

INITIAL REVIEW DRAFT

Regulatory Impact Review
for a Proposed Regulatory Amendment to
Adjust License Limitation Program License Endorsements for
Bering Sea/Aleutian Islands Pacific Cod Pot Gear Catcher/Processors

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Abstract: Vessels fishing for groundfish in the Bering Sea (BS) and Aleutian Islands (AI) groundfish fishery management plan (FMP) areas are required to have a License Limitation Program (LLP) license that is endorsed for fishing in that area. Vessels fishing for Pacific cod with fixed gear (hook-and-line or pot gear) must have additional Pacific cod endorsements for specific areas, gear-types, and operational-types (operational-type includes catcher/processors (CP) that process catch at sea and catcher vessels that deliver to inshore facilities). This document analyzes a proposed regulatory change that would eliminate the LLP license endorsement for CP vessels to fish for Pacific cod with pot gear in the BS and AI FMP subareas if the license was not credited with a minimum amount of directed Pacific cod landings during a specified period. The purpose of this action is to increase stability for pot CPs that are dependent upon Pacific cod while maintaining low rates of halibut and crab bycatch and ensuring that condensed fishing seasons do not result in safety-at-sea concerns.

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List of Acronyms and Abbreviations

| Acronym or Abbreviation | Meaning |
|-------------------------|--|
| AAC | Alaska Administrative Code |
| ABC | acceptable biological catch |
| ADF&G | Alaska Department of Fish and Game |
| AFA | American Fisheries Act |
| AFSC | Alaska Fisheries Science Center |
| AKFIN | Alaska Fisheries Information Network |
| BSAI | Bering Sea and Aleutian Islands |
| CAS | Catch Accounting System |
| CEQ | Council on Environmental Quality |
| CFR | Code of Federal Regulations |
| COAR | Commercial Operators Annual Report |
| Council | North Pacific Fishery Management Council |
| CP | catcher/processor |
| CV | catcher vessel |
| E.O. | Executive Order |
| EA | Environmental Assessment |
| EEZ | Exclusive Economic Zone |
| FMA | Fisheries Monitoring and Analysis |
| FMP | fishery management plan |
| FONSI | Finding of No Significant Impact |
| FR | <i>Federal Register</i> |
| FRFA | Final Regulatory Flexibility Analysis |
| ft | foot or feet |
| GOA | Gulf of Alaska |
| IRFA | Initial Regulatory Flexibility Analysis |
| lb(s) | pound(s) |
| LLP | license limitation program |
| LOA | length overall |
| m | meter or meters |
| Magnuson-Stevens Act | Magnuson-Stevens Fishery Conservation and Management Act |

| Acronym or Abbreviation | Meaning |
|-------------------------|--|
| t | tonne, or metric ton |
| NAICS | North American Industry Classification System |
| NAO | NOAA Administrative Order |
| NEPA | National Environmental Policy Act |
| NMFS | National Marine Fishery Service |
| NOAA | National Oceanic and Atmospheric Administration |
| NPFMC | North Pacific Fishery Management Council |
| Observer Program | North Pacific Groundfish and Halibut Observer Program |
| OMB | Office of Management and Budget |
| PBR | potential biological removal |
| PSC | prohibited species catch |
| PPA | Preliminary preferred alternative |
| PRA | Paperwork Reduction Act |
| PSEIS | Programmatic Supplemental Environmental Impact Statement |
| RFA | Regulatory Flexibility Act |
| RFFA | reasonably foreseeable future action |
| RIR | Regulatory Impact Review |
| RPA | reasonable and prudent alternative |
| SAFE | Stock Assessment and Fishery Evaluation |
| SAR | stock assessment report |
| SBA | Small Business Act |
| Secretary | Secretary of Commerce |
| TAC | total allowable catch |
| U.S. | United States |
| USCG | United States Coast Guard |
| USFWS | United States Fish and Wildlife Service |
| VMS | vessel monitoring system |

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Executive Summary

Vessels fishing for groundfish in the Bering Sea (BS) and Aleutian Islands (AI) groundfish fishery management plan (FMP) areas are required to have a License Limitation Program (LLP) license that is endorsed for fishing in that area. Vessels fishing for Pacific cod with fixed gear (hook-and-line or pot gear) must have additional Pacific cod endorsements for specific areas, gear-types, and operational-types (operational-type includes catcher/processors (CP) that process catch at sea and catcher vessels (CV) that deliver to inshore facilities). This document analyzes a proposed regulatory change that would eliminate the LLP license endorsement for CP vessels to fish for Pacific cod with pot gear in the BS and AI FMP subareas if the license was not credited with a minimum amount of directed Pacific cod landings during a specified period. The purpose of this action is to increase stability for pot CPs that are dependent upon Pacific cod while maintaining low rates of halibut and crab bycatch and ensuring that condensed fishing seasons do not result in safety-at-sea concerns.

Purpose and Need

Amendment 85 to the Groundfish FMP for the BSAI assigned a portion of the Bering Sea/Aleutian Islands Pacific cod TAC to the pot CP sector with the primary goals of aligning Pacific cod allocations with actual dependency and use and providing stability to all sectors. Three major changes have occurred since the implementation of Amendment 85, which has resulted in less stability for the dependent vessels on which the Amendment 85 allocation was based:

1. Low crab TACs and consolidation within the crab fisheries has provided increased flexibility for pot CPs;
2. The TAC for Pacific cod in the BSAI has decreased over the last several years; and
3. The availability of rollovers to the pot CP sector has declined.

The Council is considering action to eliminate latent capacity in the fishery in order to increase stability for cod dependent pot CPs, to maintain consistently low rates of halibut and crab bycatch, and to ensure that condensed fishing seasons do not result in safety-at-sea concerns.

Alternatives

Alternative 1: No action

Alternative 2: Remove the Bering Sea and Aleutian Islands Pacific cod endorsements on CP pot LLP licenses unless the license is credited with a minimum directed landing of 1,000 metric tons in the management area based on the following threshold criteria:

Option 1: 2005 – 2019

Option 2: 2012 – 2019

Suboptions:

A: In any of three years

B: In any of four years

Alternative 1

Selecting the No Action alternative would result in a status quo regulatory landscape in terms of access to participate in the BSAI Pacific cod pot CP fishery. The BSAI Pacific cod pot CP sector consists of the vessels that presently hold the eight LLP licenses with the appropriate species, area, and gear endorsements. BSAI pot gear CP LLP licenses were awarded Pacific cod endorsements if the license was credited with at least 300,000 lbs. of directed cod landings in any two years from 1995 through 1998.

The sector’s TAC is allocated across the BS and AI FMP subareas combined, but where a vessel may fish is dependent on holding a license with the appropriate area endorsement. Under Alternative 1, a vessel’s ability to participate in this sector would remain contingent on the vessel being named on one of the eight LLP license with the necessary endorsements or purchasing such a license on the open market. A vessel with a Federal Fisheries Permit (FFP) must have a cod-endorsed LLP to fish CDQ Pacific cod. Vessels are not required to hold an endorsed LLP or an FFP to participate in the parallel fishery that operates during the Federal season in state-waters (inside 3 nm).

Alternative 2

Alternative 2 would remove the Pacific cod endorsement from any of the eight pot gear CP LLP licenses that currently hold a BS or AI area endorsement if that license was not credited with a minimum amount of catch in the sector during a defined historical period. The Council has previously stated that the catch threshold should be evaluated at the BSAI level (not catch by BS or AI subarea) because the sector’s annual TAC allocation is managed at the joint-BSAI level. If a license is endorsed for both BSAI subareas, failure to meet the Alternative 2 threshold would result in removing the Pacific cod endorsement for both areas.

Alternative 2 sets the threshold for retaining the BS and/or AI Pacific cod endorsement at 1,000 mt of directed fishery catch during the relevant period. The relevant period is either 2005 through 2019 (Option 1) or 2012 through 2019 (Option 2). If no suboption is selected, the alternative is interpreted to mean that a license must be credited with 1,000 mt of catch *in total* over the length of time defined by the option selected.

Figure ES-1 is a simplified version of Figure 2-1 that shows how many of the eight Pacific cod-endorsed BSAI pot gear CP LLP licenses would retain (green) or lose (red/checkered) that endorsement under Alternative 2. Figure ES-1 is curtailed to show only Council staff’s best interpretation of the Council’s intent when defining the alternative in October 2019. A full explanation of staff’s rationale and alternative interpretations is provided in Section 2.2. Having analyzed the LLP licenses’ catch history during the relevant period, it happens that there is no difference in outcomes between the two suboptions (A and B) and there is no difference in outcomes compared to excluding the suboptions altogether. The net result is that, under staff’s interpretation of Alternative 2, four LLP licenses will retain the Pacific cod endorsement, three licenses will lose the endorsement, and one license will either retain or lose the endorsement depending on which qualifying period (Option 1 or Option 2) is selected.

Figure ES-1 LLP licenses that would retain (GREEN) or lose (RED/checkered) BSAI Pacific cod pot gear CP endorsements under Alternative 2

| LLP Licenses | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------------------|----------|-------|-------|-------|-------|-------|-----|-----|-----|
| No Suboption | Option 1 | Green | Green | Green | Green | Green | Red | Red | Red |
| | Option 2 | Green | Green | Green | Green | Red | Red | Red | Red |
| Suboption A or B | | | | | | | | | |
| with... | Option 1 | Green | Green | Green | Green | Green | Red | Red | Red |
| | Option 2 | Green | Green | Green | Green | Red | Red | Red | Red |

Regulatory Impact Review

Fishery Description and Impacts

Table ES-1 summarizes the BSAI Pacific cod pot CP sector’s available harvest, actual harvest, and fleet size from 2005 through 2020. The table shows declining allocation amounts, declining inseason reallocations (rollovers) from other BSAI Pacific cod sectors, and consistently high TAC utilization rates. These values indicate that the sector currently has the capacity to harvest its full allocation and more, if available. Table ES-2 reports the declining length of time necessary for the sector to harvest the TAC.

Table ES-1 BSAI Pacific cod CP pot sector allocations, participation, and catch (2005 through 2020)

| Year | Available Harvest (non-CDQ) | | | | Participation | | | | Harvest | | | Utilization | |
|------|-----------------------------|--------------------|-----------------------|---|---------------------------------|--|---|-------------------------------|---|----------------------------------|----------------------|--|--|
| | Initial allocation (mt) | Reallocations (mt) | Final allocation (mt) | Final allocation as % of initial allocation | Vessel count for target fishery | Vessel count for all Pacific cod catch | Vessel count in the Pacific cod CDQ fishery | Vessel count in GHL fisheries | Non-CDQ Pacific cod federal target catch (mt) | CDQ Pacific cod total catch (mt) | GHL total catch (mt) | Total catch of BSAI Pacific cod as % of initial allocation | Total Pacific cod catch as % of final allocation |
| 2005 | 3,190 | 162 | 3,352 | 105% | 2 | 2 | - | - | * | - | - | * | * |
| 2006 | 2,938 | 115 | 3,053 | 104% | 4 | 4 | 1 | - | 3,148 | * | - | 107% | 103% |
| 2007 | 2,641 | 27 | 2,668 | 101% | 3 | 3 | 1 | - | 2,755 | * | - | 104% | 103% |
| 2008 | 2,274 | 815 | 3,089 | 136% | 6 | 6 | - | 4 | 3,671 | - | 912 | 161% | 119% |
| 2009 | 2,352 | 1,198 | 3,550 | 151% | 4 | 4 | - | 2 | 3,513 | - | * | 149% | 99% |
| 2010 | 2,248 | 1,102 | 3,350 | 149% | 5 | 5 | - | 3 | 3,358 | - | 1,753 | 149% | 100% |
| 2011 | 3,041 | 0 | 3,041 | 100% | 4 | 4 | - | 1 | 3,098 | - | * | 102% | 102% |
| 2012 | 3,484 | 800 | 4,284 | 123% | 5 | 5 | 2 | - | 4,173 | * | - | 120% | 97% |
| 2013 | 3,470 | 2,600 | 6,070 | 175% | 3 | 3 | 1 | - | 6,332 | * | - | 182% | 104% |
| 2014 | 3,389 | 2,500 | 5,889 | 174% | 4 | 4 | 2 | - | 5,477 | * | - | 162% | 93% |
| 2015 | 3,329 | 3,500 | 6,829 | 205% | 4 | 4 | 2 | - | 6,166 | * | - | 185% | 90% |
| 2016 | 3,357 | 3,250 | 6,607 | 197% | 4 | 4 | 2 | - | 5,698 | * | - | 170% | 86% |
| 2017 | 3,194 | 1,805 | 4,999 | 157% | 4 | 5 | 1 | - | 4,921 | * | - | 154% | 98% |
| 2018 | 2,720 | 0 | 2,720 | 100% | 5 | 5 | 3 | 1 | 2,810 | 1,295 | * | 103% | 103% |
| 2019 | 2,410 | 335 | 2,745 | 114% | 5 | 5 | 3 | - | 2,693 | 1,521 | - | 112% | 100% |
| 2020 | 2,074 | 0 | 2,074 | 100% | 5 | 5 | 2 | - | 2,050 | * | - | 99% | 99% |

Table ES-2 Season length of BSAI Pacific cod pot CP sector, 2010 through 2020

| Year | A Season | | | B Season | | |
|------|----------|--------|------|----------|---------|------|
| | Open | Close | Days | Open | Close | Days |
| 2010 | 1-Jan | 23-Feb | 54 | 1-Sep | 23-Sep | 23 |
| 2011 | 1-Jan | 24-Jan | 24 | 1-Sep | 23-Oct | 53 |
| 2012 | 1-Jan | 23-Jan | 23 | 1-Sep | 31-Dec | 122 |
| 2013 | 1-Jan | 28-Jan | 28 | 1-Sep | 31-Dec | 122 |
| 2014 | 1-Jan | 26-Jan | 26 | 1-Sep | 31-Dec | 122 |
| 2015 | 1-Jan | 4-Feb | 35 | 1-Sep | 31-Dec | 122 |
| 2016 | 1-Jan | 29-Jan | 29 | 1-Sep | 31-Dec* | 95 |
| 2017 | 1-Jan | 25-Jan | 25 | 1-Sep | 31-Dec | 122 |
| 2018 | 1-Jan | 20-Jan | 20 | 1-Sep | 20-Sep | 20 |
| 2019 | 1-Jan | 15-Jan | 15 | 1-Sep | 15-Sep | 15 |
| 2020 | 1-Jan | 12-Jan | 12 | 1-Sep | 12-Sep | 12 |

* 2016 season was closed from October 18 to November 15 then reopened for the remainder of the calendar year.

Figure ES-2 shows the annual gross value of the fishery and illustrates the positive correlation between catch value (non-CDQ limited access fishery allocation under Amendment 85) and the sector's final TAC (initial 1.5% allocation of BSAI non-CDQ TAC plus rollovers of unfished TAC from other Pacific cod sectors). It should be noted that some of the active vessels in the pot CP sector fish CDQ Pacific cod as well (see Table ES-1). Table ES-3 shows the bycatch of PSC species that occurred in the pot CP sector during the 10 most recent years, alongside the number of active vessels in the fishery (additional years of PSC estimates are provided in Section 3.4.3). The sector encounters halibut in relatively small amounts. Crab PSC is similarly variable. NMFS closely monitors bycatch of crab species that are in overfished status (i.e., blue king crab) and takes inseason measures to ensure that crab ABCs are not exceeded.

Figure ES-2 Nominal BSAI pot CP wholesale revenues from non-CDQ catch (bars) compared to final TAC (initial TAC plus inseason reallocations; line), 2006 through 2020

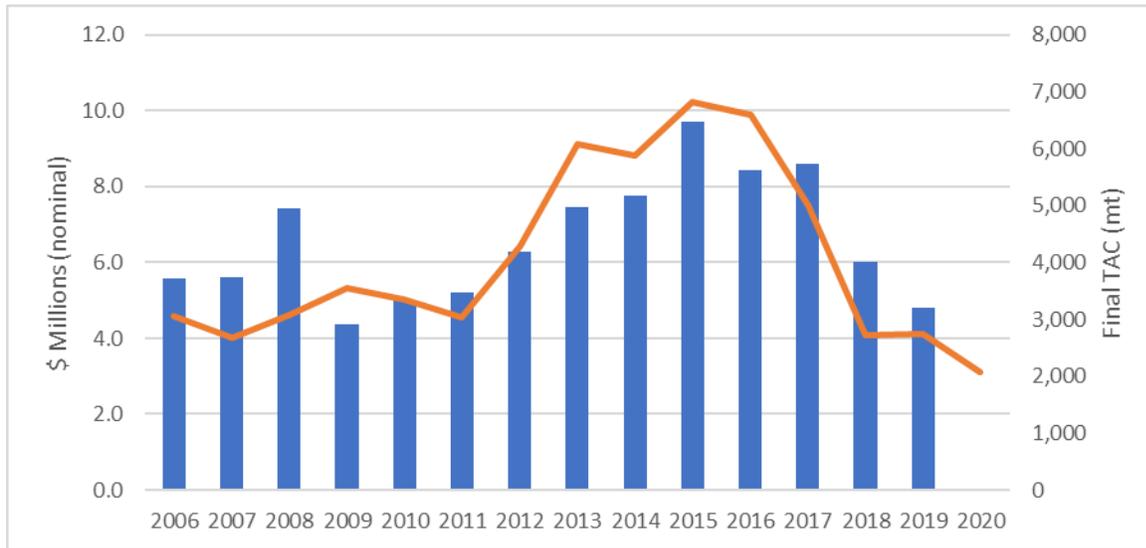


Table ES-3 Estimated prohibited species catch of crab (number of animals) and halibut (mt of mortality) in BSAI pot CP sector (2011 through 2020)

| Year | Vessels | Halibut (mt) | Blue king crab | Red king crab | Tanner crab | Golden king crab | Opilio crab |
|------|---------|--------------|----------------|---------------|-------------|------------------|-------------|
| 2011 | 4 | 1.30 | | 8,479 | 26,257 | 27 | 20,449 |
| 2012 | 5 | 0.79 | | 4,123 | 18,090 | | 1,506 |
| 2013 | 3 | 0.75 | 9 | 51,913 | 100,697 | | 4,500 |
| 2014 | 4 | 0.90 | | 72,552 | 179,499 | | 24,808 |
| 2015 | 4 | 0.57 | 975 | 94,632 | 217,500 | 7 | 40,226 |
| 2016 | 4 | 0.54 | 3,486 | 13,479 | 99,345 | | 15,824 |
| 2017 | 4 | 0.41 | 16,198 | 3,968 | 15,944 | | 41,937 |
| 2018 | 5 | 0.28 | 3,811 | 12,289 | 19,223 | 4 | 35,919 |
| 2019 | 5 | 0.16 | 2,967 | 1,491 | 2,842 | 27 | 57,668 |
| 2020 | 5 | 0.13 | | 76 | 2,483 | | 48,914 |

Impacts of Alternative 1

Given the fishery context of reduced harvest opportunity (TACs, rollovers, and CDQ), the possibility of new entry by vessels with latent LLP licenses could exacerbate ongoing challenges for recently active participants in the sector. The motive to provide relative stability to active participants (Alternative 2) is weighed against the loss of fishery access for the holders of latent licenses or those who might hold those licenses in the future.

For the owners of LLP licenses that could lose the cod endorsement, Alternative 1 is a straight-forward benefit. The opportunity to fish might be important to those license holders if the fisheries in which they currently participate decline in volume and/or value. Moreover, a license with a Pacific cod endorsement is also a more valuable asset on the LLP transfer market. However, the opportunity afforded by the cod endorsement on the latent LLP licenses is currently a diminished opportunity relative to years of higher final TACs. Latent licenses might be used to enter the fishery in two cases: the BSAI Pacific cod stock rebounds to create a more attractive fishery, or the opportunity cost of choosing to fish pot cod rather than the other fisheries for which latent licenses are currently used become sufficiently low. Low opportunity costs could be the result of reduced yield or revenue in other fisheries, or situations where a vessel has the

flexibility afforded by rationalization to take time away from other fisheries when the pot season is open without giving up potential catch to competing vessels.

The challenges faced by historically active pot CPs that might be exacerbated by new entry mainly stem from reduced expected harvest and shorter season length. Aside from the direct gross revenue impact of less available harvest, shortened seasons create real costs in terms of down-time, crew travel, and crew retention when the cod fishery does not last long enough to link up with other pot fisheries (e.g., Bering Sea crab). Vessels might need to seek supplemental harvest opportunities in other (rationalized) fisheries through leasing. Opportunities to lease quotas are not equally available to all participants, and leasing marginally reduces the return on the vessel's effort. That loss in productivity flows down the labor chain and negatively affects crew compensation; it could also lead to reductions in crew size (job loss) or reduced crew retention rates.

Impacts of Alternative 2

Alternative 2 would have an unambiguously negative effect on the owners of **latent LLP licenses**. Vessels associated with LLP licenses that lose the Pacific cod endorsement would not be able to enter the Federal limited access fishery, nor would they be able to harvest Pacific cod CDQ. The current set of CP vessels associated with latent licenses would likely continue to participate in the Bering Sea crab, BSAI HAL Pacific cod, and halibut/sablefish IFQ fisheries.

Alternative 2 would not prevent the owners of latent licenses or the vessels to which they are assigned from participating in state-managed GHL fisheries. The vessels currently associated with latent licenses have little or no history of reliance on BSAI Pacific cod pot fishing. While the future transfer of licenses to smaller vessels cannot be predicted, the analysts do not foresee the GHL fisheries as a “spillover fishery” based on the recent history of CPs’ desire to access that fishery and the relative attractiveness of cod fishing given the current stock trend.

Removing the Pacific cod endorsement from these licenses would certainly reduce their potential value on the LLP license transfer market. Endorsements are not severable from the license so their marginal market value cannot be priced empirically. The analysts do not attempt to place a specific dollar value on a BSAI Pacific cod pot CP endorsement since the primary drivers of LLP license value appear to be catch history and maximum LOA endorsement.

