (Sandegren 1970). During the breeding season some juveniles and non-breeding adults occur at or near the rookeries, but most are on haulouts (Raum-Suryan et al. 2002, Call and Loughlin 2005).

Stressors. Between 2008-2012, there were incidental serious injuries and mortalities of western Steller sea lions observed in the following fisheries: Bering Sea/Aleutian Islands Atka mackerel trawl, Bering Sea/Aleutian Islands flatfish trawl, Bering Sea/Aleutian Islands Pacific cod trawl, Bering Sea/Aleutian Islands pollock trawl, and Gulf of Alaska Pacific cod longline, Gulf of Alaska Pacific cod trawl, and Gulf of Alaska sablefish longline (Allen and Angliss 2014). In addition, observers monitoring the Prince William Sound salmon drift gillnet fishery in 1990 and 1991 recorded two Steller sea lion mortalities in 1991, extrapolated to 29 (95% CI: 1-108) kills for the entire fishery (Wynne et al. 1992). The combined average annual mortality estimate in observed fisheries is 31.5 (CV = 0.46) western DPS Steller sea lions (Allen and Angliss 2015).

Entanglement or other interactions with fishing gear is another source of Steller sea lion mortality or injury. From 2008 to 2012, there were six confirmed fishery-related Steller sea lion strandings in the range of the western DPS (Allen and Angliss 2015). Fishery-related strandings for non-observed fisheries during 2008-2012 result in an estimated annual mortality of 1.2 western DPS Steller sea lions. This estimate is considered a minimum because not all entangled animals strand and not all stranded animals are found or reported (Allen and Angliss 2015). Based on observer data (31.5) and stranding data (1.2), the minimum estimated mortality rate incidental to commercial and recreational fisheries is 32.7 (Allen and Angliss 2015).

The mean annual subsistence take by Alaska Natives (harvested plus struck-and-lost) from this DPS from 2004 through 2008, combined with the mean take over the 2008-2012 period from St. Paul, was 199 western DPS Steller sea lions/year (Allen and Angliss 2015).

Reports from the NMFS stranding database of Steller sea lions entangled in marine debris or with injuries caused by other types of human interaction are another source of mortality data. During the 5-year period from 2008 to 2012, 15 animals were observed with circumferential neck entanglements from packing bands or other unknown marine debris. The mean annual mortality and serious injury from other sources of human interactions for 2008-2012 is 3.0 individuals.

Mortalities may occasionally occur incidental to marine mammal research activities authorized under MMPA permits issued to a variety of government, academic, and other research organizations. However, between 2008-2012 there were zero reported mortalities resulting from research on western DPS Steller sea lions (Allen and Angliss 2015).

Steller Sea Lion Critical Habitat

NMFS designated critical habitat for Steller sea lions on August 27, 1993 (58 FR 45269). In Alaska, designated critical habitat includes: 1) a 37-km (23-mi) seaward buffer around all major haulouts and rookeries west of 144^{o} W longitude; 2) 0.9-km (0.6-mi) terrestrial, air, and aquatic zones around major haulouts and rookeries east of 144^{o} W longitude, and 3) three special aquatic foraging areas: the Shelikof Strait, Bogoslof, and Seguam Pass areas. The action area includes two major haulouts and a rookery and is located in the Bogoslof foraging area (Figure 3).

The areas designated as critical habitat for the Steller sea lion were determined using the best information available at the time, including information on land use patterns, the extent of foraging trips, and the availability of prey items. Particular attention was paid to life history traits and the areas where animals haul out to rest, pup, nurse their pups, mate, and molt.