The owners **historically active LLP licenses** as well as the vessels and crew prosecuting the pot CP fishery would benefit from Alternative 2 in terms of stability and operational efficiency. The BSAI pot CP fishery is operating in an environment of low TAC and short seasons. Alternative 2 potentially forestalls additional participation. While maintaining the current state does not *create* operational stability, it does increase the likelihood that the pace, timing, and flexibility of the fishery could contribute to stability relative to No Action. The benefits of Alternative 2 are limited in that it would not lengthen the season or increase aggregate harvest opportunity relative to No Action.

The owners of licenses that would retain the cod endorsement have testified that they hope to use the relative stability provided by the alternative to address operational inefficiencies by managing their sector cooperatively. Through voluntary cooperation, participants might recover some of the net operating margins that have been lost to lower gross revenues and additional costs experienced in recent years. Cooperative planning would not necessarily assure that the sector increases gross or net revenues but, relative to No Action, cooperation is likely to stem the losses that have occurred due to operational inefficiencies in how this low-TAC, competitive fishery is prosecuted. The active participants suggest that precluding new entry via a latent license reduction is a necessary condition for cooperative action. The analysts find this suggestion to be supported by experiences in other limited access fisheries such as the GOA trawl CV sector.

Short seasons create inefficiencies when vessels are not able to link the timing of Pacific cod fishing with other activities. Ideally, cod and crab could keep a vessel operating steadily with a full crew from the B season through to the new year when the cod A season begins, allowing vessels to have a consistent fishery from September or October through February or March. Short cod seasons create time gaps between fisheries, causing vessel operators to either house crew onshore for weeks while producing no revenue and earning no wages, or purchase additional airfare to/from high-cost operating ports like Unalaska. These gaps could result in crew layoffs or furloughs. Crew members who weather the gaps experience periods with expenses but no income, and thus may be harder to retain as employees. Vessel operators may lose experienced labor that makes the sector work efficiently and safely.

A voluntary cooperative's objective would likely be to create some flexibility in when the fishery is prosecuted, thus minimizing time gaps to a degree. The method by which this is achieved, like the creation and internal administration of a cooperative itself, is outside the Council's purview. Possible strategies to achieve flexibility include agreed upon start dates that might differ from the January 1 and September 1 "hard starts" or voluntary catch sharing agreements. A catch sharing agreement, for example, could allow a vessel to start its B season activity later without losing potential harvest to vessels that face different opportunity costs of fishing and choose to start earlier. Formalized voluntary catch sharing agreements exist in other sectors (e.g., the HAL CP sector's Freezer Longline Coalition). Ad hoc catch sharing agreements sometimes emerge in the GOA trawl CV sector when vessels need to work with each other and NMFS inseason managers to keep a fishery open while ensuring that TAC or PSC limits are not exceeded. Ad hoc agreements can be costly to arrange and can be tenuous – vulnerable to hold-outs or defectors. Entities that are less likely to join or abide by an agreement often include those with less to gain individually by maintaining historical fishing patterns or – as the case may be – adapting those patterns. Vessels entering this sector using latent licenses are likely to fit that description. If a voluntary cooperative focuses on a mutually delayed start date (no catch sharing agreement), a hold-out (or defector) that begins fishing early would likely cause all vessels to abandon their business plans and begin fishing immediately. If latent licenses could still enter the fishery, members of a cooperative agreement might have to choose between granting the new participant something of value from the agreement (e.g., a portion of agreed upon catch shares) or seeing the agreement collapse and the fishery return to a derby with start dates that are fixed in regulation.

The analysts do not predict that slowing the pace of the fishery would create a spillover of effort into the BS or AI Pacific cod GHL fisheries. Only one of the active pot CPs meets the length restrictions to participate in the state-managed fishery (AI only). The GHL fishery occurs after the Federal fishery is concluded, so slowing the pace of the fishery or cooperatively sharing the available TAC does not allow a vessel to jump between a Federal and a state-managed fishery. BSAI pot CPs have not historically demonstrated a desire to fish the AI GHL after the Federal fishery closes. Given the low volume of opportunity, this action should not directly alter those decisions.

Alternative 2 could have a positive impact on vessel safety *if* the action results in vessels having more choice over when to fish and less incentive to engage in a derby-style fishery where the timing of fishing is fixed to certain calendar dates. At present, vessels have a strong incentive to begin fishing on January 1 and September 1 regardless of weather conditions. If conditions during a limited access season become less safe, vessels working under a cooperative structure could delay fishing or stand-down mid-season without sacrificing potential catch to vessels that choose to stay on the fishing grounds. A cooperative agreement would not completely eliminate time-pressure since TACs must be taken before the season end dates of June 10 for the A season and December 31 for the B season.

Historical **halibut and crab bycatch** reflect that the volume of bycatch is highly variable by year and not correlated to the number of active vessels in the fishery. Annual variability in crab bycatch suggests that encounter rates are a function of fishery timing and collocation of crab and Pacific cod, which are largely external environmental conditions. The current race-based nature of the pot CP sector limits vessels'

bycatch response options. Alternative 2 is most likely to influence bycatch outcomes insofar as it affects the pace of the fishery relative to the status quo. The action alternative would not necessarily reduce the number of active vessels but would eliminate the possibility that additional vessels enter the fishery and exacerbate “race for fish” conditions that are expected to result in worse – or at least more volatile – bycatch outcomes because vessels are sacrificing greater catch opportunity if they stop deploying gear to spend time moving away from bycatch hot spots.

If the indirect impacts of the action slow the pace of the fishery or otherwise reduce competition between vessels, it is possible that CPs could alter their spatial fishing patterns. There is no evidence available to conclude that different spatial effort distribution would increase or decrease bycatch. As a result, the most likely connection between the action alternative and bycatch outcomes is whether vessels modify their behavior to mitigate the race to fish and avail themselves of the opportunity to move when bycatch rates are high. Even if the opportunity cost of moving is reduced, retrieving gear and spending time moving still poses operational costs. Given that halibut and crab bycatch are not limited in the sense that the sector could be closed, the extent to which vessels will choose to move away from bycatch hot spots is uncertain.

The **communities** associated with active LLPs by license and vessel ownership are the Seattle, WA metropolitan statistical area (MSA) and Anchorage, AK. The communities most involved in active pot CP vessel operations are the Seattle MSA and Unalaska, AK. Any potential entry into the fishery that becomes impossible under Alternative 2 would not likely have altered the dominance of Unalaska as the central community for port services and product transfers in this sector. The latent licenses that could lose the cod endorsement under Alternative 2 are currently owned by entities that report residences of Kodiak, AK, Wasilla, AK, and the Seattle MSA. Impacts on crew for active or potentially active vessels are likely distributed across a variety of geographies. Based on the prevalence of pot CP ownership location and homeport, it is assumed that many crew members reside in or around the Seattle MSA.

For the LLP licenses that would retain the Pacific cod endorsement, the action alternative is not expected to have negative impacts on the communities of LLP ownership, vessel ownership, or vessel operation. Those license-holders and their associated platforms/operations could continue participation as TAC levels allow. Those communities could be said to benefit by avoiding a worse outcome if selecting Alternative 2 means that available harvest is not spread across more operations, and if what operational efficiencies still exist for these participants are not further limited by reduced season length. The benefits of the action are acute to the active participants associated with the pot CPs retaining the endorsement.

The communities associated with LLP licenses that could lose the cod endorsement would not necessarily be worse off relative to the status quo but could be adversely impacted relative to the No Action alternative (Alternative 1). Under the status quo, the communities that are linked by ownership to latent LLP licenses do not depend on, or derive direct benefits from, the BSAI pot cod CP sector. However, selecting Alternative 2 eliminates a future opportunity for residents of these, or other, communities to enter the fishery. That opportunity would still exist under Alternative 1.

Management and Enforcement Considerations

This analysis identifies existing challenges with observer data collections and provides recommendations for improving the quality and timeliness of the data that are used to manage and enforce the activities of BSAI Pacific cod pot CPs. Though not directly related to the action alternative under review, the document informs the Council and public of NMFS and industry’s intention to continue improving data collections in the pot CP sector. Aside from monitoring and data collection challenges, NMFS staff did not identify other issues regarding inseason management and enforcement that warrant the Council’s attention.

Because of the short seasons and limited number of vessels participating in the fishery, NMFS relies on timely and accurate observer data to manage the pot CP sector. Since 2014, NMFS has identified a concern with the timeliness of the observer data available for this fleet. This concern is important because NMFS is 100% reliant on the observer data to manage a fishery that has a relatively small allocation, short seasons, and typically only three to five vessels participating each season. These characteristics mean that if observer data are changed or deleted during the observer debriefing process after the season, there could be a relatively large impact on final catch estimates. Imprecise estimates could result in a TAC overage or TAC remaining that could otherwise have been harvested.

BSAI pot CPs are among the most challenging deployments faced by observers because of the pace of fishing, the sampling workload, and the need for very close communication between the captain and the observer. NMFS strives to keep as much data as is reliable and not delete large amounts of data without exhausting every other remedy first. Nevertheless, of the 13 fishing seasons (A and B seasons) in the six years from 2014 through 2019 and the 2020 A season, NMFS has replaced all or a portion of the observer data with industry reported production data for a vessel in nine seasons. In some cases, catch estimates were significantly affected by the data changes. On one occasion data replacement resulted in doubling the harvest estimate for one vessel.

Additional monitoring requirements may be necessary to address concerns expressed by industry and NMFS about the data sources for catch estimates in this sector, similar to what is used in other fisheries with data quality concerns. NMFS recommends the following monitoring requirements for the BSAI pot CP sector:

- Require observers deployed on BSAI pot CPs participating in the BSAI groundfish fisheries to have a level 2 deployment endorsement.
- Require BSAI pot CPs participating in the BSAI groundfish fisheries to comply with the pre-cruise meeting notification before beginning a fishing trip.
- Require BSAI pot CPs participating in the BSAI groundfish fisheries to provide a certified observer sampling station and motion compensated platform scale for the observer's use.

NMFS also recommends continued engagement with the fishing industry to explore other monitoring options to address NMFS and industry data needs. Additional tools could include requiring two observers to sample every haul (currently a requirement on trawl CPs), or the use of a flow scale or other at-sea scale to measure the total haul weight.

Requirements for observer coverage, observer experience level, and other monitoring and enforcement requirements such as at-sea catch weighing and electronic reporting are designed to maximize the quality of data used to estimate catch and bycatch. Estimates of discarded Pacific cod, halibut PSC, and other bycatch species are derived solely from observer data. For this reason, it is important that observer data used by NMFS for inseason management be as complete and accurate as possible.

Comparison of Alternatives

| | Alternative 1 | Alternative 2 |
|-------------------------------|---|--|
| | No action | Remove BSAI pot gear CP Pacific cod endorsement from latent LLP licenses Options: (1) 2005 – 2019 or (2) 2012 – 2019 Suboptions: (A) In any 3 years or (B) In any 4 years |
| Environmental Impacts | No impacts on the human environment anticipated; preliminary determination by NMFS to seek a categorical exclusion under NAO 216-6. | |
| Economic Impacts | | |
| Fishing opportunity | Status quo. Up to 8 CPs could participate in limited access or CDQ cod (compared to 4 or 5 CPs active in recent years) | Up to 5 CPs could participate under Option 1; up to 4 CPs could participate under Option 2. Based on analysts' interpretation, selection of a suboption would not change that outcome. |
| BSAI pot CP fishery operation | Status quo. Short, competitive seasons where TAC (plus any rollovers) is fully harvested. | Possibly no change from status quo. If active vessels fish cooperatively, timing of fishing could shift away from season opening dates (particularly for B season). |
| Harvest volume and value | Status quo (subject to natural evolution of Pacific cod stock and market) | No substantial change. Fishery will likely continue to be fully harvested. Finished wholesale product sold into a global market. |
| Crew | Status quo | If vessels fish cooperatively, reduced inefficiencies that occur around short seasons could increase crew pay and/or stability of work. |
| Community | Status quo | No change. LLP ownership largely based in Seattle; in-season vessel operations centered in Unalaska. |
| Bycatch | Status quo | Likely status quo. Potential benefits if vessels fish cooperatively and can move away from crab bycatch with less internal cost. |
| Safety at sea | Status quo | Likely status quo. Potential benefits if vessels fish cooperatively and agree to stand down or catch-share so that vessels do not fish openers in unsafe conditions. |

1. Introduction

Vessels fishing for groundfish in the Bering Sea (BS) and Aleutian Islands (AI) groundfish fishery management plan (FMP) areas are required to have a License Limitation Program (LLP) license that is endorsed for fishing in that area. Vessels fishing for Pacific cod with fixed gear (hook-and-line or pot gear) must have additional Pacific cod endorsements for specific areas, gear-types, and operational-types (operational-type includes catcher/processors (CP) that process catch at sea and catcher vessels (CV) that deliver to inshore facilities). This document analyzes a proposed regulatory change that would eliminate the LLP license endorsement for CP vessels to fish for Pacific cod with pot gear in the BS and AI FMP subareas if the license was not credited with a minimum amount of directed Pacific cod landings during a specified period. The purpose of this action is to increase stability for pot CPs that are dependent upon Pacific cod while maintaining low rates of halibut and crab bycatch and ensuring that condensed fishing seasons do not result in safety-at-sea concerns.

This document is a Regulatory Impact Review (RIR). An RIR provides an assessment of the impacts of a proposed action and its reasonable alternatives, as well as the benefits and costs of the alternatives, the distribution of impacts, and identification of the small entities that may be affected by the alternatives. This RIR addresses the statutory requirements of the Magnuson Stevens Fishery Conservation and Management Act, the National Environmental Policy Act, Presidential Executive Order 12866, and some of the requirements of the Regulatory Flexibility Act. An RIR is a standard document produced by the North Pacific Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS) Alaska Region to provide the analytical background for decision-making.

NMFS Alaska Region Office has made the preliminary determination that the proposed action would be a change to regulations that does not result in substantial modification of fishing location, timing, effort, authorized gear types, or harvest levels relative to the status quo and relative to what has been analyzed in previous approved actions. Prior actions related to the establishment and modification of LLP licenses and Pacific cod endorsements are summarized in Section 1.2. Any pursuant regulatory changes would have no effect, individually or cumulatively, on the human environment as defined in NAO 216-6. As such, NMFS foresees that this action would qualify for a Categorical Exclusion from further review under the National Environmental Policy Act (NEPA). For that reason, this document does not include an Environmental Assessment (EA).

1.1. Purpose and Need

The purpose of this action is to consider whether the number of LLP licenses endorsed to fish for Pacific cod with pot gear on CP vessels is aligned with the intent of the Council when it most recently allocated Pacific cod TAC to various sectors under BSAI groundfish Amendment 85 (72 FR 50788, September 2007), which became effective for the 2008 fishing year. The regulatory history of BSAI Pacific cod allocation is further described in Section 1.2 of this document.

The Council adopted the following statement of purpose and need to originate this action in October 2019.¹

Amendment 85 [to the Groundfish FMP for the BSAI]² assigned a portion of the Bering Sea/Aleutian Islands Pacific cod TAC to the pot CP sector with the primary goals of aligning Pacific cod allocations with actual dependency and use and providing stability to all sectors.

¹ Council motion (October 8, 2019) available at: <https://meetings.npfmc.org/CommentReview/DownloadFile?p=84b21d13-42e6-40b1-9ec4-f155b0e43866.pdf&fileName=D4%20MOTION.pdf>.

² Underlined language is an addition suggested by Council staff for clarity and specificity.

Three major changes have occurred since the implementation of Amendment 85, which has resulted in less stability for the dependent vessels on which the Amendment 85 allocation was based:

4. *Low crab TACs and consolidation within the crab fisheries has provided increased flexibility for pot CPs;*
5. *The TAC for Pacific cod in the BSAI has decreased over the last several years; and*
6. *The availability of rollovers to the pot CP sector has declined.*

The Council is considering action to eliminate latent capacity in the fishery in order to increase stability for cod dependent pot CPs, to maintain consistently low rates of halibut and crab bycatch, and to ensure that condensed fishing seasons do not result in safety-at-sea concerns.

In the deliberations that led to this purpose and need – and the alternatives described in Section 2 – the Council noted that the BSAI Pacific cod TAC is fully allocated to various gear and operational-type sectors and that the TAC is typically fully harvested. The Council noted that the stability of the sector that had been key to the rationale for Amendment 85 is potentially threatened by a combination of low TACs, reduced availability of rollovers from other BSAI Pacific cod sectors, increased interest in participation by vessels utilizing licenses that had not recently been active, and the resultant reduction in the length of fishing seasons.

In October 2019 the Council requested that NMFS establish a control date to provide notice that participation after that date might not be considered for future actions that would affect participation in the BSAI Pacific cod CP pot sector. The control date was published as December 10, 2019 and noticed in the Federal Register (84 FR 67421). The advanced notice of proposed rulemaking reflected the Council's intent to evaluate participation and effort in the BSAI Pacific cod pot CP sector in response to a public request to consider further limits on access to this fishery. The notice promoted awareness that any participation in the sector after the control date may not ensure continued access to the fishery subsequent to the action being analyzed in this document. The establishment of a control date is intended to discourage speculative entry into the fishery while the Council considers whether and how access to the fishery may be further limited under this action.

1.2. History of this Action

This potential action originated in December 2018 when the Council tasked a discussion paper to track recent and historical participation in the BSAI Pacific cod pot CP sector. In doing so, the Council was responding to public testimony expressing concern about the reduction in season length – particularly the B season (September 1 through December 31) – that is largely the result of reduced Pacific cod ABC and TAC levels. The Council reviewed that discussion paper³ at its October 2019 meeting and established the purpose and need statement and alternatives that are analyzed herein.

Because this action relates to the requirement to hold an LLP license that is endorsed for an area, gear type, and Pacific cod, the analysts include a brief timeline of Council amendments to the BSAI Groundfish FMP that established LLP license requirements and the various endorsements that they must carry in order to participate in certain groundfish fisheries. The timeline also includes amendments that established sector allocations of Pacific cod ABC/TAC. A useful tool to help readers to track FMP development over the years is the *Bering Sea/Aleutian Islands Groundfish Fishery Management Plan Amendment Action Summaries*, published by the Council in 2016.⁴ Additional information on the purpose

³ Available at: <http://meetings.npfmc.org/CommentReview/DownloadFile?p=39504ae2-86c5-4f52-8e76-7780389335da.pdf&fileName=E1%20MOTION%20Pot%20Cod%20CP.pdf>

⁴ Available on the Council's website at: <https://www.npfmc.org/wp-content/PDFdocuments/fmp/BSAI/BSAIGFAMActionSumm.pdf>.

and need and results for each of the FMP amendments listed below are provided in one-page summaries in that document.

- **Amendment 39** (63 FR 52642, October 1998; effective January 1, 1999): In 1995 the Council took action to establish the License Limitation Program to address excess harvest capacity in the BSAI groundfish fleets in anticipation of rationalization actions for groundfish and crab fisheries.⁵ LLP licenses limited the number, size, and specific operation of groundfish and crab vessels based on historical participation. LLP licenses went into practical effect for the 2000 fishing year.
- **Amendment 59** (64 FR 3651, January 1999; effective January 19, 1999): Extended the Vessel Moratorium Program (precursor to LLP program) for one year to prevent speculative entry into groundfish and crab fisheries while additional time was needed to complete the development and approval of the LLP.
- **Amendment 60** (66 FR 48813, September 2001; effective January 1, 2002): Among several small adjustments to the LLP, created designations for the type of gear authorized to harvest groundfish as either “trawl” or “non-trawl”.
- **Amendment 64** (65 FR 51553, August 2000; effective September 1, 2000): Revised BSAI Pacific cod gear allocations (established under Amendment 46) to jig, trawl, and fixed-gear. This action was partly prompted by an increase in Pacific cod pot gear participation by crab vessels that were experiencing shortened or cancelled seasons while cod prices had been increasing. The Council sought to provide stability to historical fixed-gear cod participants prior to a comprehensive rationalization action that was anticipated at the time. The amendment created seasonal apportionments as well as fixed gear sector TAC allocations in the following amounts: 80% for hook-and-line CP; 0.3% for hook-and-line CV; 18.3% for pot gear; 1.4% for fixed gear CVs less than 60’ LOA.
- **Amendment 67** (67 FR 18129, April 2002; effective May 15, 2002): The Council took action in April 2000 to establish the Pacific cod LLP endorsement that is required for non-trawl vessels that are greater than 60’ LOA. The minimum historical catch required for a pot CP LLP license to qualify for an endorsement was at least 300,000 lbs. of Pacific cod catch in any two years from 1995 through 1998, inclusive. The action was in large part motivated by the potentially destabilizing amount of latent capacity vis-à-vis vessels that had qualified for a pot gear LLP but had not been active, combined with high cod prices and a declining opilio crab resource. The fixed-gear cod endorsement reduced the number of potential CP participants under the LLP from 67 vessels (approximately 57 more vessels than had actually participated in the fishery since 1995).⁶ The Council’s rationale for selecting qualifying years was based on how many vessels would be able to receive a Pacific cod endorsement, noting that including other years would not adequately stabilize effort levels in the fishery.⁷
- **Amendment 77** (68 FR 67086, December 2003; effective January 1, 2004): Superseded Amendment 64 to modify fixed-gear Pacific cod sector allocations by splitting the pot sector into pot CPs and pot CVs.
- **Amendment 85** (72 FR 50788, September 2007; effective January 1, 2008): Created the existing sector allocations for non-Community Development Quota (CDQ) program BSAI Pacific cod. (In

⁵ Groundfish LLP license regulations are defined at 50 CFR 679.4(k)(4).

⁶ Additional reference materials for Amendment 67, including the EA/RIR, are available at: <https://www.fisheries.noaa.gov/action/amendment-67-fmp-groundfish-bering-sea-and-aleutian-islands-management-area>.

⁷ The qualifying years were upheld under legal challenge in a May 2005 decision by the US Court of Appeals, Ninth Circuit (see *Yakutat, Inc. v. Gutierrez, No. 03-35400*, decided May 18, 2005).

2014 the BSAI Pacific cod stock was split into separate BS and AI stocks for the purposes of setting OFL and ABC, but sector allocations continue to be determined based on the summed total of BS and AI TACs, after deduction of 10.7% for CDQ allocation. Sector allocations may be fished in either the BS or AI, subject only to the sector's overall harvest limit.) The BSAI pot CP sector receives 1.5% of the TAC. Amendment 85 also established NMFS's ability to make inseason TAC reallocations (rollovers) between sectors.

Finally, for context and to consider the precedent for this type of action, the analysts also note several analogous Council actions where fishery participation was limited (made more exclusive) by the addition of an endorsement or where latent LLP license endorsements were eliminated based on a lack of recent participation.

- **BSAI Groundfish FMP Amendment 92 / GOA Groundfish FMP Amendment 82** (74 FR 41080, August 2009; effective September 14, 2009): The Council took action in June 2006 to recommend that LLP licenses that were not utilized to make at least two trawl landings between the years 2000 and 2006 in a particular endorsement area would have that area removed from the LLP license. The Council also created an additional trawl CV area endorsement for the Aleutian Islands subarea to make that fishery more exclusive. The Council identified the need to reduce the future potential for an increase in trawl groundfish effort from LLPs that were unused or underutilized, noting that LLP holders who currently participate had made significant investments have long catch histories, and were economically dependent on the groundfish resource in the respective areas of their trawl endorsements.
- **GOA Groundfish FMP Amendment 86** (75 FR 15826, March 2011; effective April 21, 2011): The Council took action in December 2009 to create Pacific cod fixed-gear LLP license endorsements for the Western and Central GOA based on qualifying catch history. The Council was motivated by intensified competition in the fishery due to increased cod market value, declining TAC, and increased participation by harvesters displaced from other fisheries that had accrued capital from participation in rationalized fisheries. The Council expressed a desire to protect long-term participants that were dependent on the Western and Central GOA fixed-gear Pacific cod fishery from entry or re-entry of latent fishing capacity.

1.3. Description of Management Area

This action would apply to CP vessels that are attached to LLP licenses endorsed to fish for Pacific cod with pot gear in the BS and AI FMP areas. Figure 1-1 shows the management areas that are associated with this action.

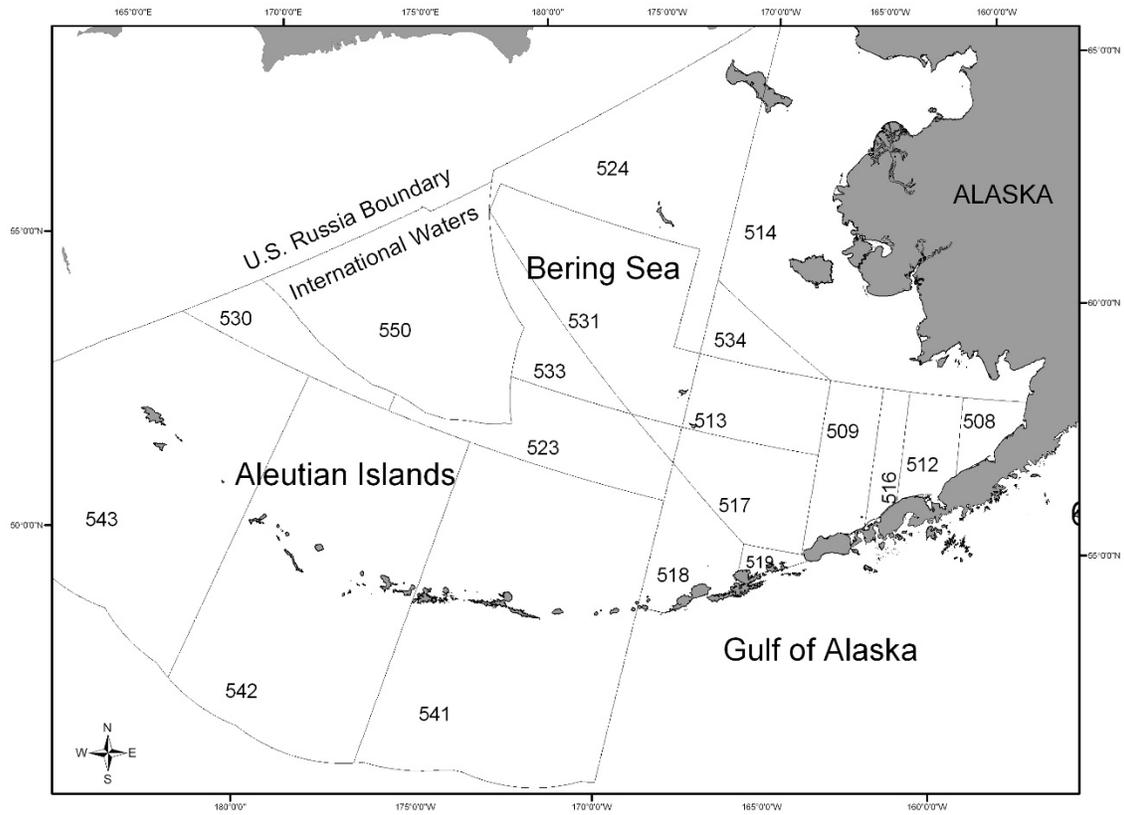


Figure 1-1 Map of Bering Sea and Aleutian Islands Groundfish FMP areas, with reporting areas (AI = 541, 542, 543)

2. Description of Alternatives

The alternatives in this section were designed to accomplish the stated purpose and need for the action as described in Section 1.1.

The Council adopted the following alternatives for analysis in October 2019.

Alternative 1: No action

Alternative 2: Remove the Bering Sea and Aleutian Islands Pacific cod endorsements on CP pot LLP licenses unless the license is credited with a minimum directed landing of 1,000 metric tons in the management area based on the following threshold criteria:

Option 1: 2005 – 2019

Option 2: 2012 – 2019

Suboptions:

A: In any of three years

B: In any of four years

A control date of December 10, 2019 establishes that the Council may not consider participation after that date in this or other action that could determine future access to this fishery sector (84 FR 67421).

The analysts note that using the term “directed landing” in Alternative 2 creates some ambiguity in assessing the test for which LLPs would retain the endorsement. “Directed” – and “target” for that matter – is associated with a specific catch composition threshold. Further complicating matters, those thresholds vary by species. Moreover, “landings” and whether or not a vessel was “directed fishing” for a particular species or “targeting” that species is less well defined for CPs since those measures are attributed on a weekly basis that can be somewhat arbitrary relative to how a vessel is actually operating. The analysts suggest that Alternative 2 be reworded so that the standard of 1,000 metric tons is evaluated based on **retained commercial catch**. Fortunately, in this case, pot CPs are typically focused on a single species so the distinction between targeting, directed fishing, and incidental catch of Pacific cod is rarely necessary (but does crop up in a small number of data events). Also, the delineation between the LLP licenses that are active versus latent in regard to this action – as shown in Section 2.2 – is quite stark so the loose terminology does not cause the analysts to hedge on the effects of Alternative 2.

2.1. Alternative 1, No Action

Selecting the No Action alternative would result in a status quo regulatory landscape in terms of access to participate in the BSAI Pacific cod pot CP fishery. The BSAI Pacific cod pot CP sector consists of the vessels that presently hold the eight LLP licenses with the appropriate species, area, and gear endorsements.⁸ As further described in Section 3.4, the sector’s TAC is allocated under Amendment 85 across the BS and AI FMP subareas combined, but where a vessel may fish is dependent on holding a license with the appropriate area endorsement (current area endorsements are noted in Section 3.4.2). Under Alternative 1, the ability to participate in this sector would remain contingent on owning one of the eight LLP license with the necessary endorsements or purchasing such a license on the open market.

Since the 2000 fishing year, a Federal LLP license is required for vessels participating in directed fishing for LLP groundfish species. LLP groundfish species are target species and “other species” specified annually pursuant to 679.20(a)(2). The LLP is generally not applicable in waters of the State of Alaska (inside 3 nm), but in 2012 NMFS implemented regulations to limit the access of Federally permitted pot

⁸ A definition of pot gear subsector of the BSAI groundfish CP category can be found in Department of Commerce and Related Agencies Appropriations Act, 2005, Pub. L. No. 108-447, Sec. 219, 118 Stat. 2887.

and HAL CPs in the Pacific cod parallel fishery for the BS and AI.⁹ A vessel must be named on an LLP license that is onboard the vessel. The LLP is authorized in Federal regulations at 50 CFR 679.4(k). Definitions relevant to the program are defined at 679.2 and prohibitions are defined at 679.7. Exceptions to the LLP license requirement exist for small vessels (<60' LOA in the BSAI) and for jig vessels, but those are not pertinent for the vessels that do participate or have participated in the pot CP sector. Regulations also provide an exception for new-build vessels that are constructed for, and used exclusively in, CDQ fisheries.¹⁰

Since Amendment 67 was implemented for the 2003 fishing year, persons who wish to participate in the directed fishery for Pacific cod in the BS and/or AI with pot or HAL gear must have a gear- and operation-type specific Pacific cod endorsement on the LLP license that names their vessel. For pot CPs, Amendment 67 requires an LLP to have been credited with at least 300,000 lbs. of Pacific cod retained catch in the BSAI in any two years from 1995 through 1998, inclusive. Exemptions from the Pacific cod endorsement requirement are in regulation at 679.4(k)(9)(iv), but are generally not applicable to this fleet. They include the LLP exemptions mentioned above and catch of Pacific cod for personal use bait. Regulations at 679.4(k)(9)(v)(B) also refer to qualification for an LLP based on a 'hardship provision'.

The Final Rule implementing Amendment 67 addressed a question in the form of public comment on whether vessels fishing CDQ needed a Pacific cod endorsement on their LLP (see 67 FR 18133). The comment asserted that Amendment 67 would negatively impact CDQ groups that depend on vessels to harvest their CDQ Pacific cod allocation if such vessels did not receive an endorsement. The agency responded that the Council made its recommendation on Amendment 67 after having evaluated the impacts on all small entities, including CDQ groups. In doing so the Council determined that the LLP does not treat CDQ vessels differently than non-CDQ vessels, and that a CDQ vessel must have an LLP license to fish groundfish in the BS and/or AI when using fixed-gear. There, the Council indicated that vessels harvesting CDQ are not exempted from the requirement to hold a Pacific cod endorsement on their LLP license.

2.2. Alternative 2

Alternative 2 would remove the Pacific cod endorsement from any of the eight pot gear CP LLP licenses that currently hold a BS or AI area endorsement if that license was not credited with a minimum amount of catch in the sector during a defined period of time. As detailed in Section 3.4.2, all eight of those licenses hold a BS area endorsement while five of the eight hold an AI area endorsement. At the October 2019 meeting the Council articulated its intent that the catch threshold should be evaluated at the BSAI level (not catch by BS or AI subarea) because the sector's TAC allocation under Amendment 85 is managed at the joint-BSAI level. If the Alternative 2 threshold is not met then the Pacific cod endorsement for both areas would be removed from the license.

The historical catch data used to assess the thresholds defined in Alternative 2 include all CP pot gear catch of BSAI Pacific cod that is associated with this set of LLP licenses. Those data include BSAI non-CDQ (Federal limited access), Pacific cod CDQ, state-managed Pacific cod fisheries in the BS and AI, and catch that occurs during halibut/sablefish IFQ fishing with pot gear.¹¹ The Council may wish to specify which catch history should apply under Alternative 2 if this is not the correct interpretation. That being said, the analysts' determinations about which licenses would retain/lose their Pacific cod

⁹ "Federally permitted" means that a vessel holds a Federal Fisheries Permit, or FFP. The "parallel fishery" is that which occurs in State waters but during the Federal season where catch is attributed to the TAC. One LLP that is potentially affected by this action recorded pot CP catch in the AI parallel waters fishery from 2006 through 2011 but did not possess an AI area endorsement for the Federal fishery.

A vessel that does not hold an FFP is not required to have an LLP to fish in the state-waters Pacific cod fishery.

¹⁰ <https://www.fisheries.noaa.gov/alaska/sustainable-fisheries/license-limitation-program-alaska>.

¹¹ Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA.

endorsements – shown below in Figure 2-1 – did not reveal any “edge cases” where a license was on the cusp of qualifying or not qualifying but for the inclusion of some less obvious harvesting activity like IFQ fishing.

Alternative 2 sets the threshold for retaining the BS and/or AI Pacific cod endorsement at 1,000 mt of directed fishery catch during the relevant period. The relevant period is either 2005 through 2019 (Option 1) or 2012 through 2019 (Option 2). If no suboption is selected, the alternative is clearly interpreted to mean that a license must be credited with 1,000 mt of catch *in total* over the length of time defined by the option selected.

With no suboption selected, the analysts calculate that four of eight LLP licenses would retain their Pacific cod endorsement under either option, one LLP license would retain its Pacific cod endorsement *only* under Option 1, and three LLP licenses would lose their Pacific cod endorsements under either option.

The Council *could* select one of two suboptions that are worded: “Suboption A: In any of three years” or “Suboption B: In any of four years”. If the Council selects a suboption then some further interpretation is necessary. The suboptions could be read in three ways:

- A license must have been credited with 1,000 mt of directed catch in each of three/four years during the relevant period, or
- A license must have been credited with 1,000 mt of directed catch combined over three/four years during the relevant period, or
- A license must have been credited with 1,000 mt of directed catch in total (combined) during the relevant period and have been active in the sector during three/four years of the relevant period.

Based on the catch attributed to the eight LLP licenses in the sector, the second and third interpretations (bullets) are functionally equivalent. In other words, a license could not be credited with 1,000 mt in total while being active in three/four years without having recorded 1,000 mt of catch in any combination of three/four selected qualifying years. **The Council should clarify whether the wording of the suboptions means that a vessel must record 1,000 mt of catch in *each of* three/four years.** The “each of” interpretation (first bullet) is the most stringent of the three possible interpretations offered by staff. Given the amount of available harvest for the sector in recent years, where final TAC has been less than 3,000 mt for a fishery that typically consists of three to five active CPs (Table 3-1), **the analysts’ operating assumption throughout this document is that the 1,000 mt threshold is meant to be applied to cumulative catch throughout the relevant period**, as in the second and third bullets above.

If a suboption is selected, the more stringent “each of” interpretation (first bullet) results in five of eight LLP licenses losing their Pacific cod endorsements. Either of the second or third interpretations results in three of eight licenses losing their endorsements under Option 1 (2005 – 2019) or four of eight licenses losing their endorsements under Option 2 (2012 – 2019).

Also, catch data during the relevant period show that **there is no functional difference between Suboption A and Suboption B**. Within all possible interpretations, there are no instances where an LLP license would have retained its Pacific cod endorsement under one suboption but not the other.

Figure 2-1 summarizes the proportion of LLP licenses that would retain/lose their Pacific cod endorsement under the various permutations and interpretations of Alternative 2. The figure shows that there is one license that retains its Pacific cod endorsement under Option 1 but not Option 2 if no suboption is selected. If a suboption is selected then that license plus one additional license would lose its endorsement under the more stringent of the possible interpretations of how the suboptions are worded. If the suboption language is to be interpreted as described in the latter two (less stringent) bullets, then

selecting the suboption does not provide a different outcome than Alternative 2 with no suboptions. Note that the generic LLP identifiers (1-8) used to mask identifiable catch data are not linked to any other anonymous identifiers used elsewhere in this document (e.g., “A-H” in Section 3.4.2).

| | | LLP Licenses | | | | | | | |
|-------------------------|------------------------|-----------------------|-------|-------|-------|-------|-----|-----|-----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| No Suboption | Option 1 | Green | Green | Green | Green | Green | Red | Red | Red |
| | Option 2 | Green | Green | Green | Green | Red | Red | Red | Red |
| Suboption A or B | Subopt. Interpretation | | | | | | | | |
| | Option 1 | "Each of..." | Green | Green | Green | Red | Red | Red | Red |
| | | * "Combined" | Green | Green | Green | Green | Red | Red | Red |
| | | * "Combined + Active" | Green | Green | Green | Green | Red | Red | Red |
| | Option 2 | "Each of..." | Green | Green | Green | Red | Red | Red | Red |
| | | * "Combined" | Green | Green | Green | Green | Red | Red | Red |
| | * "Combined + Active" | Green | Green | Green | Green | Red | Red | Red | |

* Denotes staff’s assumption that these rows reflect the Council’s intent when wording the suboptions.

Figure 2-1 LLP licenses that would retain (GREEN) or lose (RED/checkered) BSAI Pacific cod pot gear CP endorsements under Alternative 2

The Council established a control date of December 10, 2019 to discourage any future fishing activity in this sector that might not otherwise have occurred if not for the consideration of this action. That date does not exclude any BSAI Pacific cod pot CP sector harvest that occurred in 2019 and might be considered with regard to the Alternative 2 threshold because the B season was closed on September 15.

Finally, note that throughout this document the authors use the term “latent” to describe an LLP license that has not been utilized to catch Pacific cod with pot gear on a CP vessel during the analyzed historical years, or has not been utilized to catch and process an amount of Pacific cod that meets the minimum threshold defined by Alternative 2.

2.3. Comparison of Alternatives

Table 2-1 Summary of alternatives and impacts

| | Alternative 1 | Alternative 2 |
|-------------------------------|---|--|
| | No action. | Remove BSAI pot gear CP Pacific cod endorsement from latent LLP licenses Options: (1) 2005 – 2019 or (2) 2012 – 2019 Suboptions: (A) In any 3 years or (B) In any 4 years |
| Environmental Impacts | No impacts on the human environment anticipated; preliminary determination by NMFS to seek a categorical exclusion under NAO 216-6. | |
| Economic Impacts | | |
| Fishing opportunity | Status quo. Up to 8 CPs could participate in limited access or CDQ cod (compared to 4 or 5 CPs active in recent years) | Up to 5 CPs could participate under Option 1; up to 4 CPs could participate under Option 2. Based on analysts' interpretation, selection of a suboption would not change that outcome. |
| BSAI pot CP fishery operation | Status quo. Short, competitive seasons where TAC (plus any rollovers) is fully harvested. | Possibly no change from status quo. If active vessels fish cooperatively, timing of fishing could shift away from season opening dates (particularly for B season). |
| Harvest volume and value | Status quo (subject to natural evolution of Pacific cod stock and market) | No substantial change. Fishery will likely continue to be fully harvested. Finished wholesale product sold into a global market. |
| Crew impacts | Status quo | If vessels fish cooperatively, reduced inefficiencies that occur around short seasons could increase crew pay and/or stability of work. |
| Community impacts | Status quo | No change. LLP ownership largely based in Seattle; in-season vessel operations centered in Unalaska. |
| Bycatch | Status quo | Likely status quo. Potential benefits if vessels fish cooperatively and can move away from crab bycatch with less internal cost. |
| Safety at sea | Status quo | Likely status quo. Potential benefits if vessels fish cooperatively and agree to stand down or catch-share so that vessels do not fish openers in unsafe conditions. |

3. Regulatory Impact Review

This Regulatory Impact Review (RIR)¹² examines the benefits and costs of a proposed regulatory amendment to remove the BSAI Pacific cod endorsement from CP pot gear LLP licenses that are not credited with at least 1,000 mt of directed landings in that sector during a qualifying period of historical years. The purpose of this action is to increase stability for pot CPs that are dependent upon Pacific cod while maintaining low rates of halibut and crab bycatch and ensuring that condensed fishing seasons do not result in safety-at-sea concerns.

This range of directly regulated entities considered in this RIR encompasses the owners of BSAI pot CP LLP licenses that are endorsed for Pacific cod and the vessels to which those LLPs are currently assigned. Due to the nature of at-sea processing, management of this sector does not directly affect the inshore processing component. Communities that may be involved in this sector could be directly affected but are not directly regulated. Potential community impacts are discussed in Section 3.4.5.2, focusing on the communities where LLP license owners reside, where pot CP vessels are owned or homeported, and where at-sea product has been transferred from the vessel to enter commerce. Entities that might be indirectly affected by this action include those who might choose to utilize a “latent” BSAI pot CP LLP in the future but do not do so currently, and the class of entities who benefit from observer data collected in this sector which are used to manage BSAI fisheries for sustainability and economic benefit (fishery monitoring considerations are discussed in Section 3.7 of this document).

The preparation of an RIR is required under Presidential Executive Order (E.O.) 12866 (58 FR 51735, October 4, 1993). The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following Statement from the E.O.:

In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.

E.O. 12866 requires that the Office of Management and Budget review proposed regulatory programs that are considered to be “significant.” A “significant regulatory action” is one that is likely to:

- Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in E.O. 12866.

¹² The analysts have consulted with NMFS Alaska Region and preliminarily determined that none of the alternatives have the potential to have an effect individually or cumulatively on the human environment. This determination is subject to further review and public comment. If this determination is confirmed when a proposed rule is prepared, the proposed action will be categorically excluded from the need to prepare an Environmental Assessment.

3.1. Statutory Authority

Under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801, *et seq.*), the United States has exclusive fishery management authority over all marine fishery resources found within the exclusive economic zone (EEZ). The management of these marine resources is vested in the Secretary of Commerce (Secretary) and in the regional fishery management councils. In the Alaska Region, the Council has the responsibility for preparing fishery management plans (FMPs) and FMP amendments for the marine fisheries that require conservation and management, and for submitting its recommendations to the Secretary. Upon approval by the Secretary, NMFS is charged with carrying out the Federal mandates of the Department of Commerce with regard to marine and anadromous fish.

The BSAI catcher/processor pot gear Pacific cod fishery in the EEZ off Alaska is managed under the BSAI Groundfish Fishery Management Plan. The proposed action under consideration would likely amend Federal regulations at 50 CFR 679.4(k)(4), which describes qualifications for a groundfish license and was the part of the regulatory code amended in 2009 when latent BSAI and GOA trawl LLP licenses were revoked.¹³ Actions taken to implement regulations governing this fishery must meet the requirements of applicable Federal laws, regulations, and Executive Orders.