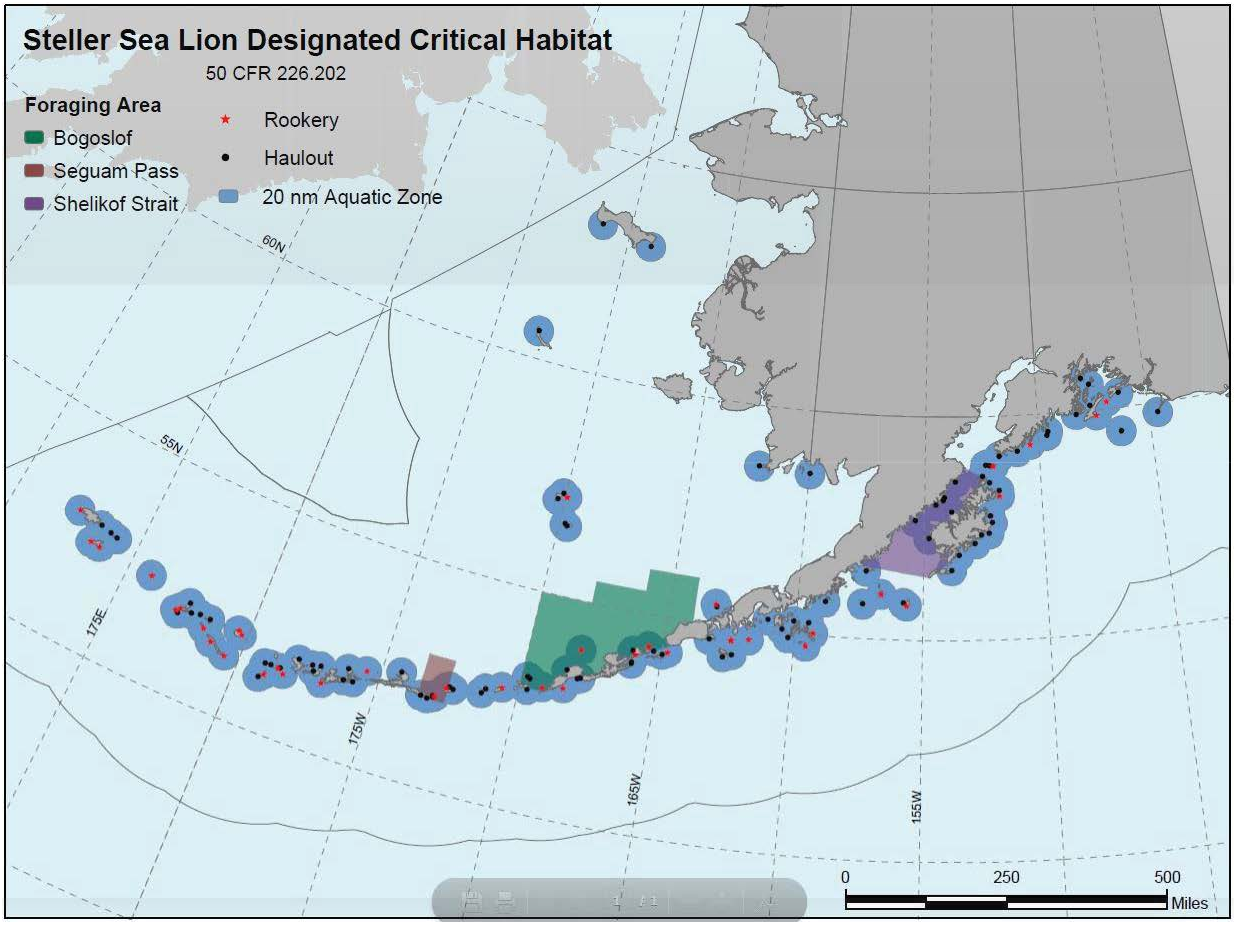

Figure 3. Designated Steller sea lion critical habitat in Western Alaska (Merrill 2015).

Effects of the Action

For purposes of the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is "not likely to adversely affect" listed species or critical habitat is that all of the effects of the action are expected to be insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and are those that one would not be able to meaningfully measure, detect, or evaluate, and should never reach the scale where take occurs. Discountable effects are those that are extremely unlikely to occur. Beneficial effects are contemporaneous positive effects without any adverse effects to the species.

The potential effects of the proposed action on listed species include habitat alteration from a reduction in available prey to the endangered Steller sea lion WDPS and designated critical habitat.

Habitat Alteration

The seasonal TAC allocations are a component of the status quo Steller sea lion protection measures, which are in place to ensure adequate prey availability overall and particularly in critical areas and at critical times for the Steller sea lion life history requirements. The Steller Sea Lion Recovery Plan notes that the Steller Sea Lion protection measures in the Alaska groundfish fisheries should be maintained until it can be determined that reducing those protections would not reduce the likelihood for survival or increase the time to recovery, including protections developed to: 1) avoid disturbance and competition around rookeries and major haulouts, 2) avoid competition during the early winter season, 3) disperse the fisheries spatially, and 4) disperse the fisheries temporally (NMFS 2008).

Historically, the pollock fishery has harvested all or nearly all of the available A season TAC. Given this history, NMFS assumes that the fishery would harvest the additional 5 percent of the reapportioned TAC in the A season. Figure 4 shows the expected temporal distribution of pollock catch under the proposed reallocation along with the historical distribution in 1997 (before implementation of the AFA), 2003 (the first year after implementation of the status quo Steller sea lion protection measures) and 2014 (the most recent year of harvest data including provisions of Amendment 91). In 1997, the pollock TAC was taken over a period of 15 weeks with more than 40 percent of the TAC taken in the first four weeks. Figure 4 shows the increased temporal dispersion of the fishery in 2003 and 2014 (after sea lion protection measures were implemented) relative to 1997 (before sea lion protection measures were implemented) with no more than 5 percent of the TAC taken in any single week and the total fishery spanning more than 25 weeks. The existing total harvest capacity in the Bering Sea pollock fishery would not change as a result of Amendment 110. No increase in the number of vessels or other harvest capacity mechanism is expected or known to have occurred in this fishery, therefore SF expects the fishery to follow that same pattern of harvesting 5 percent or less of the TAC per week under the proposed seasonal reallocation. This would result in the A season harvest extending approximately three weeks at the end of the A season such that fishing would decrease beginning in late April rather than early April. NMFS expects the directed pollock fishing would end approximately three weeks earlier in the B season in mid-September rather than early-October (Figure 4), which is approximately three weeks earlier than under the status quo. Under this scenario there would be no directed pollock fishing from late-September through late-January.