3.2. Purpose and Need for Action

The Council adopted the following statement of purpose and need to originate this action in October 2019.¹⁴ Further description and context are provided in Section 1.1.

Amendment 85 to the Groundfish FMP for the BSAI assigned a portion of the Bering Sea/Aleutian Islands Pacific cod TAC to the pot CP sector with the primary goals of aligning Pacific cod allocations with actual dependency and use and providing stability to all sectors. Three major changes have occurred since the implementation of Amendment 85, which has resulted in less stability for the dependent vessels on which the Amendment 85 allocation was based:

- 1. Low crab TACs and consolidation within the crab fisheries has provided increased flexibility for pot CPs;*
- 2. The TAC for Pacific cod in the BSAI has decreased over the last several years; and*
- 3. The availability of rollovers to the pot CP sector has declined.*

The Council is considering action to eliminate latent capacity in the fishery in order to increase stability for cod dependent pot CPs, to maintain consistently low rates of halibut and crab bycatch, and to ensure that condensed fishing seasons do not result in safety-at-sea concerns.

¹³ 74 FR 41080, August 14, 2009.

¹⁴ Council motion (October 8, 2019) available at: <https://meetings.npfmc.org/CommentReview/DownloadFile?p=84b21d13-42e6-40b1-9ec4-f155b0e43866.pdf&fileName=D4%20MOTION.pdf>.

3.3. Alternatives

The Council adopted the following alternatives for analysis in October 2019.

Alternative 1: No action

Alternative 2: Remove the Bering Sea and Aleutian Islands Pacific cod endorsements on CP pot LLP licenses unless the license is credited with a minimum directed landing of 1,000 metric tons in the management area based on the following threshold criteria:

Option 1: 2005 – 2019

Option 2: 2012 – 2019

Suboptions:

A: In any of three years

B: In any of four years

A control date of December 10, 2019 establishes that the Council may not consider participation after that date in this or other action that could determine future access to this fishery sector (84 FR 67421).

3.4. Description of the Fishery

Table 3-1 summarizes much of the information that will be described in greater detail throughout Section 3.4. The fields in the table are grouped by “available harvest,” “participation,” “harvest,” and “utilization.” Available harvest shows the amount of non-CDQ Pacific cod TAC (mt) that was available to the vessels holding cod-endorsed pot gear CP LLP licenses. The sector’s initial TAC allocation is equal to 1.5% of the total BSAI non-CDQ Pacific cod TAC for all sectors. The Council sets the TAC in reference to the acceptable biological catch (ABC) for Pacific cod in the BSAI FMP area while accounting for CDQ allocation and the amount of each subarea ABC that goes to the state GHL fishery (see Section 3.4.1.2). Initial TAC was at its recent peak in 2012 (3,484 mt) but has generally declined since that year with the decline accelerating beginning in 2017. Figure 3-1 plots the ABC from 2003 through 2020.¹⁵ The available harvest portion of Table 3-1 also shows the amount of Pacific cod TAC that NMFS reallocated to the non-CDQ pot CP sector during a fishing year, which is summed with initial TAC to equal the sector’s final TAC, or total harvest opportunity. Additional detail on inseason reallocations is provided in Section 3.4.1.1. The proportion of the initial and final TACs that were actually harvested in a given year are shown in the utilization field of the table. The participation and harvest fields show the number of vessels that have participated in the sector – which is often a small number that limits what data can be shown under confidentiality restrictions. Those fields reflect that some of the CPs participating in the federal directed fishery also fish CDQ¹⁶ and state-waters GHL Pacific cod.

¹⁵ The BSAI Pacific cod stock was split into two stocks (BS and AI) in 2014. For 2014 through 2020 the figure shows the sum of the BS ABC and AI ABC for visual simplicity and because Pacific cod sector allocations are made based on the sum of BS and AI area TACs.

¹⁶ The section of this RIR on management and enforcement considerations (Section 3.7) highlights the different monitoring requirements for CDQ and non-CDQ fisheries. Monitoring requirements are a general management concern for the fishery but are not currently proposed to be altered under this set of alternatives.

Table 3-1 BSAI Pacific cod CP pot sector allocations, participation, and catch (2005 through 2020)

| Year | Available Harvest (non-CDQ) | | | | Participation | | | | Harvest | | | Utilization | |
|------|-----------------------------|--------------------|-----------------------|---|---------------------------------|--|---|-------------------------------|---|----------------------------------|----------------------|--|--|
| | Initial allocation (mt) | Reallocations (mt) | Final allocation (mt) | Final allocation as % of initial allocation | Vessel count for target fishery | Vessel count for all Pacific cod catch | Vessel count in the Pacific cod CDQ fishery | Vessel count in GHL fisheries | Non-CDQ Pacific cod federal target catch (mt) | CDQ Pacific cod total catch (mt) | GHL total catch (mt) | Total catch of BSAI Pacific cod as % of initial allocation | Total Pacific cod catch as % of final allocation |
| 2005 | 3,190 | 162 | 3,352 | 105% | 2 | 2 | - | - | * | - | - | * | * |
| 2006 | 2,938 | 115 | 3,053 | 104% | 4 | 4 | 1 | - | 3,148 | * | - | 107% | 103% |
| 2007 | 2,641 | 27 | 2,668 | 101% | 3 | 3 | 1 | - | 2,755 | * | - | 104% | 103% |
| 2008 | 2,274 | 815 | 3,089 | 136% | 6 | 6 | - | 4 | 3,671 | - | 912 | 161% | 119% |
| 2009 | 2,352 | 1,198 | 3,550 | 151% | 4 | 4 | - | 2 | 3,513 | - | * | 149% | 99% |
| 2010 | 2,248 | 1,102 | 3,350 | 149% | 5 | 5 | - | 3 | 3,358 | - | 1,753 | 149% | 100% |
| 2011 | 3,041 | 0 | 3,041 | 100% | 4 | 4 | - | 1 | 3,098 | - | * | 102% | 102% |
| 2012 | 3,484 | 800 | 4,284 | 123% | 5 | 5 | 2 | - | 4,173 | * | - | 120% | 97% |
| 2013 | 3,470 | 2,600 | 6,070 | 175% | 3 | 3 | 1 | - | 6,332 | * | - | 182% | 104% |
| 2014 | 3,389 | 2,500 | 5,889 | 174% | 4 | 4 | 2 | - | 5,477 | * | - | 162% | 93% |
| 2015 | 3,329 | 3,500 | 6,829 | 205% | 4 | 4 | 2 | - | 6,166 | * | - | 185% | 90% |
| 2016 | 3,357 | 3,250 | 6,607 | 197% | 4 | 4 | 2 | - | 5,698 | * | - | 170% | 86% |
| 2017 | 3,194 | 1,805 | 4,999 | 157% | 4 | 5 | 1 | - | 4,921 | * | - | 154% | 98% |
| 2018 | 2,720 | 0 | 2,720 | 100% | 5 | 5 | 3 | 1 | 2,810 | 1,295 | * | 103% | 103% |
| 2019 | 2,410 | 335 | 2,745 | 114% | 5 | 5 | 3 | - | 2,693 | 1,521 | - | 112% | 100% |
| 2020 | 2,074 | 0 | 2,074 | 100% | 5 | 5 | 2 | - | 2,050 | * | - | 99% | 99% |

* denotes confidential data

Note: In 2006 the Initial allocations for all BSAI Pacific cod sectors were adjusted twice mid-season; once to accommodate the newly formed AI GHL fishery and later to receive unused GHL fish back from the State (see [Info Bulletin, September 22, 2006](#)). The 115 mt of "reallocations" reflects the business-as-usual inseason reallocations between Federal Pacific cod sectors based on the ability to harvest TAC that was not anticipated to be utilized.

Source: NMFS Alaska Region

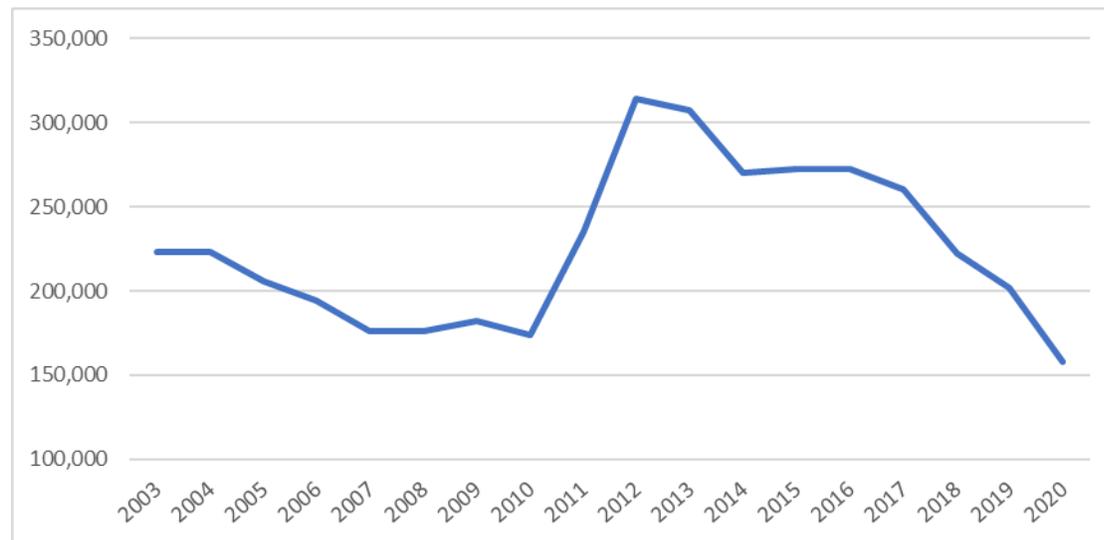


Figure 3-1 BSAI Pacific cod ABC (mt), 2003 through 2020

3.4.1. Description of Management

3.4.1.1. Federal Limited Access Fishery

As a result of implementing BSAI Groundfish FMP Amendment 85 in 2008, Federal regulations at 50 CFR 679.20(a)(7) authorize distinct BSAI Pacific cod allocations of the initial TAC for nine sectors. Before allocating to these sectors, the initial TAC accounts for the amount of available harvest that goes to state-managed GHL fisheries and 10.7% of TAC that is allocated to CDQ groups.

- Hook-and-line (HAL) CPs – 48.7 percent
- Trawl catcher CVs – 22.1 percent
- Amendment 80 – 13.4 percent
- Pot CVs greater than or equal to 60 feet LOA – 8.4 percent
- AFA trawl CPs – 2.3 percent
- HAL and pot CVs less than 60 feet LOA – 2 percent
- **Pot CPs – 1.5 percent**
- Jig vessels – 1.4 percent
- HAL CVs greater than or equal 60 feet LOA – 0.2 percent

The BSAI Pacific cod pot CP allocation is apportioned to two seasons: the A season (51% of annual TAC) and the B season (49%). Seasonal TAC apportionment was established to disperse effort as part of Steller sea lion mitigation measures. The A season opens on January 1 and closes by regulation on June 10. However, as shown in Table 3-2, the A season is typically harvested by late January or early February, with the length of the season shortening over the last decade as TAC has declined (see Figure 3-3). The A season historically lasts a shorter amount of time than the B season because there are no rollovers from other sectors in the A season (rollovers are described below). The B season opens on September 1 and closes by regulation on December 31. The B season last remained open through the end of the calendar year in 2017, as it did from 2012 through 2015 (in 2016 there was a mid-season closure before reopening through December 31). Since 2010, early closures due to full harvest of the TAC and any available reallocations from other sectors have occurred in late October (2011 and 2016), late September (2010), and – more recently – mid-September (2018 through 2020). Figure 3-2 plots season length in days from 2010 through the 2020 A season. The A season recorded its shortest season in 2020, closing on January 12 after only 12 days of fishing.¹⁷ The B season also recorded its shortest historical season in 2020 after 12 days. Once the directed fishery is closed, vessels may only retain Pacific cod up to the maximum retainable amount (MRA) defined at 679.20(e) and (f). Vessels that have been historically active in this fishery might be subject to a Pacific cod MRA when fishing for BSAI sablefish with hook-and-line or pot gear, as some have done in the past.

Table 3-2 Season length of BSAI Pacific cod pot CP sector, 2010 through 2020

| Year | A Season | | | B Season | | |
|------|----------|--------|------|----------|---------|------|
| | Open | Close | Days | Open | Close | Days |
| 2010 | 1-Jan | 23-Feb | 54 | 1-Sep | 23-Sep | 23 |
| 2011 | 1-Jan | 24-Jan | 24 | 1-Sep | 23-Oct | 53 |
| 2012 | 1-Jan | 23-Jan | 23 | 1-Sep | 31-Dec | 122 |
| 2013 | 1-Jan | 28-Jan | 28 | 1-Sep | 31-Dec | 122 |
| 2014 | 1-Jan | 26-Jan | 26 | 1-Sep | 31-Dec | 122 |
| 2015 | 1-Jan | 4-Feb | 35 | 1-Sep | 31-Dec | 122 |
| 2016 | 1-Jan | 29-Jan | 29 | 1-Sep | 31-Dec* | 95 |
| 2017 | 1-Jan | 25-Jan | 25 | 1-Sep | 31-Dec | 122 |
| 2018 | 1-Jan | 20-Jan | 20 | 1-Sep | 20-Sep | 20 |
| 2019 | 1-Jan | 15-Jan | 15 | 1-Sep | 15-Sep | 15 |
| 2020 | 1-Jan | 12-Jan | 12 | 1-Sep | 12-Sep | 12 |

* 2016 season was closed from October 18 to November 15 then reopened for the remainder of the calendar year.
Source: NMFS Alaska Region Sustainable Fisheries Division

¹⁷ Closure notice available at: <https://www.fisheries.noaa.gov/bulletin/ib-20-04-nmfs-prohibits-directed-fishing-pacific-cod-pot-catcher-processors-bering-sea>.

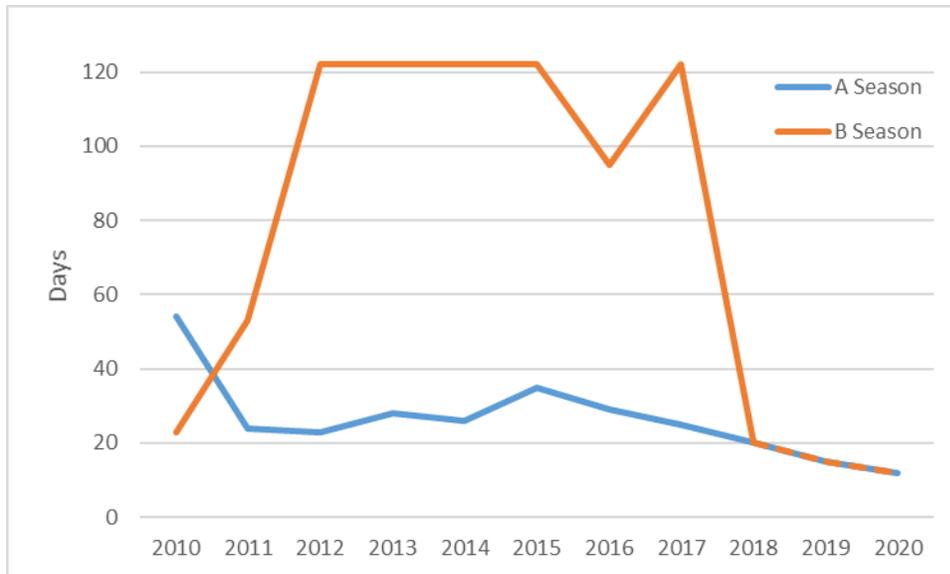


Figure 3-2 Season length (days), 2010 through 2020

Since 2004, the BSAI pot CP sector has received inseason reallocations (or “rollovers”) of non-CDQ TAC that is not likely to be harvested in certain other sectors. These rollovers are an important source of harvest opportunity for the pot CP sector. Figure 3-3 and Figure 3-4 illustrate the prevalence of rollover harvest as a proportion of the pot CP sector’s total catch since 2004. The harvest of rollovers is only a factor during the pot CP B season because unharvested A season apportionments in other sectors are rolled over to those sectors’ own subsequent seasons rather than being reallocated to other sectors (e.g., pot CPs). Figure 3-4 shows that rollovers accounted for between 19% and 51% of the total annual BSAI pot CP harvest opportunity during the 2008 through 2017 period (excepting a zero rollover in 2011). Table 3-1 showed the same information in percentage terms, reporting that the “final allocation” to the pot CP sector ranged from 123% (2012) to 205% (2015) of the sector’s initial allocation (excepting 2011) during the same period. In short, since BSAI Groundfish FMP Amendment 85 was implemented in 2008, the pot CP sector relied on rollovers from other sectors to supplement its 1.5% initial TAC allocation to account for roughly one-fifth to one-half of its total annual harvest opportunity until 2018 when overall BSAI ABC/TAC experienced a significant decline and inter-sector reallocations became less reliable. The pot CP sector did not receive any B season reallocation in 2018 or 2020.

NMFS’s system, or hierarchy, for making inseason reallocations of non-CDQ Pacific cod TAC between sectors near the end of the year is outlined in Federal regulations at 50 CFR 679.20(a)(7)(ii)(B)(iii).¹⁸ Reallocations have not been made *from* the pot CP sector, given its history of full utilization and the fact that participants try to operate through to the end of the fishing/calendar year if TAC is available. The reallocation hierarchy places the pot CP sector in line to receive 2.6% of unharvested TAC from the BSAI trawl CV sector or the AFA CP sector *after* reallocations are made to other trawl sectors if they are in a position to harvest them. The pot CP sector is getting 2.6% of an after-trawl reallocation amount that is shared with the HAL CP sector (83.1%) and the pot CV (greater than or equal to 60’ LOA) sector (14.3%). The pot CP sector is also in line to receive reallocations from the pot CV (greater than or equal to 60’ LOA) sector before they would otherwise flow to the HAL CP sector.

From 2004 through 2007 the reallocations that reached the pot CP sector came from the trawl CP and CV sectors, and were shared with the HAL CP sector. Since 2008 – after the rationalization of the Amendment 80 fishery – rollovers to pot CPs have come from trawl CVs, pot CVs (greater than or equal

¹⁸ Rollovers are also discussed in Section 4.1.2 of the [BSAI Pacific Cod Allocation Review \(June 2019\)](#).

to 60' LOA), and AFA CPs. One of the several reasons that the pot CP sector has received less reallocated TAC since 2018 is that the “Pot CV \geq 60' LOA” sector has been putting greater effort into harvesting its B season TAC, which had previously been a source of rollovers to pot CPs. Pot CVs \geq 60' LOA have fully harvested their B season TAC in each of the last three years (2018-2020).

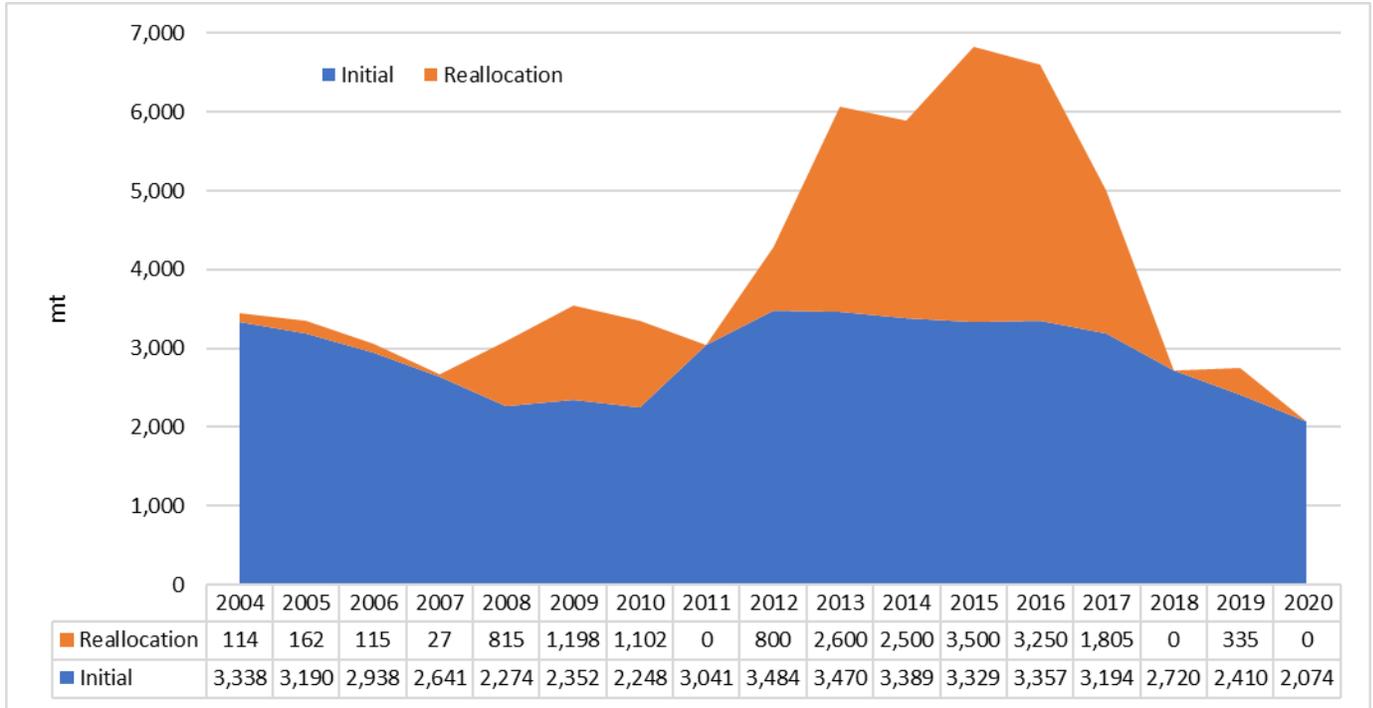


Figure 3-3 BSAI Pot CP Pacific cod TAC: initial TAC and in-season reallocations from other sectors, 2004 through 2020

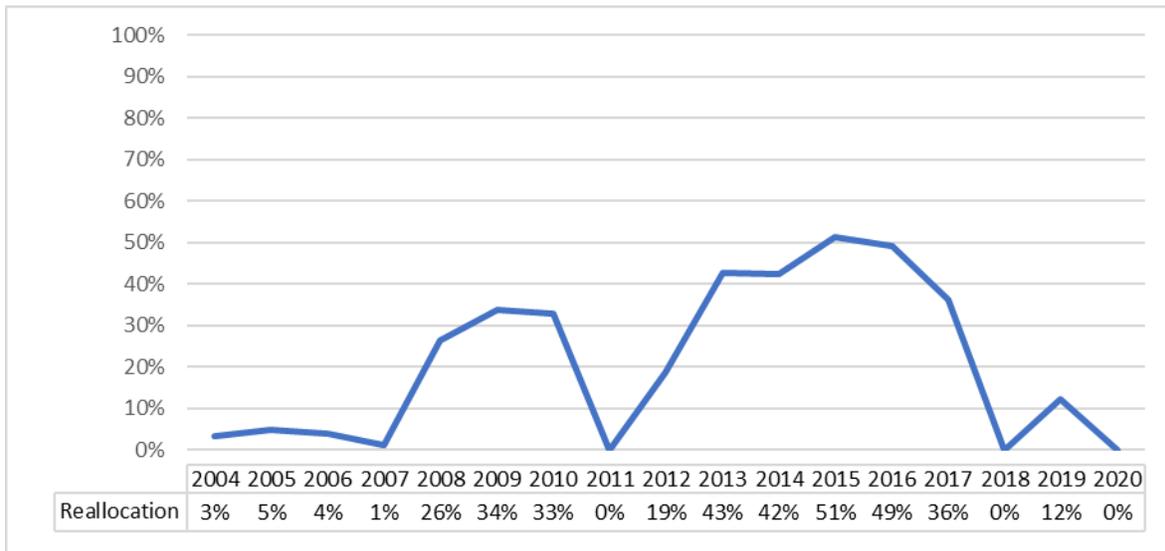


Figure 3-4 Percentage of Final BSAI pot CP Pacific cod TAC that was reallocated in-season from other BSAI Pacific cod sectors, 2004 through 2020

3.4.1.2. State Guideline Harvest Level (GHL) Fisheries

The State of Alaska has managed a GHL fishery for Pacific cod in State waters in the AI subdistrict (AIS) since 2006 and in the Dutch Harbor Subdistrict (DHS) of the BS since 2014. In general, the GHL fisheries open after the federal fishery closes to directed fishing (see Table 3-2 for federal fishery closure dates since 2010). The Council annually sets the Pacific cod TAC for BSAI sectors in a manner that accounts for how the State of Alaska has set the GHL so that ABC is not exceeded.

For the AI, the state set the GHL at 3 percent of the Federal BSAI (combined) Pacific cod ABC from the 2006 through the 2015 fishing seasons. Starting in 2016, the AI GHL changed to 27 percent of the AI ABC, with annual step-up provisions in 4 percent increments if the AI GHL is fully harvested, up to a maximum of 15 million pounds (6,804 mt) or 39 percent of AI ABC, whichever is less. The annual step-up provision remains in place if the GHL is fully harvested. State regulations also include a 4 percent step-down provision if the GHL is not harvested during two consecutive years. The minimum GHL is set to be no less than 15 percent of the Federal AI ABC. The GHL fishery is considered fully harvested if 90 percent of the limit is taken.

In 2007, the Alaska Board of Fisheries (BOF) adopted new vessel length limits for the GHL fisheries in the Aleutian Islands Subdistrict of state-waters. Pot vessels are restricted to 125 feet or less; trawl vessels 100 feet or less, and longline and jig vessels to 58 feet or less. The BOF also established a vessel trip limit of 150,000 pounds (68 mt) of Pacific cod. CPs that participate in the trip-limited AIS Pacific cod state-waters fishery are required to provide daily reports to ADFG via email or call-in. Trip limits for CPs are calculated in round pounds; if a CP is only able to report processed weight then ADFG uses established conversion factors to estimate round pounds to attribute to the GHL.

While trawl, longline, pot, and jig gear are allowed at various times during the AIS GHL fishery, the majority of the AIS GHL has been harvested by vessels using trawl and pot gear. The June 2019 BSAI Pacific Cod Allocation Review includes a summary of AI GHL allocations, harvest, and vessel count from 2006 through 2018 (Table 4-6 in the review).¹⁹ Pot CP vessels have participated in the AIS GHL fishery intermittently over the years. From 2008 through 2011, one to four vessels participated; in 2018, one vessel participated. The total number of vessels in the AIS GHL fishery ranged from 45 vessels in 2008 to six vessels in 2018. The proportion of AIS GHL harvest that was taken by pot CP vessels cannot be reported due to confidentiality, but the analysts can state that pot CPs are not predominant in the fishery.

In October 2013 the Alaska Board of Fisheries created a state-waters Pacific cod GHL fishery for the state Dutch Harbor Subdistrict of the Bering Sea area. The GHL was initially established at 3 percent of the Federal BSAI (combined) ABC. The fishery was restricted to vessels less than or equal to 58' LOA using pot with a limit of 60 pots per vessel. In 2016, the BOF expanded the boundaries of the area and changed the GHL calculation to 6.4 percent of the Federal BS Pacific cod ABC. In 2018 the BOF again revised the GHL calculation; regulations currently set the harvest at 8 to 15 percent of the BS Pacific cod ABC with an annual step-up increments of 1 percent if the GHL is fully harvested in a year. The 2020 allocation is set at 9 percent. In 2018, the BOF also adopted an additional allocation of 100,000 pounds (45 mt) of Pacific cod for a jig fishery in the Dutch Harbor Subdistrict, which further impacts the amount of the ABC that is available for federal fishery TACs.

The Dutch Harbor Subdistrict GHL season opens seven days after the Federal BSAI < 60 ft pot/HAL sector closes; it may close and re-open as needed to coordinate with federal fishery openings. Due to the

¹⁹ Available at: <https://meetings.npfmc.org/CommentReview/DownloadFile?p=9317ac25-1aa8-49c8-b547-da16b0a6cc94.pdf&fileName=D2%20BSAI%20Pcod%20Allocation%20Review%20June%202019%20Revised%20May%2022%2C%202019.pdf>

vessel length restriction, BS state-waters cod fisheries have not been prosecuted by the vessels known to have been associated with cod-endorsed BSAI pot CP LLP licenses.

Because the Council first accounts for GHL when setting TACs so that ABC is not exceeded, the BOF actions taken in 2018 have resulted in less available harvest in federal fisheries. In 2019 the BSAI Pacific cod TAC for the pot CP sector was 50 mt lower than it would have been in the absence of GHL changes from 2018 to 2019. In 2020, the TAC for the pot CP sector is 26 mt lower than it would have been in the absence of GHL changes from 2019 to 2020.

3.4.2. BSAI Pacific Cod-Endorsed Pot CP LLP Licenses

Eight LLP licenses hold an endorsement to fish for Pacific cod with pot gear in the BS or AI as a CP (Table 3-3). Five of those licenses have been attached to a single vessel during the “cod-endorsement era” dating back to BSAI Amendment 67 (effective in May 2002), while the other three have been assigned to two or three vessels over that span.

All of the eight pot CP LLP licenses are endorsed to fish Pacific cod with pot gear as a CP in the Bering Sea. Five of those eight licenses are endorsed to fish Pacific cod with pot gear as a CP in the Aleutian Islands. Three of the eight licenses – each of which are endorsed for pot gear in both the BS and AI – are also endorsed to fish with HAL gear in the BS and AI. One LLP license is endorsed to operate as a CP for HAL gear in both the Central and Western GOA. One license is endorsed for HAL and pot gear in the Western GOA. One license is endorsed for pot gear in the Central GOA. Finally, one license is endorsed to operate as a CV for HAL gear in the BS and AI. None of the eight licenses are endorsed for trawl gear in the BS, AI, Western GOA, or Central GOA.

Table 3-3 CP LLP license gear and area endorsements for LLPs that are potentially affected by Alt. 2

| Endorsements | LLP licenses | | | | | | | | Total endorsements |
|-----------------------|--------------|----------|----------|----------|----------|----------|----------|----------|--------------------|
| | A | B* | C | D | E | F | G | H | |
| AI CP PCOD POT | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 5 |
| BS CP PCOD POT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| AI CP PCOD HAL | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 |
| BS CP PCOD HAL | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 |
| CG CP PCOD POT | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| CG CP PCOD HAL | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WG CP PCOD HAL | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| WG CP PCOD POT | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |

* This LLP license is also endorsed for BS CV HAL and AI CV HAL.
CG = Central Gulf of Alaska; WG = Western Gulf of Alaska

The LLP licenses that could lose their Pacific cod endorsement under Alternative 2 (see Section 2.2) vary as to whether they have endorsements for other groundfish opportunities. Of the four LLP licenses that could lose Pacific cod endorsements, depending on the option selected, three are endorsed for BS nontrawl, two are endorsed for AI nontrawl, two are endorsed for Central GOA nontrawl, and one is endorsed for Western GOA nontrawl. In terms of Pacific cod gear and area endorsements, one of the four LLP licenses does not have any outside of the BSAI pot fishery, one license can fish cod pots in a GOA area, one license can fish HAL gear for Pacific cod in the BSAI, and one can fish HAL gear for Pacific cod in the BSAI and the GOA. One of the licenses in this group that does not include an AI area endorsement fished in the AI Federal parallel waters fishery (catch during the Federal season inside state waters that is deducted from the sector’s TAC) in years prior to 2012. Since 2012 NMFS has required an area-endorsed LLP license for that fishery. That AI catch is included in Figure 3-5 and in the analysis of catch history for qualification under Alternative 2 (Section 2.2).

The four LLP licenses that would not lose their Pacific cod endorsement under any options selected for Alternative 2 are similarly varied. All four are endorsed for BS nontrawl, three are endorsed for AI trawl, none are endorsed for Central GOA nontrawl, and one is endorsed for Western GOA nontrawl. Three of these licenses hold zero pot cod endorsements outside of the BSAI, while one can fish fixed-gear in a GOA area and another can fish HAL gear in the BSAI.

For each of the eight LLP licenses that currently hold endorsements to fish as a CP for BSAI Pacific cod using pot gear, Figure 3-5 shows whether the vessels that are (or were) associated with those LLPs recorded BS or AI target catch of pot cod as a CP. Actual catch amounts and the vessel (or vessels) that are reflected cannot be shown due to confidentiality. The figure highlights increased participation during the qualifying years that led to a Pacific cod endorsement being granted subsequent to Amendment 67 (1995 through 1998). For the years when the fishery is reported through the NMFS Catch Accounting System (2003 to the present), the data used to track the catch associated with these particular LLP licenses pulls in all activity where Pacific cod was assigned as the target species. For that reason, data for some recent years include a small amount of pot CP cod catch that occurred when a vessel was prosecuting IFQ species with pot gear (i.e. sablefish IFQ). The analysts cannot specifically identify these instances due to confidentiality restrictions.

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Figure 3-5 Years that the eight endorsed LLP licenses were credited with Pacific cod pot CP catch in the BS or AI, 1991 through 2020 (black = catch occurred)

Figure 3-6 and Table 3-4 show the annual total amount of BSAI Pacific cod caught by any CP using pot gear (Tons_Total) and the amount caught by vessels that are associated with the eight existing Pacific cod-endorsed BSAI pot CP LLP licenses. The data reflect that prior to LLP implementation there was a larger set of CPs catching Pacific cod but the vessels that ultimately received the gear/area/operation LLP endorsements – and subsequently the Pacific cod endorsements – began to account for the majority of catch during the period that was used for qualifying history (1995 through 1998). Since 2011 the CP vessels associated with the LLPs affected by this action account for all Pacific cod catch by that gear/operational type. The catch shown in the figure and table include the Federal limited access fishery, catch in the Federal parallel fishery, catch of CDQ Pacific cod, and catch in the state-managed fishery (GHL). The Catch Accounting System is used to restrict Tons_Total to Federal limited access landings (including parallel fishery) beginning in 2003 – excludes CDQ – but data prior to 2003 come from a blend of data sources that may include catch of Pacific cod by pot CPs in other fisheries, such as state fisheries or IFQ fishing. Harvests by the vessels currently associated with BSAI Pacific cod pot CP LLP licenses in other fisheries are summarized in Section 3.4.5.1.

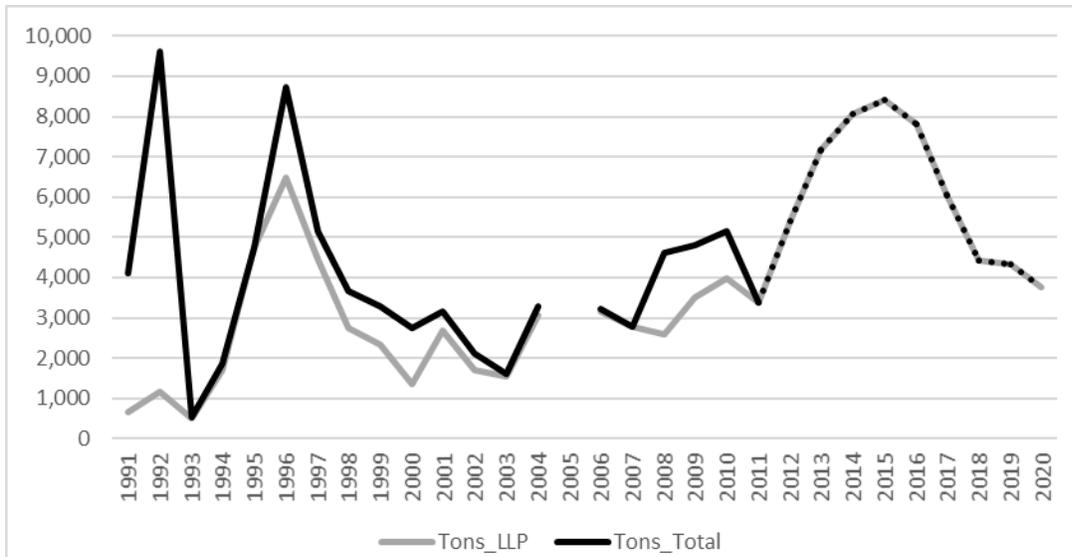


Figure 3-6 BSAI pot CP catch of Pacific cod: Total catch by CPs using pot gear vs. catch by vessels associated with LLP licenses that received Pacific cod endorsements under Amendment 67 (1991 through 2020; 2005 data omitted due to confidentiality)

Table 3-4 BSAI pot CP catch of Pacific cod: Total catch by CPs using pot gear vs. catch by vessels associated with LLP licenses that received Pacific cod endorsements under Amendment 67 (1991 through 2020)

| Year | # Vessels | Tons_LL P | Tons_Total | % LLP |
|------|-----------|-----------|------------|-------|
| 1991 | 9 | 662 | 4,124 | 16% |
| 1992 | 19 | 1,159 | 9,614 | 12% |
| 1993 | 3 | 501 | 529 | 95% |
| 1994 | 5 | 1,708 | 1,849 | 92% |
| 1995 | 8 | 4,740 | 4,741 | 100% |
| 1996 | 13 | 6,483 | 8,719 | 74% |
| 1997 | 12 | 4,471 | 5,141 | 87% |
| 1998 | 7 | 2,748 | 3,665 | 75% |
| 1999 | 13 | 2,333 | 3,293 | 71% |
| 2000 | 9 | 1,341 | 2,741 | 49% |
| 2001 | 6 | 2,676 | 3,173 | 84% |
| 2002 | 5 | 1,701 | 2,123 | 80% |
| 2003 | 3 | 1,545 | 1,596 | 97% |
| 2004 | 3 | 3,063 | 3,282 | 93% |
| 2005 | 2 | * | * | * |
| 2006 | 4 | 3,165 | 3,207 | 99% |
| 2007 | 3 | 2,780 | 2,780 | 100% |
| 2008 | 6 | 2,604 | 4,606 | 57% |
| 2009 | 4 | 3,507 | 4,817 | 73% |
| 2010 | 6 | 3,990 | 5,163 | 77% |
| 2011 | 4 | 3,369 | 3,369 | 100% |
| 2012 | 5 | 5,417 | 5,417 | 100% |
| 2013 | 3 | 7,165 | 7,165 | 100% |
| 2014 | 4 | 8,067 | 8,067 | 100% |
| 2015 | 4 | 8,421 | 8,421 | 100% |
| 2016 | 4 | 7,808 | 7,808 | 100% |
| 2017 | 4 | 6,047 | 6,047 | 100% |
| 2018 | 5 | 4,435 | 4,435 | 100% |
| 2019 | 5 | 4,324 | 4,324 | 100% |
| 2020 | 5 | 3,754 | 3,754 | 100% |

* denotes confidential data

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA.

3.4.2.1. Transfers of LLP Licenses

According to NMFS Restricted Access Management (RAM) Division, five of the eight Pacific cod- endorsed pot CP LLP licenses have been transferred one or more times since their original issuance at the beginning of the 2000 calendar year. Information on the terms of past transfers or the value of the assets transferred are not publicly available. Based on RAM’s permit holder records and general knowledge of the sector, it appears that some LLP license transfers were arms-length transactions while others might have occurred between subsidiaries of the same fishing company.

In terms of estimating the value of a cod- endorsed pot CP LLP license, the analysts can only provide a broad range based on personal communication with brokers who have experience with LLPs.²⁰ Those familiar with the market for LLP licenses report that it is a slow-moving, low-volume market. It was noted that the market for cod- endorsed licenses has been slower than usual in recent years due to low

²⁰ Personal communication with Dock Street Brokers (www.dockstreetbrokers.com) and Alaska Boats & Permits (www.alaskaboat.com), February 2020.

TACs, though there is some interest in accruing catch history (via purchase or utilization) in the BSAI CV sector in anticipation of a rationalization action. Brokers reported sale and lease inquiries on cod-endorsed CP LLP licenses for use in the CV fishery to build vessel catch history because CV LLPs with the necessary length endorsements for some buyers are in short market supply. It was also speculated that cod-endorsed licenses could see increased demand from crab-oriented businesses since harvest opportunities in the crab fisheries have declined and those vessels would be well suited for pot cod fishing.

The assets available are highly variable due to the different endorsements and catch histories associated with each permit. According to brokers, the market value of a license is a function of catch history (in regard to any future rationalizations), maximum length overall (MLOA) endorsement, and species/area endorsements.

Two of the eight LLP licenses with BSAI Pacific cod pot gear CP endorsements have been publicly listed for sale in 2020. One license with a 134' MLOA as a "CP pot permit for the Bering Sea" was listed at a \$450,000 asking price (listed June 2019). The other listed license has a 124' MLOA and is listed as "P-cod endorsed with pots in Bering Sea and Central GOA". That license was listed at a \$250,000 asking price as of March 2020 but was relisted in August 2020 for \$125,000. The analysts have no specific insight into the reason for the price discrepancy between licenses or the change in listing prices. The analysts can speculate that a license with a similar MLOA and an additional area endorsement might be listed less than half the asking price due to the amount of catch history associated with the license. By comparison, a BSAI nontrawl LLP with no cod endorsement and an MLOA of less than 60' was selling in the range of \$25,000 to \$30,000 within the last five years.

3.4.3. Pacific Cod Fishery Catch

The available harvest for the BSAI Pacific cod pot CP sector is shown in Table 3-1 and Figure 3-3. During the period from 2004 through 2020, the sector's initial TAC has ranged from 3,484 mt in 2012 to 1,850 mt in 2020. Initial TAC was relatively stable between 3,200 mt and 3,400 mt from 2012 to 2017 but has been in steady decline since then.

Actual catch by the sector is reportable for years when at least three vessels were active (every year since 2006). Figure 3-7 plots the sector's annual harvest of non-CDQ Pacific cod, overlaid with TAC utilization percentage to reflect how much of the available harvest the sector was able to catch. The line in Figure 3-7 showing utilization percentage relative to final TAC (initial TAC plus rollovers) is fairly steady around 100%, meaning that the sector is usually able to harvest all that is available to it. The line showing utilization relative to initial TAC reflects that the active vessels in the sector have had the capacity to harvest more than its initial allocation. Note that rollovers (the difference between initial TAC and final TAC) did not become a factor in the fishery until the implementation of Amendment 85 in 2008. The figure reflects that rollover TAC has become less available in the most recent years (see also Figure 3-4). Actual non-CDQ harvest exceeded the initial TAC amount in all analyzed years. The lowest utilization rate of final TAC was 86% in 2016.