Winter is a critical period for Steller sea lions, particularly females and juveniles (NMFS 2001, 2003, 2008, 2010). There are seasonal differences in the frequency of occurrence of pollock in sea lion diets upon which the targeted application of temporal conservation measures primarily aimed at limiting harvest amounts in the winter are based. NMFS has concluded that the winter, in particular, requires catch limitations as it is a particularly sensitive period for Steller sea lions. Not only are juveniles learning to forage and find resources as this time, but their energy demands are very high due to their large growth rate over the first few years of life. For females with pups, their energy demands are about double their requirements without a pup (Winship et al., 2002; Winship and Trites, 2003), which makes them potentially susceptible to a reduction in available prey. Under these conditions, a pregnant and nursing female may be more likely to abort the growing fetus which was implanted the previous summer.

The proposed seasonal reallocation is expected to shift approximately three weeks of fishing from the early winter period (late September through early October) to the spring period, which is a less critical time for Steller sea lions providing a potential foraging benefit to the species. If the 5 percent TAC reallocation was ultimately not harvested in the A season and rolled-over to the B season, the temporal distribution of the fishery would reflect the distribution under the status quo. In sum, the proposed reallocation may reduce any potential adverse effects of the Bering Sea pollock fishery on prey availability for Steller sea lions in winter provided the same weekly harvest level pattern continues, though this reduction would likely be small. Thus, the Bering Sea pollock fishery would avoid competition for prey resources with Steller sea lions during the early winter season, though it would be expected to maintain the status quo through the remainder of the winter season (January through March), thereby satisfying the protection measures to temporally disperse the competition for prey.

As discussed above and shown in Figure 4, NMFS expects the overall temporal duration of the Bering Sea pollock fishery to be unchanged (e.g., approximately 25 weeks) under the proposed seasonal TAC allocation relative to the temporal distribution under the status quo Steller sea lion protection measures. Thus, the Bering Sea pollock fishery would continue to disperse the fisheries temporally.

The proposed reallocation of 5 percent of the TAC from the B to the A season would not affect the status quo critical habitat area closures and harvest limits. Closures to directed pollock fishing around important rookery and haulouts would remain in place. Thus, the Bering Sea pollock fishery would continue to disperse spatially and avoid disturbance and competition around rookeries, major haulouts, and foraging areas.

We therefore consider the anticipated effects of this action on potential habitat alteration and prey availability for WDPS Steller sea lions to be insignificant.

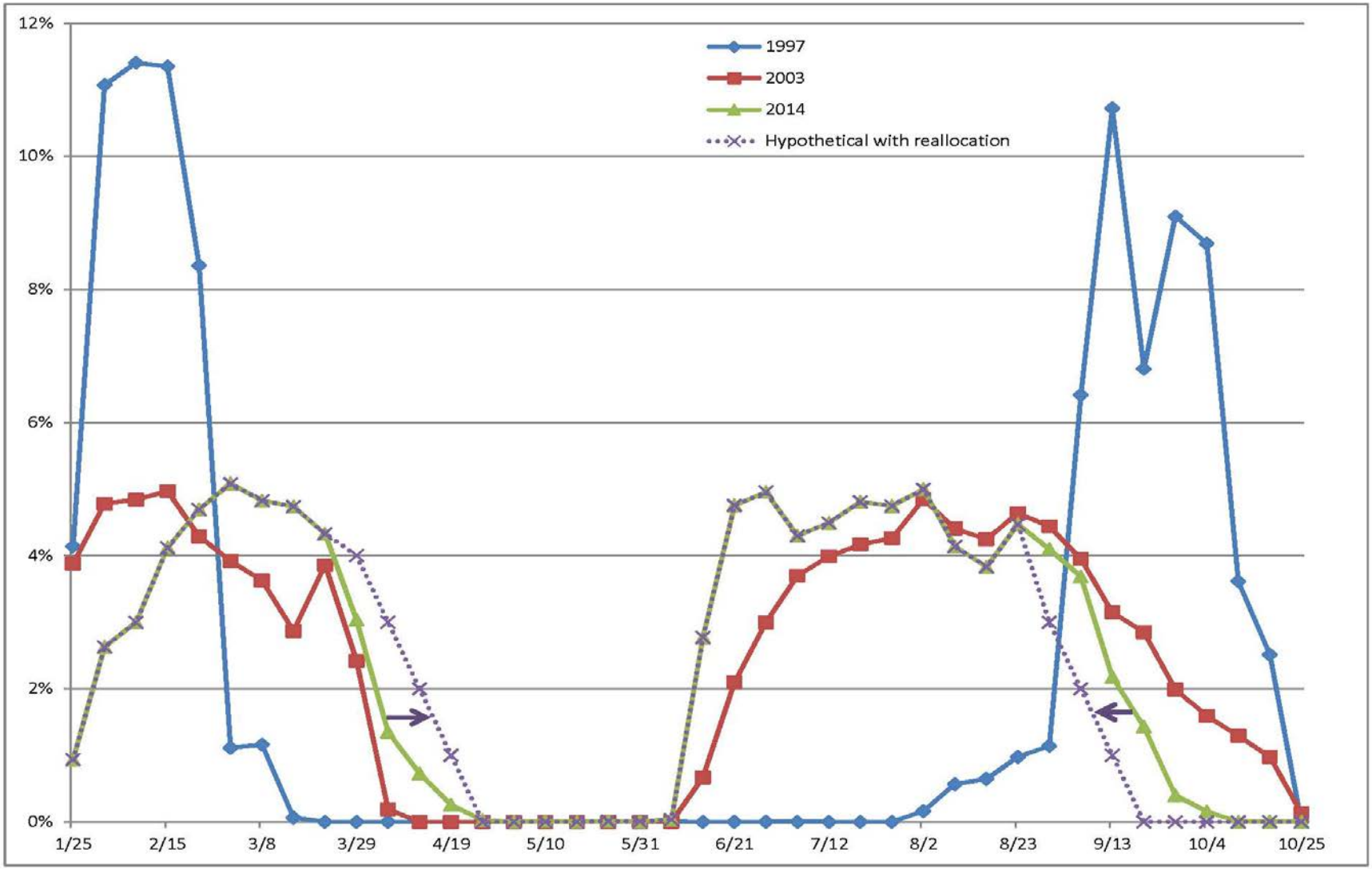

Figure 4. **Percentage of the annual Bering Sea pollock TAC caught per week in 1997, 2003, and 2014. The dotted purple line indicates NMFS's assumption about the shift in the temporal distribution of catch under the proposed seasonal TAC reallocation (NMFS 2015)**

Steller Sea Lion Critical Habitat

NMFS identified physical and biological features essential for conservation of Steller sea lions in the final rule to designate critical habitat (58 FR 45269; August 27, 1993). The proposed project may impact Steller sea lion critical habitat by reducing prey availability. However, this impact is anticipated to be insignificant due to mitigation measures being in place. We evaluate effects to each of the essential features below.

1. Alaska rookeries, haulouts, and associated areas identified at 50 CFR §226.202(a), including terrestrial zones that extend 3,000 feet landward, air zones that extend 3,000 feet above the terrestrial zone, aquatic zones that extend 3,000 feet seaward from each major rookery and major haulout east of 144° W. longitude, and aquatic zones that extend 20 nm seaward from each major rookery and major haulout west of 144° W. longitude. The proposed action will not allow the fishery participants to approach within 20 nm of the major rookery and haulout locations within the Bering Sea Subarea. The proposed action would not affect status quo critical habitat area closures or harvest limits. Closures to directed pollock fishing around important rookery and haulouts would remain in place. The proposed action would continue to disperse spatially and avoid disturbance and competition around rookeries and major haulouts resulting in an insignificant effect to Steller sea lion critical habitat

2. Three special aquatic foraging areas: the Shelikof Strait area, the Bogoslof area, and the Seguam Pass area, as specified at 50 CFR §226.202(c). Shelikof Strait and Seguam Pass are not within the action area and therefore the effects on those foraging areas are not evaluated for this proposed action. The Bogoslof foraging area is within the action area. However, there is no directed fishing for pollock allowed in this area under the proposed action.

The potential effects of the action on both of the essential features of the WDPS Steller sea lion critical habitat identified above are consistent with those evaluated in the species section for habitat alteration and prey availability. We therefore consider the anticipated effects of this action on WDPS Steller sea lion critical habitat to be insignificant.

Conclusion

Based on this analysis, NMFS PRD concurs with your determination that the proposed action may affect, but is not likely to adversely affect, Steller sea lions or their designated critical habitat.

Reinitiation of consultation is required where discretionary federal involvement or control over the action has been retained or is authorized by law and if (1) take of listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter, or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

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