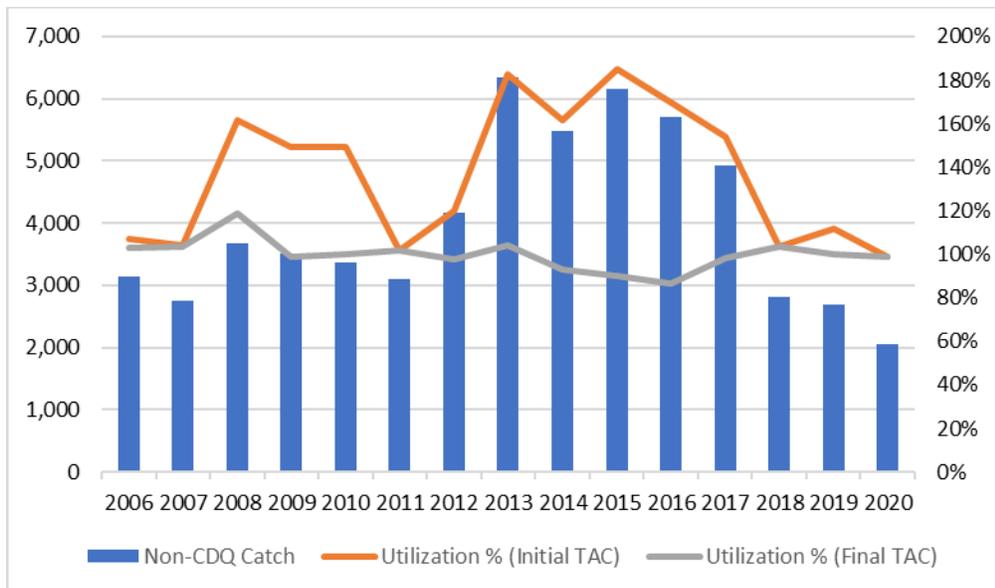


Figure 3-7 BSAI pot CP Pacific cod harvest (mt, left axis) and utilization rates relative to initial TAC and final TAC (% , right axis), 2006 through 2020

Table 3-5 reports retained catch of BSAI FMP species in recent years, clearly showing that the pot CP sector is highly selective for Pacific cod. Other retained species combine to account for roughly one-tenth of one percent of total estimated retained catch, some of which may be used for bait. Table 3-6 reports discarded catch of FMP species. From 2014 through 2020, the sector’s total catch is estimated to be 31,341 mt with discards accounting for 4.2% of total catch (1,320 mt). Yellowfin sole accounted for roughly 72% of discarded volume (946 mt over seven fishing years). Non-FMP ecosystem species (e.g., starfish, grenadiers) are not reported in this document but could be included at the Council’s request.

Table 3-5 Retained catch (mt) in BSAI pot CP sector, by species (2014 through 2020)

| BSAI FMP Species | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total | % Total |
|---------------------|-------|-------|-------|-------|-------|-------|-------|--------|---------|
| <i>Vessel Count</i> | 4 | 4 | 4 | 4 | 5 | 5 | 5 | | |
| Pacific Cod | 5,477 | 6,166 | 5,698 | 4,921 | 2,983 | 2,688 | 2,048 | 29,980 | 99.9% |
| Octopus | * | * | 5.54 | * | * | * | * | 14.59 | 0.05% |
| Pollock | * | 2.62 | * | * | * | * | * | 14.34 | 0.05% |
| Yellowfin Sole | * | | * | * | * | | | * | |
| Atka Mackerel | | | | | * | | | * | |
| Sculpin | | * | | | | | | * | |
| Rougheye Rockfish | | | | | * | | | * | |
| Total | 5,482 | 6,172 | 5,720 | 4,923 | 2,987 | 2,689 | 2,048 | 30,021 | 100.0% |

* denotes confidential data

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA.

Table 3-6 Discarded catch (mt) in BSAI pot CP sector, by species (2014 through 2020)

| BSAI FMP Species | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total | % Total |
|-------------------------|---------------------------------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|----------------|
| <i>Vessel Count</i> | 4 | 4 | 4 | 4 | 5 | 5 | 5 | | |
| Yellowfin Sole | 296.6 | 222.9 | 94.0 | 121.1 | 107.8 | 68.2 | 35.9 | 946.4 | 72% |
| Sculpin | 51.7 | 66.2 | 41.9 | 39.1 | 35.7 | 10.3 | 15.9 | 260.9 | 20% |
| Octopus | * | 22.8 | 10.0 | 5.2 | 9.9 | 3.9 | * | 57.9 | 4% |
| Pacific Cod | | * | * | 26.48 | | | * | 32.6 | 2% |
| Pollock | 3.1 | 2.4 | 0.8 | 0.6 | 0.3 | 0.1 | 0.4 | 7.6 | 1% |
| Rock Sole | 0.8 | 0.1 | * | 2.5 | 0.1 | * | * | 4.2 | 0.3% |
| Atka Mackerel | * | * | 0.02 | | * | | * | 2.0 | 0.1% |
| Arrowtooth Flounder | 0.5 | 0.4 | 0.3 | 0.5 | 0.1 | * | * | 1.8 | 0.1% |
| Other Flatfish | * | * | 0.4 | 0.2 | | * | | 1.3 | 0.1% |
| Flathead Sole | * | * | 0.3 | 0.8 | * | * | * | 1.2 | 0.1% |
| Sablefish | Data not shown due to confidentiality | | | | | | | 3.7 | 0.3% |
| Northern Rockfish | | | | | | | | | |
| Other Rockfish | | | | | | | | | |
| Greenland Turbot | | | | | | | | | |
| Kamchatka Flounder | | | | | | | | | |
| Skate | | | | | | | | | |
| Rougheye Rockfish | | | | | | | | | |
| Shorthead Rockfish | | | | | | | | | |
| Alaska Plaice | | | | | | | | | |
| Pacific Ocean Perch | | | | | | | | | |
| Squid | | | | | | | | | |
| Total | 355.6 | 319.2 | 149.1 | 196.8 | 156.4 | 83.1 | 59.4 | 1,320 | 100% |

* denotes confidential data

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA.

PSC allowances are shared among the BSAI trawl and nontrawl fisheries according to guidelines outlined at 50 CFR 679.21. PSC species include halibut, herring, red king crab, opilio (snow) crab, Tanner crab, and salmon (divided into chinook and non-chinook). PSC limits are apportioned to trawl and HAL sectors as part of annual harvest specifications. The pot and jig sectors are exempt from PSC limits. Table 3-7 shows the estimated amount of crab and halibut PSC species that occurred in the BSAI pot cod CP sector from 1998 through 2020. PSC species that are not reported did not occur in the pot CP fishery during the analyzed period (e.g., salmon and herring).

Bycatch estimates are reported back to 1998, which is the earliest year for which AKFIN has high confidence in reporting accuracy based on current standards. Bycatch trends for halibut and crab do not appear to be correlated to the number of active vessels in the pot CP fishery. Data for 1998 through 2002 are derived from a blend database that includes the Federal limited access Pacific cod pot CP sector plus CDQ cod (when applicable) and cod that was caught by pot CPs participating in the halibut/sablefish IFQ fishery. From 2003 through the present, the data are derived from Catch Accounting and only reflect the Federal limited access pot CP sector that was restricted to pot CPs associated with cod-endorsed LLP licenses throughout that period (refer to Section 1.2).

Estimated crab PSC is reported in “number of animals”. There is no crab PSC limit for the pot CP sector that would close the fishery but NMFS could impose inseason area-based closures to move the fishery away from crab stocks that are in “overfished status,” such as Pribilof Islands and St. Matthews blue king crab. This is described further in Section 3.4.3.1. Blue king crab bycatch was highly variable, ranging from zero to a few individuals recorded to over 30,000 in on year (2010); zero were reported in 2020. Annual red king crab bycatch was consistently below 10,000 animals through 2012 but jumped to more than 50,000 from 2013 through 2015 before a relative decline in recent years; red king crab bycatch reached a recent low in 2020. Tanner crab bycatch levels reached the highest peaks but was similarly variable over the reported years. Over 100,000 Tanner crab were caught in five years during the reported period, but fewer than 20,000 Tanner crab were caught in 11 years. Opilio crab bycatch reached the

highest annual peaks during the analyzed period (over 400,000 animals), with an average of around 95,000 crab from 1998 through 2020. During the most recent 10 years, however, the annual average was roughly 29,000 crab per year and fewer than 5,000 crab in two years. Golden king crab bycatch levels tend to be lower than those of other crab species, and trending low in recent years relative to the full period.

There is no halibut PSC limit that would close a pot sector fishery, but halibut is still a prohibited bycatch species and catch should be minimized at all times to the extent practicable under MSA National Standard 9. Halibut PSC mortality in the pot CP sector (reported in metric tons) is estimated based on observers' determinations of the disposition of sampled fish. In this sector, sampled halibut are assessed for viability as either "dead" (100% mortality), "poor" (100% mortality), or "excellent" (0% mortality). The estimated mortality rate for sampled catch is extrapolated to the total catch of the pot CP sector, resulting in a total mortality estimate (in metric tons) for the fishery. While this sampling strategy combined with a relatively small sample size (few vessels fishing a short season) can result in annual variability, the total amount of estimated mortality is predictably low compared to other sources of halibut mortality in BSAI groundfish fisheries. Since 1998, annual halibut PSC mortality has only exceeded 1 mt in one year (2011; four active vessels), and has been as low as 0.05 mt. Average annual halibut PSC for that period was 0.39 mt and the median annual amount was 0.28 mt. During the 1991 to 1997 period, when data are less reliable, halibut PSC mortality was recorded at up to 5 mt in a year when over 10 vessels were active.

Table 3-7 Estimated prohibited species catch of crab (number of animals) and halibut (mt of mortality) in BSAI pot CP sector (1998 through 2020)

| Year | Vessels | Halibut (mt) | Blue king crab | Red king crab | Tanner crab | Golden king crab | Opilio crab |
|------|---------|--------------|----------------|---------------|-------------|------------------|-------------|
| 1998 | 7 | 0.81 | | 1,030 | 13,530 | | 293,161 |
| 1999 | 13 | 0.33 | | 612 | 17,959 | | 85,394 |
| 2000 | 9 | 0.12 | | 9,974 | 42,660 | | 42,817 |
| 2001 | 6 | 0.21 | | 16 | 5,054 | | 57,092 |
| 2002 | 5 | 0.07 | | 143 | 25,624 | | 70,546 |
| 2003 | 3 | | 319 | 7 | 1,821 | | 8,474 |
| 2004 | 3 | 0.10 | 17 | 243 | 11,418 | | 74,598 |
| 2005 | 2 | * | * | * | * | | * |
| 2006 | 4 | 0.05 | 209 | 1,268 | 26,539 | 1 | 101,533 |
| 2007 | 3 | 0.04 | 22,492 | 8,393 | 134,457 | 2 | 432,989 |
| 2008 | 6 | 0.60 | 31 | 3,571 | 160,788 | | 125,778 |
| 2009 | 4 | 0.20 | 1,651 | 147 | 94,534 | 240 | 411,372 |
| 2010 | 5 | 0.51 | 34,303 | 86 | 24,088 | 4 | 138,131 |
| 2011 | 4 | 1.30 | | 8,479 | 26,257 | 27 | 20,449 |
| 2012 | 5 | 0.79 | | 4,123 | 18,090 | | 1,506 |
| 2013 | 3 | 0.75 | 9 | 51,913 | 100,697 | | 4,500 |
| 2014 | 4 | 0.90 | | 72,552 | 179,499 | | 24,808 |
| 2015 | 4 | 0.57 | 975 | 94,632 | 217,500 | 7 | 40,226 |
| 2016 | 4 | 0.54 | 3,486 | 13,479 | 99,345 | | 15,824 |
| 2017 | 4 | 0.41 | 16,198 | 3,968 | 15,944 | | 41,937 |
| 2018 | 5 | 0.28 | 3,811 | 12,289 | 19,223 | 4 | 35,919 |
| 2019 | 5 | 0.16 | 2,967 | 1,491 | 2,842 | 27 | 57,668 |
| 2020 | 5 | 0.13 | | 76 | 2,483 | | 48,914 |

* denotes confidential data

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_PSC.

3.4.3.1. Crab Bycatch Management

The pot CP sector is not subject to crab PSC limits but NMFS monitors and manages the catch of crab species. The agency is particularly attuned to bycatch of blue king crab (BKC) stocks that are in overfished status (Pribilof Islands BKC and St. Matthews BKC). Figure 3-8 illustrates the blue king crab stock areas. The Pribilof Islands Habitat Conservation Zone (PIHCZ), shown in Figure 3-9, encompasses the core area of the Pribilof Islands BKC stock and is closed to both trawl gear and pot gear targeting Pacific cod to protect habitat and minimize bycatch in the BSAI groundfish fisheries.

NMFS manages crab bycatch in reference to crab ABCs that are accounted for on an annual basis running from July 1 to June 30, meaning that bycatch accounting restarts half-way through the groundfish year. NMFS publishes weekly reports that show crab bycatch in groundfish fisheries relative to the ABC.²¹ The amount of a crab ABC that can be taken as bycatch in groundfish fisheries is not divided by sector or gear, but if bycatch causes the overfishing limit (OFL) to be approached then managers will assess the gear types and sectors that are taking the most crab and begin to close areas of high encounter for those groups.²² Crab bycatch would not cause the total closure of a particular gear type or sector. Regulations for inseason adjustments, defined at 50 CFR 679.25, allow NMFS to close specific areas, gears, and target species. If NMFS were to close areas, it would only close areas within the crab stock boundaries (e.g., Figure 3-8 for blue king crab) and the closure areas would be based on State of Alaska statistical areas (e.g., blue boxes in Figure 3-9).

If NMFS's weekly monitoring of crab bycatch triggers concern about exceeding an OFL then the agency first works with the fishing fleet to have them move their effort to another location before enacting a closure. This interaction has taken place for the pot CP fleet in the past, though the agency acknowledges that such coordination can be a challenge when the limited access TAC is being taken over the course of a short season.

²¹ <https://www.fisheries.noaa.gov/alaska/commercial-fishing/fisheries-catch-and-landings-reports>

²² This is a cooperative effort with the State of Alaska. ADF&G reports to NMFS Inseason Management on the amount of crab bycatch in state-managed crab fisheries, which is not tracked through the Catch Accounting System. NMFS would be responsible for any crab-related closures to groundfish fisheries and ADF&G would be responsible for area closures for crab fisheries.

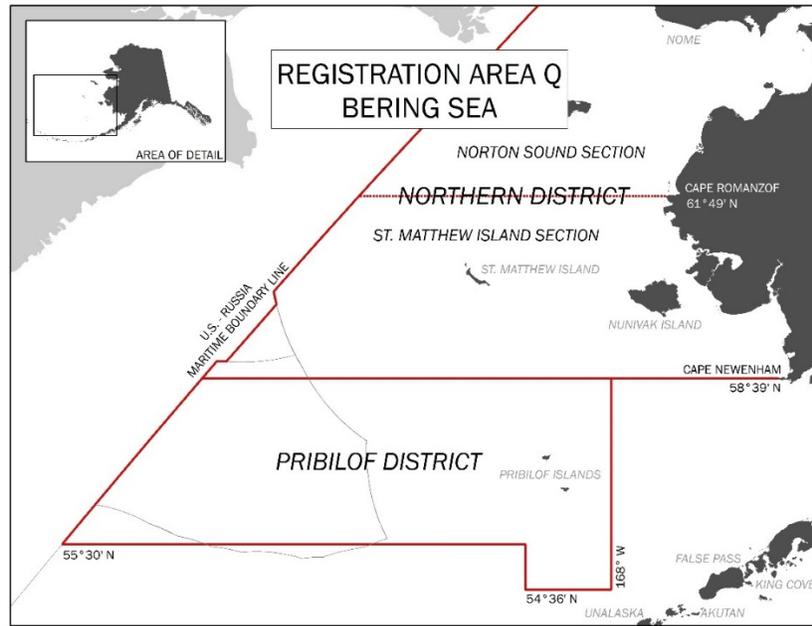


Figure 3-8 Map of blue king crab stock areas

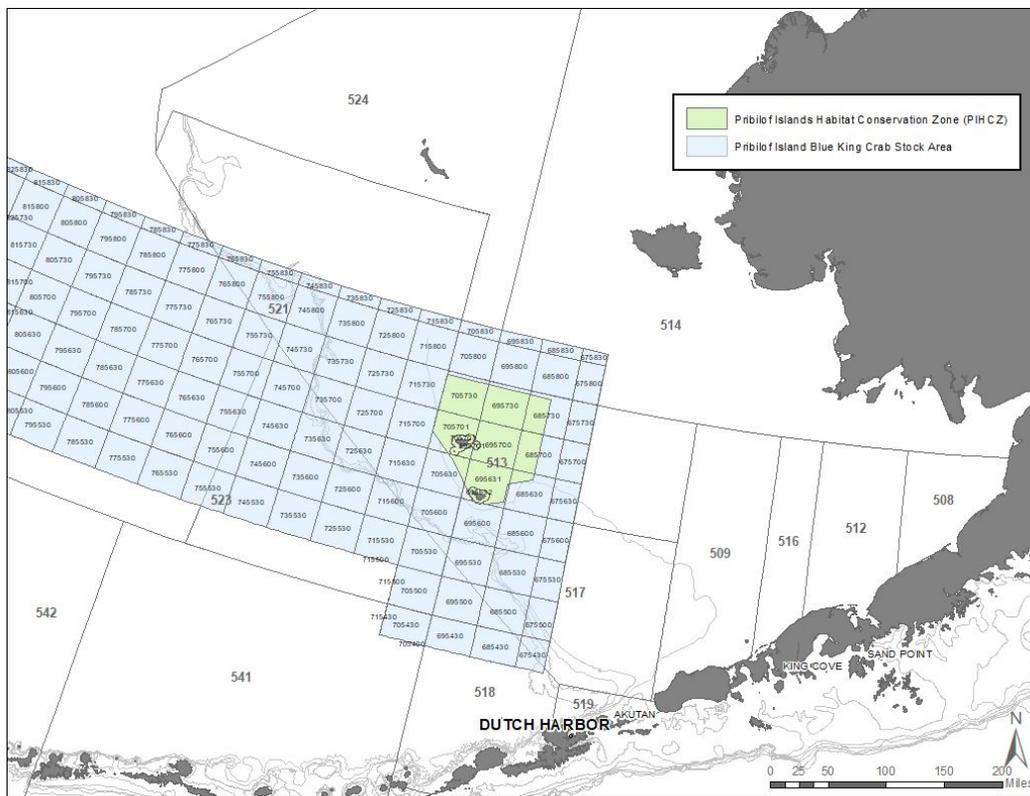


Figure 3-9 Partial map of BSAI groundfish FMP areas showing PIHCZ closed area (green) and overlays of PIBKC stock area and ADF&G statistical areas

3.4.4. Harvest Value

Table 3-8 reports the nominal (unadjusted) wholesale value of Pacific cod and other harvest by the vessels attached to active BSAI pot CP LLP licenses from 2006 through 2019. (2019 is the most recent year for which revenue data are currently available.) The Pacific cod revenues in the table reflect all non-CDQ catch that was attributed to the TAC (Federal waters and parallel fishery catch in state-waters). Data prior to 2006 are not shown due to confidentiality. Figure 3-10 shows pot cod CP revenues next to total gross revenues and illustrates the annual percentage of total gross revenues that this fishery accounts for across all active vessels in the sector. Across all years, the active vessels in the sector generated approximately 41% of their annual wholesale revenue from the pot cod CP sector. That proportion dipped to 32% and 35% in 2018 and 2019, respectively. The information that can be shared publicly about individual vessels' dependency on the pot cod fishery is included in Section 3.4.5.1; one of the four vessels that is certain to retain its endorsement under Alternative 2 routinely generated more than half of its annual revenue from this fishery. The other fisheries that are combined with the pot cod CP sector to make up total gross revenues include BSAI HAL Pacific cod, crab, halibut and sablefish IFQ, and fixed-gear Pacific cod in the GOA (see also Section 3.4.5.1). The vessels attached to the LLP licenses considered in this action may have generated other revenues from Alaska fisheries that are not captured by total gross revenue. For example, at least one CP associated with these LLP licenses has participated in salmon tendering; AKFIN does not have access to revenues from tendering contracts so the analysts can only acknowledge that additional revenues may exist in some cases.

Figure 3-11 shows the sector's combined annual wholesale revenues compared to the sector's final TAC allocation (initial TAC as defined by Amendment 85, equal to 1.5% of the overall BSAI Pacific cod TAC, plus any inseason reallocations from other sectors to the Pacific cod pot CP B season). The figure illustrates that the gross value of the fishery roughly tracks the volume that is available to be harvested. That observation fits with the fact that the sector comes close to full TAC utilization in most years, as shown in Figure 3-7. Lower gross wholesale revenues associated with similar final TAC levels – e.g., 2018 and 2019 – are likely a reflection of the broader demand market for Pacific cod and other whitefish.

Product value (wholesale value per mt of finished product) is not reported because the sector retains virtually only one species – Pacific cod (see Table 3-5) – and the sector virtually always fishes up to its final TAC limit (see Figure 3-7). Participants do not appear to temper their effort levels based on Pacific cod demand (wholesale unit value). In this competitive fishery, an individual participant's direct economic benefit relative to others would appear to be a simple function of harvest volume. A lower wholesale unit value likely reduces the marginal benefit of harvesting Pacific cod, but any analysis of whether wholesale unit value trends impact willingness to participate in the fishery would require cost-side information that is unavailable. Moreover, the fact that the final TAC is fully utilized and season lengths are shortening indicate that any past fluctuations in unit value have not altered the competitiveness or appeal of the fishery to this point.

Table 3-8 Nominal gross first wholesale value of BSAI pot CP non-CDQ Pacific cod catch relative to revenue generated by active BSAI pot CPs in all Alaska fisheries (2006 through 2019)

| Year | PCod Gross first wholesale value (millions \$) | PCod Gross first wholesale value as % of total gross revenue | Total gross revenue (millions \$) |
|------------------------|--|--|-----------------------------------|
| 2006 | 5.6 | 45% | 12.4 |
| 2007 | 5.6 | 57% | 9.8 |
| 2008 | 7.4 | 36% | 20.9 |
| 2009 | 4.4 | 37% | 11.8 |
| 2010 | 5.0 | 26% | 19.0 |
| 2011 | 5.2 | 29% | 18.1 |
| 2012 | 6.3 | 31% | 19.9 |
| 2013 | 7.5 | 49% | 15.1 |
| 2014 | 7.8 | 39% | 19.7 |
| 2015 | 9.7 | 53% | 18.4 |
| 2016 | 8.4 | 47% | 17.9 |
| 2017 | 8.6 | 52% | 16.5 |
| 2018 | 6.0 | 32% | 18.7 |
| 2019 | 4.8 | 35% | 13.7 |
| Total / Average | 92.3 | 41% | 231.8 |

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA.

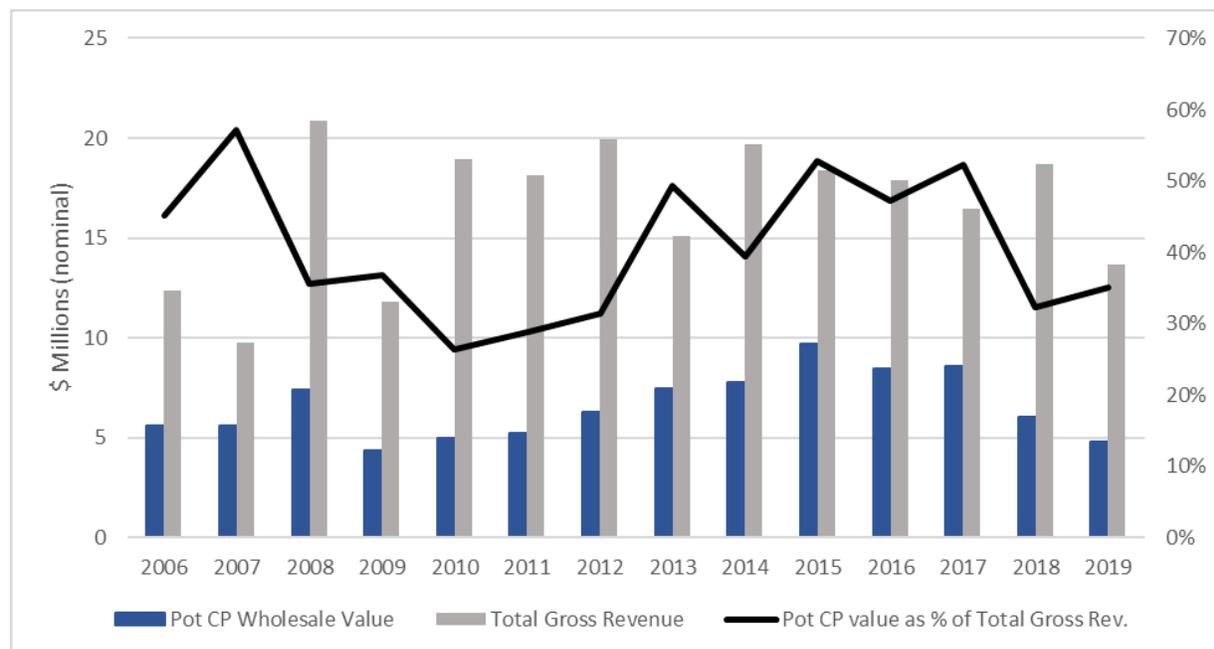


Figure 3-10 Nominal BSAI pot CP wholesale revenues from non-CDQ catch as a proportion of total gross revenues generated by active vessels (2006 through 2019)

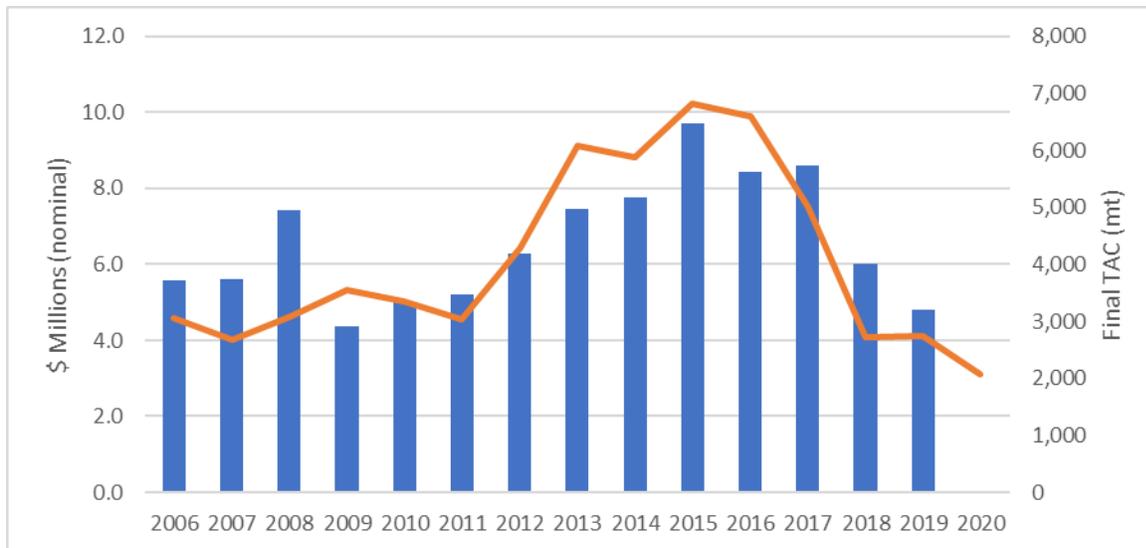


Figure 3-11 Nominal BSAI pot CP wholesale revenues from non-CDQ catch (bars) compared to final TAC (initial TAC plus inseason reallocations; line), 2006 through 2020

3.4.5. Harvesting Vessels

Table 3-1 showed that between two and six vessels have participated in the BSAI Pacific cod pot CP sector dating back to 2005. The greatest number of participating vessels (six) was in 2008, which was the first year that Pacific cod sector allocations were implemented under Amendment 85. Since 2009 the number of vessels participating has settled at four or five annually, except for 2013 when only three vessels participated. The number of vessels has not declined since 2018 when the sector’s TAC began to decline as part of reduced overall BSAI Pacific cod ABCs, remaining at five vessels in 2018, 2019, and 2020.

Figure 3-5 and Table 3-4 include the number of vessels that were active in each year during the analyzed period. The annual distribution of catch across active vessels cannot be reported due to confidentiality. However, the analysts can state that from 2006 through 2019, on average, whichever vessel landed the highest volume of Pacific cod in each year accounted for 44% of the sector’s catch (42% median). Whichever vessel landed the smallest volume accounted for, on average, 11% of the sector’s catch (10% median). From 2006 through 2015, two particular CPs tended to account for the majority of catch in the sector. Since 2015 a set of three CPs have combined to account for the majority of catch.

A subset of the CPs in this sector have consistently fished Pacific cod CDQ in addition to non-CDQ TAC since 2012. One or two vessels fished CDQ cod from 2012 through 2017, and three vessels fished CDQ cod in 2018 and 2019. The volume of CDQ catch can only be reported for 2018 and 2019. In those years the three pot CPs that fished CDQ cod combined to catch 1,295 mt and 1,530 mt, respectively. Those amounts were equivalent to roughly half the total volume of non-CDQ cod caught by the five boats in the limited access fishery. CDQ catch was equivalent to 46% of non-CDQ catch in 2018 and 57% of non-CDQ catch in 2019.

The vessels that are currently associated with the eight LLP licenses affected by the action range in length from 100’ to 180’ LOA. The five vessels that were active in this sector in the most recent year range in length from 124’ to 166’ LOA. Vessel length is relevant for determining whether or not a pot CP is allowed to fish in the Alaska state-managed guideline harvest level (GHL) fisheries. In the BS area, GHL fishing with pot gear is restricted to vessels less than or equal to 58’ LOA. In the AI – under of a new regulation implemented in 2020 – pot vessels fishing the GHL must be less than or equal to 100’ LOA

form when the fishery opens to March 15; from March 15 the fishery is restricted to vessels less than or equal to 125' LOA.²³ None of the vessels currently attached to the LLP licenses affected by this action would be (or have been) able to participate in the BS GHL fishery. However, Table 3-1 shows that GHL fishing did occur on one to four pot CPs from 2008 through 2011 and in 2018; that activity occurred in the AI GHL fishery.²⁴ Management of the BS and AI GHL fisheries is explained in more detail in Section 3.4.1.2. Table 3-1 shows that four pot CPs harvested 912 mt of Pacific cod in the 2008 GHL fishery and three pot CPs harvested 1,753 mt in the 2010 GHL fishery; harvest data from all other years when GHL catch occurred are confidential.

3.4.5.1. Vessel Dependency

This section describes the relative participation across fisheries for the eight CPs that are *currently* assigned to the LLP licenses directly affected by this action (as of 2020). Revenue diversification data are not included for CP vessels that were assigned to these licenses in the past but currently are not.

Staff analyzed revenue data for these vessels from 2000 through the 2019 fishing year, which is the most recent for which finalized revenues are available. AKFIN provided gross revenue data across the following fisheries: BSAI pot gear Pacific cod (CDQ and non-CDQ breakouts); BSAI HAL gear Pacific cod; GOA pot gear Pacific cod; GOA HAL gear Pacific cod; state-managed Pacific cod, crab IFQ, and halibut/sablefish IFQ.²⁵ Staff looked at revenue data reported in ex-vessel values because those are the only values available for crab fisheries and halibut/sablefish IFQ fisheries, which are an important piece of the total directed fishing portfolio for some of these vessels.²⁶ For CPs' groundfish activity, AKFIN either reports ex-vessel value estimates that are provided on the ADF&G/CFEC Fish Ticket by the vessel or uses an algorithmically estimated value based on data from Commercial Operator Annual Reports (COAR). The analysts cannot report specific revenues for any vessel, nor information that reveals the activity of fewer than three vessels. For the most part, this section relies on a qualitative description of which fisheries these CPs have prosecuted and, where possible, the rough proportion of total estimated ex-vessel revenues across all fisheries. While dollar amounts are not reported, the analysts note that percentage calculations were made using 2018-dollar adjusted ex-vessel values based on AKFIN's methodology. Proportion of revenue by fishery is not meant to serve as a direct comparison across all vessels because this set of vessels varies substantially in their combinations of fisheries, the values of the species targeted, the volume landed, and the number of years active.

As stated in Section 2.2, the eight LLP licenses can be divided into two groups for purposes of description and comparison: four licenses that would retain their Pacific cod endorsement under any²⁷ selected version of Alternative 2, and four licenses that would lose their endorsement or could lose their endorsement depending on the options selected (see Figure 2-1). Even within these two groupings, vessels are heterogeneous in which fisheries they prosecute, the relative balance of those fisheries in terms of revenue generation, and other sources of revenue that are available to AKFIN.

²³ Prior to 2020 the AI GHL vessel length restriction was 125' LOA for the entire year.

²⁴ A cod-endorsed LLP license is not required in order to participate in the GHL fishery.

²⁵ Source: ADFG/CFEC Fish Tickets, provided by AKFIN

²⁶ Crab and halibut/sablefish IFQ catches are not reported in "round weight," which is how groundfish wholesale values are typically reported. AKFIN has the ability to estimate round weights based on net weight but that method is less preferred than the methods for estimating ex-vessel value described above. Moreover, converting to round weights to match estimated wholesale values is not strictly necessary since the analysts are focused on percentage-based revenue dependency as opposed to dollar-value revenue amounts.

²⁷ For the purpose of this discussion, staff is assuming that it has correctly interpreted the Alternative 2 suboptions to mean that a vessel does not have to record 1,000 mt in *each* of three or four (depending on the suboption) qualifying years.

Vessels associated with LLP licenses that would retain the Pacific cod endorsement under Alt. 2

Only one of these four CPs has routinely generated more than half of its total ex-vessel revenues from BSAI Pacific cod pot fishing (Federal limited access pot cod plus CDQ). Pot cod accounted nearly 100% of that vessel's revenues during the 11 most recent analyzed years. One other CP eclipsed 50% of revenues coming from the pot cod fishery in three of the four most recent years. For the other two CPs, pot cod accounted for between 10% and 45% of annual revenues, with the average of recent active years falling closer to 20%.

One of the four CPs has participated in the BSAI HAL gear Pacific cod fishery. That vessel is not currently active in HAL gear, having largely switched to pot cod and crab IFQ. When active in that fishery – roughly 10 to 15 years ago – HAL cod accounted for 60% to 95% of total revenues.

All four CPs in this group have participated in the crab IFQ fishery during the analyzed period, though only two have been participating during the three most recently reported years. For the two vessels that currently and consistently participate in the BS crab fishery, crab revenues typically account for 65% to 90% of annual revenue.

While three of four CPs have participated in the halibut and sablefish IFQ fishery, only one has done so consistently and to a degree that it was a substantial part of a business plan. That vessel generated between 15% and 75% of annual revenues from IFQ fishing, but with an annual average of around 40%.

Two of the four CPs had infrequent, low-volume participation in GOA fixed-gear Pacific cod fisheries. Of all the vessel-years analyzed from 2000 through 2019, this set of vessels participated in GOA pot cod four times and GOA HAL cod one time; total gross revenues from that activity amounted to much less than 1% of all activity for that vessel or the group of vessels combined.

None of these vessels participated in state-managed Pacific cod fisheries during the analyzed period.

Over the most recently reported decade, three of the four CPs in this group had no additional revenues outside of the suite of fisheries considered in this dependency analysis. "Other revenues" accounted for between 10% and 40% of total reported gross for the other CP, with an annual average around 25%.

Vessels associated with LLP licenses that would/could lose the Pacific cod endorsement under Alt. 2

None of the four CPs currently associated with the LLP licenses that could be modified under Alternative 2 participated in Federal limited access or CDQ Pacific cod pot gear fisheries during the analyzed period. Two of the four CPs show exclusively crab revenues; one of those vessels has been consistently active while the other has not landed crab or shown other revenue since 2006.

The other two CPs have not landed crab since 2004 or before. Those vessels each show consistent participation in the BSAI HAL gear Pacific cod fishery. One CP has generated nearly all revenues in that sector since 2013 but was active in the halibut and sablefish IFQ fishery prior to that. The other CP generated 45% to 65% of annual revenues in the HAL cod fishery with the rest coming from halibut and sablefish IFQ and intermittent participation in the GOA HAL cod fishery.

3.4.5.2. Crew Information

Vessel crews are an important stakeholder group for any fishery management action. Crew residency data by community are not available for this fishery because it is not subject to an economic data reporting (EDR) program. Alaska Department of Fish & Game (ADF&G) maintains a data base of licensed crew members but individuals are not identifiable by the vessel(s) on which they worked.

Through personal communication with vessel owners, operators, and managers in this fishery, the analysts understand that crew size within the BSAI pot CP fishery is variable. One vessel operator stated that a full crew complement was 25 people: six on deck, 14 in the factory, two in the wheelhouse, two in

the engine room, and a cook. According to that operator, the same crew breakdown was onboard when fishing for crab. A manager associated with a different vessel stated that their typical crew was 22 people. By contrast, the owner of a different vessel stated that their Pacific cod pot crew consisted of 10 people, and that the crew size dropped down to seven when fishing crab and five when operating as a tender. The individual representing the vessel with a smaller crew noted that they had reduced crew size in the pot cod fishery in recent years because the TAC was not large enough to justify as many shifts per day.

Through personal communication with vessel owners and operators in this fishery, the analysts understand that many of the crew on BSAI pot cod CPs are hired from the Seattle metropolitan statistical area (MSA), but that is by no means exclusive and there is simply no data available to quantify the distribution of crew demographics.

3.4.6. Communities

This subsection summarizes the information that is available to link the BSAI Pacific cod pot CP sector to specific communities so that the Council can consider the potential impacts of this action in terms of National Standard 8. National Standard 8 calls for the Council to account for the importance of the fishery in fishing communities and to minimize adverse impacts on those communities to the extent practicable. Linking an offshore sector to specific coastal communities is somewhat less straightforward for an offshore sector such as this. The analysts present information on the reported residence of the owners of the LLPs that would be directly affected by the action alternative, ownership residence for the CP vessels that have been active in the sector, self-reported “homeport” for pot CPs, and the location of finished product deliveries (transfers or “port calls”). Due to the offshore nature of this fishery, the small harvest volume and number of vessels relative to other commercial fisheries that interact with the identified communities, and the fact that the action alternative is prospective in nature, the analysts do not expect this action to have a substantial impact at the community level.

Table 3-9 shows the community of LLP ownership for the active vessels in the BSAI pot CP sector from 2009 through 2020. The table indicates that active vessels are related to LLPs with ownership in Seattle, WA and Anchorage, AK. Data from NMFS Alaska Region Restricted Access Management division (RAM) shows that in 2020 the BSAI cod-endorsed CP LLPs that were not utilized in the sector are owned by residents of Seattle, WA, Kodiak, AK, and Wasilla, AK. Those three communities are also the communities associated with LLP ownership of licenses that could lose their Pacific cod endorsement under Alternative 2.

Table 3-9 CPs in the BSAI limited access Pacific cod pot fishery by community of vessel ownership address (number of vessels), 2009 through 2020

| Geography | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Annual | Annual | Total |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|-----------|-----------|
| | | | | | | | | | | | | | Average | Average | Unique |
| | | | | | | | | | | | | | 2009-2018 | 2009-2018 | 2009-2018 |
| | | | | | | | | | | | | | (number) | (percent) | (number) |
| Anchorage | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 14.29% | 1 |
| Seattle MSA | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3.5 | 85.71% | 5 |
| Grand Total | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 4.1 | 100.00% | 6 |

Seattle MSA includes all communities in King, Pierce, and Snohomish counties.

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT.

Table 3-10 and Table 3-11 report estimated ex-vessel values of BSAI Pacific cod pot CP activity by community of active vessel ownership address. The rationale for using estimated ex-vessel values is provided in Section 3.4.5.1. The reader may refer to Section 3.4.4 for gross first wholesale values, which are more typically reported for CPs. The ex-vessel revenue trend evident in Table 3-10 is compatible with the trend in final TAC shown in Table 3-1 and Figure 3-3. Table 3-11 puts the revenue generated by the

BSAI pot cod CP sector in the context of all other commercial fishing activities by those same CPs and all revenues from the entire set of vessels with the same community of ownership address (Seattle MSA plus Anchorage, AK). The non-CDQ Pacific cod pot CP sector accounts for less than 1% of total gross revenues for all Alaska fishing revenue attributed to the identified geographies. Though not shown due to confidentiality, the non-confidential years for CP harvest volume reported in Table 3-1 clearly imply that the same can be said for Pacific cod CDQ harvest revenue from this sector.

Table 3-10 Estimated ex-vessel revenues (2018\$) for CPs in the BSAI limited access Pacific cod pot fishery by community of vessel historic ownership address, 2009 through 2019

| Geography | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Average |
|-------------------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Seattle MSA & Anchorage | 602,478 | 1,554,929 | 1,413,047 | 1,846,318 | 2,207,061 | 2,169,050 | 4,982,440 | 3,565,162 | 3,236,559 | 1,352,900 | 1,227,896 | 2,196,167 |

Seattle MSA includes all communities in King, Pierce, and Snohomish counties.
Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT.

Table 3-11 Estimated ex-vessel gross revenue diversification for CPs in the BSAI limited access Pacific cod pot fishery by community of vessel historic ownership address, 2009 through 2019

| Geography | Annual Avg. Number of Vessels | Annual Avg. Ex-Vessel Gross Revenues from BSAI CP Pot PCod | CP Annual Avg. Total Ex-Vessel Revenues from all Area, Gear, and Species Fisheries | CP Ex-Vessel Gross Revenue from BSAI Open Access Pot PCod as % of Total Ex Vessel Gross Revenue, Annual Avg. | Total Community Ex-Vessel Gross Revenue, Annual Avg. | CP Ex-Vessel Gross Revenue from BSAI Open Access Pot PCod as % of Total Community Gross Revenue, Annual Avg. |
|-------------------------|-------------------------------|--|--|--|--|--|
| Seattle MSA & Anchorage | 3.9 | 2,196,167 | 11,163,687 | 19.7% | 682,398,021 | 0.3% |

Seattle MSA includes all communities in King, Pierce, and Snohomish counties.
Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT.

Table 3-12 shows the location and number of port calls made by BSAI pot CPs when transferring product, from 2010 through 2020. Port calls for product transfer can be a proxy indicator for where vessels interact with a community other than the location of vessel or license ownership residence. Port call interactions could include direct economic impacts such as the transfer of product for shipment, purchasing of fuel and provisions, immediate repairs, and crew changeovers. A commonly used port might also be a location where crew are stationed for extended periods if there are gaps in a vessel’s operational plan due to short seasons or otherwise unforeseeable reasons to leave the fishing grounds. Port calls are recorded by observers so the number and location of occurrences should be reliable for a fishery such as this one that carries observers almost at all times (the exception being in a very few cases where a CP fell below a threshold of average weekly production in a previous year and was temporarily not required to be placed in the full coverage category). Port call information is gleaned from Product Transfer Reports (PTR) that are generated when a CP offloads finished product and are provided to NOAA OLE. PTRs record the shipper/receiver, the location of the transfer, species codes, product codes, and weight transferred. The analysts are not able to use offload weight data due to concerns about the quality and consistency of reported units of measurement. Since 2010, Unalaska/Dutch Harbor, AK makes up the vast majority of port calls recorded for the BSAI pot CP fleet. The total annual number of port calls has decreased alongside reductions in the sector’s final TAC (see Table 3-1).

Table 3-12 Location of port calls by BSAI Pacific cod pot CPs, 2010 through 2020

| Geography | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Average |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|
| Unalaska | 26 | 22 | 18 | 15 | 19 | 16 | 11 | 9 | 11 | 7 | 10 | 14.9 |
| Bellingham | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | | 2 | | 1.3 |
| Juneau | 1 | 1 | | 1 | 1 | 1 | | 1 | 2 | 1 | 1 | 0.9 |
| Kodiak | | 5 | | | | | | | | | | 0.5 |
| Total | 29 | 29 | 20 | 17 | 21 | 19 | 13 | 11 | 13 | 10 | 11 | 17.5 |

Source: NMFS Alaska Region Product Transfer Report, data compiled by AKFIN.

The analysts do not presume that PTRs capture all interactions between CPs and Alaska communities. It is likely that vessels involved in the pot CP sector come into ports that are not listed in Table 3-12 for occasional or unforeseen reasons unrelated to product transfer, like the need for immediate, small-scale maintenance (e.g., part replacement). One such report was of a pot CP vessel in St. Paul, AK during the 2018 B season (personal communication from NMFS staff). Port calls that are not captured in PTR data could be partially captured through observer logs; that would also be subject to gaps in observer coverage or observer reporting and is not reported quantitatively in this document. The analysts presume that most of the in-port economic activity generated by this fleet is centered in the places where product transfer occurs – namely, Unalaska/Dutch Harbor, AK.

Finally, AKFIN provided ADFG/CFEC Fish Ticket data on the self-reported homeports of the five vessels that have been active in the most recently analyzed years. Four vessels listed their homeport as Seattle MSA and one vessel listed Juneau, AK. Homeport is not relied upon as a primary indicator of where the economic activity generated by a CP vessel is most likely to flow.

3.4.6.1. Community Profiles

The Council and the Alaska Fisheries Science Center (AFSC) have compiled and published extensive profiles of Alaska fishing communities; those are incorporated here by reference. The primary communities identified in this section for potential impact are Anchorage, AK (community of LLP and vessel ownership), Wasilla, AK (community of LLP ownership), Kodiak, AK (community of LLP ownership), Unalaska/Dutch Harbor, AK (community of port calls, vessel service, product transfer, and crew transfer), and the Seattle MSA (community of LLP and vessel ownership, and homeport). Data to identify other directly or indirectly impacted communities, such as crew residence, are not available for this fishery. The analysts cannot identify the residence of future LLP license owners if the licenses that are currently inactive in this fishery were to be transferred in the future.

AFSC has compiled profiles of 196 Alaska fishing communities. Those profiles can be viewed at: <https://www.fisheries.noaa.gov/resource/document/alaska-fishing-community-profiles-north-pacific-fisheries>. An interactive portal the navigates readers to Alaska community snapshots and profiles that are updated periodically can be viewed at: <https://archive.fisheries.noaa.gov/afsc/REFM/Socioeconomics/Projects/communitysnapshots/fullmap.php>

The Council published *Fishing Communities of Alaska Engaged in Federally Managed Fisheries* in May 2016 and is working toward an update. That publication can be viewed at: <https://npfmc.legistar.com/View.ashx?M=F&ID=4472388&GUID=9A7B5279-6583-4BEC-BA28-2FB45B4EB9C0>.

NOAA’s most recent publication of the *Fisheries Economics of the United States Report* covers the year 2016.²⁸ This periodic publication routinely identifies Unalaska as one of the highest volume and highest

²⁸ National Marine Fisheries Service. 2018. Fisheries Economics of the United States, 2016. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-187, 243 p. Available at: <https://www.fisheries.noaa.gov/resource/document/fisheries-economics-united-states-report-2016>.

value grossing ports in the nation. As is evident from the comparison in Table 3-11 of revenues from this fishery to total revenues in a geography that is similarly high-value in terms of vessel ownership, the Pacific cod pot CP fleet would account for a small proportion of the gross fishery revenues in Unalaska.

The community profiles referenced above do not cover the Seattle MSA, but that region and its connections to the BSAI groundfish fishery are well documented in previous Council analyses. Most recently, the Council completed a draft Social Impact Assessment (SIA) for an ongoing action to link halibut bycatch limits to halibut abundance. That document is available on the Council's October 2019 agenda²⁹. The following is excerpted from Section 6.6 of that SIA document:

The Seattle MSA, with a population of over 3.4 million persons in 2010, is at once the community most substantially engaged in many of the important North Pacific fisheries in general and the BSAI groundfish fishery in particular (as measured by absolute participation numbers of vessels and crew, as well as volume and value of landings from those vessels). Conversely, this area is among the least substantially dependent of the engaged communities on those fisheries based on the relative number of fishing jobs and economic value of those fisheries when compared to the size of the overall Seattle metropolitan labor pool and the scale, diversity, and resilience of its economy. For many of the fisheries off Alaska, especially the industrial-scale fisheries such as the BSAI groundfish fishery, it could be stated, paradoxically perhaps, that the major BSAI fisheries in their present configurations are more dependent upon Seattle than Seattle is dependent upon the fisheries. Regardless, a central part of Seattle's identity has always been as a fishing community, and there are still distinct areas within the Seattle MSA where concentrations of businesses and infrastructure are focused on the area's large and wide-ranging fleet and the support of that fleet and of the fishing industry in general. From an outside perspective, the Seattle fleet(s) and support operations might be considered components of interest-based rather than place-based communities; from the Seattle perspective, however, Seattle has been and remains a place-based North Pacific fishing community.

Additionally, the Seattle MSA [...] has extensive fishery support services available, including some types or scale of services unavailable anywhere in Alaska. The region is an important supplier of logistical services to the fleet, including corporate headquarters support, shipyard services, other repairs and maintenance, and supplies, as well as other services support, including the provision of financial, legal, and other services; marketing; and product shipment and storage.³⁰

3.4.7. Safety Considerations

The purpose and need statement for this action (Section 1.1) specifically recognizes the Council's concern that reduced season length in the context of a competitive limited access fishery might increase the likelihood that vessels fish in poor conditions that do not minimize the safety of human life at sea. As shown in Figure 3-2, the number of days in the BSAI pot CP sector A season has been declining since 2015, reaching a low point in 2020 (12 days); the length of the B season also reached a low of 12 days in 2020. No data are available to investigate whether vessels have ceased fishing or chose not to begin fishing during poor weather while other vessels made a different choice, but the risk of forgone revenues and crew payment in a competitive fishery seem apparent. These implications are further discussed in Section 3.6.

²⁹ Agenda Item C1, <https://meetings.npfmc.org/CommentReview/DownloadFile?p=aff6e222-aa5f-4a73-bbd0-bf972591d450.pdf&fileName=C1%20Halibut%20ABM%20Draft%20Social%20Impact%20Assessment.pdf>

³⁰ The SIA authors cite as reference for this section:

National Oceanic and Atmospheric Administration (NOAA). 2014. "Steller Sea Lion Protection Measures for Groundfish Fisheries in the Bering Sea and Aleutian Islands Management Area Environmental Impact Statement." Juneau: NOAA Alaska Region Office.

After consulting with NMFS inseason managers, the analysts conclude that safety considerations related to this action are limited to season length. There are no imminent concerns about gear conflict or collocation of fishing areas between pot CPs and vessels using trawl gear in the same time and area. The analysts consulted spatial fishery data, but that information cannot be displayed in this report due to confidentiality restrictions. The shortening of the pot CP fishery in recent years does not have the effect of causing pot vessels to deploy gear when and where trawl vessels are fishing.

3.5. Analysis of Impacts: Alternative 1 – No Action

E.O. 12866 calls for the Council to consider “the alternative of not regulating,” or taking no action. Because the action alternative (Alternative 2) is framed simply as a removal of access privileges that currently exist, the No Action alternative reads as a true “status quo” alternative in terms of access. In terms of effect, however, taking no action does not necessarily promise status quo outcomes in the future with regard to how the BSAI Pacific cod pot CP sector will be prosecuted and the net benefits that it will provide to active participants. As noted in the purpose and need for this action, the sector has recently undergone a reduction in harvest opportunity (final TAC; Table 3-1) due to several factors: reduced BS and AI Pacific cod stock abundance (Figure 3-1), an increased proportion of the BS and AI ABC being allocated to GHF fisheries (Section 3.4.1.2), and fewer metric tons of inseason reallocations (rollovers) from other Pacific cod sectors (Table 3-1; Figure 3-3 and Figure 3-4). The Council also noted in its purpose and need statement that low crab TACs might incentivize vessels with endorsed LLPs to consider entering this fishery. The general downward trend in annual crab TACs can be viewed on the NMFS Alaska Region website.³¹

All of this contextual fishery information underscores the fact that the BSAI pot CP sector is in a different state than it was when the Council chose to allocate it 1.5% of the annual BSAI Pacific cod TAC under Amendment 85. Generally only two vessels were operating in the sector from 2002 through 2005 when Amendment 85 was under consideration; that amount of participation was down from five to seven vessels participating during the cod-endorsement qualifying years of 1995 through 1998 (Table 3-4 and Figure 3-5). Since Amendment 85 was recommended by the Council in 2006 and implemented in 2008, participation in the fishery rebounded to a three to five vessel fleet size.

With a diminishing harvest opportunity and potential for new entry as a backdrop, the status quo situation with regard to access – i.e., latent licenses that could enter a competitive fishery – might contribute to or exacerbate ongoing changes in outcomes for historical participants. The sector’s low placement on the hierarchy, or chain, of inseason TAC rollovers could leave the historical participants in the sector particularly exposed to marginal reductions in catch availability resulting from new entrants. This section weighs that situation against the effects of this action on entities holding latent pot cod-endorsed LLP licenses that might enter the fishery to seek a beneficial opportunity in the context of their own current situation.

The remainder of this section is separated into summaries of likely impacts on two groups of LLP license owners: those holding licenses that would (or could) lose the Pacific cod endorsement under Alternative 2 and those that would certainly retain the endorsement under any selection from the alternative set. Potential impacts on the vessels and crew associated with those licenses are incorporated as appropriate.

³¹ Available under “FMP crab OFL/ABC/TAC from 1960-present in metric tons” at: <https://www.fisheries.noaa.gov/alaska/sustainable-fisheries/bering-sea-and-aleutian-islands-bsai-crab-fisheries>, or directly via: <https://www.fisheries.noaa.gov/webdam/download/99960246>.

3.5.1. Effects on Latent LLP License Holders

For the owners of LLP licenses that could lose the cod endorsement under Alternative 2 – and the vessel operators associated with those licenses – selecting No Action is a straight-forward benefit. Alternative 1 maintains a potential harvest opportunity for the current license owners or any entity that might acquire the license in the future. That opportunity might be important to these license holders if the fisheries in which they currently participate decline in volume and/or value. As noted in Section 3.4.2.1, a license with a Pacific cod endorsement is also a more valuable asset on the LLP transfer market. The fact that the benefit provided to this set of stakeholders by this alternative is an “opportunity” begs the question of how valuable that opportunity is and under what circumstances it might be taken.

As noted above, the current state of the BSAI pot cod CP fishery presents somewhat of a diminished opportunity relative to years of higher final TACs. Granting that further new entry under current conditions is not probable, a latent LLP license might choose to enter the fishery under one of two circumstances: (1) the BSAI Pacific cod stock increases at some point in the future, or (2) an individual deems their own opportunity cost for choosing to participate in the pot CP sector to be sufficiently low.

The first case is simple – a larger cod stock would lead to higher initial sector TACs and an increased likelihood of inseason rollovers from other sectors (the BSAI Pacific cod ABC trend since 2003 is shown in Figure 3-1). Higher initial and final TAC would create room in the fishery that could be exploited. The analysts cannot predict whether this will occur, nor when it might occur. Given that the sector’s initial TAC peaked in 2012 and participation did not move above five vessels in that year, it is reasonable to assume that a TAC-based inducement for new entry would require a significant change in stock status that is not likely to occur in the near future.

The opportunity cost case for new entry is more likely to occur, in the analysts’ view. Opportunity cost is the value that an individual forgoes when choosing to do one thing instead of another. For example, if participating in the pot CP fishery means that a vessel cannot participate in another fishery (or can participate less) then the cost of entering the pot fishery is the value that was not achieved in the other fishery. The opportunity cost of entering the pot fishery could be low if the value of other fishing opportunities is suppressed (low prices, low TACs, etc.) or if the other fishery can be accessed in a way that does not preclude or conflict with the pot fishery. Given present circumstances, the analysts would not expect that relative product prices and TACs would drive entry into the pot CP sector. Rather, vessels that might deploy a latent LLP license in the sector would be those whose other fisheries are rationalized (e.g., Bering Sea crab) or can be prosecuted outside of the current pot cod seasons.

A crab vessel with a CP pot cod-endorsed LLP license might consider entry into the pot CP sector if crab TACs are diminished to an extent that the vessel needs supplementary income to meet its business objectives or to keep crew fully employed. In recent years, the pot CP sector’s B season takes place entirely when BS crab fisheries are not open.

Other fisheries that are – or have been – prosecuted by vessels associated with latent pot cod CP licenses include BSAI HAL Pacific cod and halibut/sablefish IFQ (see Section 3.4.5.1). The halibut/sablefish IFQ fishery does not overlap the pot cod fishery in timing. The BSAI HAL Pacific cod CP fishery operates nearly year-round and is managed under a voluntary cooperative agreement that provides vessels unique flexibility in when they fish. While the analysts do not have access to information on the business arrangements that take place within the HAL CP sector, it is possible that vessels sharing a common business affiliation could arrange for one vessel to fish another’s HAL cooperative quota so that it could participate in other fisheries. The only limits on the benefit of such an arrangement would be the need to possess a pot-endorsed LLP and the expected value of participating in a short, competitive, TAC-limited pot fishery.

3.5.2. Effects on Historically Active LLP License Holders

This subsection describes operational challenges in the pot CP sector that have emerged in recent years as available harvest amounts declined. These are status quo issues that are not directly alleviated by the action alternative but are described here because they are the basis of the Council's purpose and need for considering this action. These challenges would likely persist under the No Action alternative and might be exacerbated if additional vessels enter the fishery regardless of whether TAC levels remain steady or continue to decline.

Many of the recent changes in the operation of the pot CP sector stem from reduced season length as lower TAC levels are harvested quickly upon the opening of two competitive seasons. In 2018 the A and B seasons each lasted 20 days; in 2019 they each lasted 15 days; and in 2020 the A season lasted only 12 days (Table 3-2). In all cases the fishery commenced on the season opening dates (January 1 or September 1). The B season no longer extends to the start of the A season, as it did from 2012 through 2015 and in 2017. Moreover, the B season is not reaching the opening date for most Bering Sea crab fisheries (October 15), as it did in 2011 and 2016.

The simple cost of shortened seasons with low TACs is less gross revenue with which to cover operating costs, fixed costs (i.e. costs that exist regardless of how much a vessel fishes, like debt service and insurance), crew compensation, and profit returns for the owners. Reduced revenues have – or could – incentivize pot CPs to increase their participation in other fisheries to make up the shortfall. For example, one operator reported putting their vessel back into the snow crab fishery for the first time in several years because the pot cod A season did not yield enough revenue. An operator also reported investing in refrigerated seawater systems so that it could tender salmon.

Short seasons have also altered operational plans in ways that create direct costs and reduce efficiency. Several active pot CPs seek to link fisheries together on the calendar, keeping their crews employed and avoiding down-time when costs accrue without offsetting revenues. The red king crab fishery that opens on October 15 is chief among the other fisheries that fit into pot cod vessels' annual plans. The ability to link the B season and the A season across the calendar New Year is also efficient for the vessel and its crew.

Gaps between seasons confront vessels with additional costs in terms of crew management. A vessel might be choosing between paying for crew to layover in Unalaska for a matter of weeks or booking travel away from the fishery and then back for the next season. One vessel operator reported to the analysts that in a recent year they sent home part of the crew after the pot cod B season and elected to fish crab after the down-time with a smaller crew operating as a catcher vessel, which was less profitable and resulted in lost employment opportunities for those who did not return. Gaps in the fishing year increase the amount of time crew spend away from home. Not only is that down-time uncompensated, it is correlated with a fishery that yields less wage income. Crew income is reduced both because the vessel brings in less revenue to be distributed as shares and because fixed vessel costs take up a larger proportion of gross revenue before the remainder is divided for wages. Taken together, these factors could make it difficult for vessel operators to attract and retain experienced crew members who are essential for efficient and safe operation.

As the pot cod seasons become shorter with lower TACs, it is possible that a vessel could make its entire season's effort on one trip. Without the need to offload finished product for transfer and return to fishing quickly, vessels might be able to target different areas that are farther from the typical transfer point in Unalaska/Dutch Harbor. Vessels vary in their capacity so it is not possible to analyze and predict at what level this would become possible. The analysts do not have any insight into where vessels might prefer to fish but are currently unable to reach since spatial data (not shown due to confidentiality) only reflect past season. There is no reason to presume that vessels would fish farther north, but the possibility of the

fishery moving north would bring it closer to the stock boundary areas for blue king crab species that are in overfished status (recent historical crab bycatch by species is reported in Table 3-7).³²

Holding TAC levels constant, the extent to which historically active participants are affected by shorter seasons and reduced revenues under Alternative 1 would be dictated by how many latent permits (vessels) enter the fishery and how much of the available harvest those new vessels absorb. Each new entrant would diminish the expected revenue of current participants by an amount that would vary depending on the new entrant's capacity. The impact of reduced expected harvest would not be uniform across current participants since those vessels vary in their own catch capacity and reliance on the pot cod fishery as part of their total business portfolio. The revenue dependency of the historical participants is described in broad terms (due to confidentiality) in Section 3.4.5.1. While three of four CPs typically generate less than half of their total annual revenue in the pot fishery, the analysts cannot conclude that pot cod revenues are not integral to total revenue objectives and retaining a capable crew throughout the entirety of their fishing year. These vessels differ in their access to other fisheries (see Section 3.4.2 describing endorsements). Of particular note in that regard are rationalized quotas for crab and halibut/sablefish, as well as the relationships with CDQ groups that might be necessary to lease additional harvest opportunities. There is no guarantee that CDQ or IFQ fishery quotas would be available for lease. For CDQ Pacific cod, which can be fished by a variety of gear sectors, these vessels could be competing with trawl vessels and large HAL CPs for the opportunity to harvest CDQ fish. Aside from relationships with potential lessors, vessels might also have different levels of access to additional quota based on their financial situation and the lease fee percentage that they are able to accommodate. Vessels that lease quotas to compensate for reduced opportunities in the pot cod fishery would generate less revenue from that fishing after accounting for lease fees. Moreover, quota fees are often deducted from gross revenues before shares are calculated, meaning that crew members would see less return from that work.

The amount by which season length and available harvest-per-vessel would decline with the entry of an additional vessel would vary based on several factors and can only be described in broad terms based on the analysts' suppositions about the nature of the new vessel. The most important factors are the vessel's harvest rate (mt per year) and distribution of effort across the A and B seasons. During the recent low-TAC years, both the average and median vessel harvest rates were around 800 to 900 mt per year.³³ Harvesting 800 mt in a recent year equates to a weekly harvest rate of around 200 mt (2 week A season; 2 week B season). Using 2020 as an example (setting aside CDQ fish), an "average" new entrant would bring roughly 200 mt/week of capacity into a fishery that already has four or five vessels targeting an initial TAC of 2,074 mt (1,058 mt A season; 1,016 mt B season). If it were assumed that all vessels in the fishery share the same "average" weekly capacity, one could imagine that a seasonal TAC of roughly 1,000 mt could be taken by six vessels in a week. In actuality, the 2020 A season TAC was taken by five vessels in 12 days.³⁴ (Another possible reason that the TAC did not go faster is that vessels did not operate at peak capacity; some participants noted that they did not use a full crew complement because the small size of the TAC and expected revenues was not enough to pay sufficient shares to a full crew.) More important than estimating the true minimum time in which a fleet of a certain size could fish the current TAC is the acknowledgement that the fishery is well over the necessary amount of capacity. Even a relatively large percentage share of the current seasonal TAC equates to an amount that is far below what individual historical participants have been able to harvest in the past.

One must also note that not all vessels bring the same capacity or effort to the sector. Dating back to 2006, on average, the top producing CP in the fishery during a given year caught roughly 1.7-times the

³² NMFS Inseason managers note that two pot CPs have fished in the St. Matthews Blue King Crab stock area in recent years during the B season. (SMBKC areas are shown in Figure 3-8.)

³³ Based on four or five vessels harvesting the pot CP sector's initial TAC, any rollovers, and CDQ fish.

³⁴ The availability of CDQ fish for harvest by some of the CPs active in this sector would not affect the length of the limited access season. Vessels that are able to lease CDQ Pacific cod fish that quota after the limited access season is complete, otherwise they would be losing out on the opportunity to harvest pounds that are competitive.

volume of the “average vessel”; that ratio has been as high as 2.6-times the average vessel. During the recent low-TAC years the ratio of “top” to “average” varied between 1.5x and 2.2x. Since 2006, on average, the lowest producing CP in the fishery caught 0.35x the average vessel’s volume; that ratio has ranged from 0.95x to 0.02x. During the recent low-TAC years the ratio of “lowest” to “average” varied between 0.26x and 0.02x. It is obvious to state that the entry of a low-volume vessel would have less of an effect on historical participants. Given current conditions, however, vessels are materially impacted – to varying individual degrees – by any marginal reduction in available harvest.

3.6. Analysis of Impacts: Alternative 2 – Remove Latent Pacific Cod Endorsements

This section evaluates the possible impacts of Alternative 2 using the No Action alternative as a baseline for comparison, and focusing on the issues highlighted in the purpose and need statement (Section 1.1). Alternative 2 includes two options that define the relevant historical period for qualifying catch and two suboptions that specify how many years of participation are needed to meet the minimum catch threshold. Figure 2-1 in Section 2.2 shows the analysts’ conclusions on how many LLP licenses would or would not retain the BSAI Pacific cod endorsement under each option. That section demonstrated that the selection of either suboption – or no suboption – does not alter the outcome of that analysis. For that reason, the suboptions are not addressed in this section.

Option 1 allows for more historical years over which a vessel could meet the minimum catch threshold of 1,000 mt of Pacific cod directed harvest (2005 through 2019). Option 1 would allow five of eight LLP licenses to retain the Pacific cod endorsement. Option 2 allows fewer years to meet the threshold (2012 through 2019). Option 2 would allow four of eight LLP licenses to retain the endorsement. Because the distinction between the two options is clear and simple, the discussion points in this section are not broken out by each option as they often are in RIR documents. Similar to the analysis of Alternative 1, the discussion in this section is organized by groups of LLP licenses (latent licenses and historically active licenses as defined by catch data since 2005). Additional subsections on bycatch considerations and community impacts are included.

As described under Alternative 1, the action alternative presents a trade-off between future opportunity for latent or prospective LLP holders and stability and efficiency for participants with recent dependence on the fishery. The action alternative is considered in the present context of the fishery, which is different from the period during which Amendment 67 was considered and implemented by the Council (final action in April 2000; rule became effective in May 2002). During the years leading up to Amendment 67, the pot CP fishery was prosecuted by five to seven vessels (Figure 3-5) but there was a significant amount of latent effort that could have entered the fishery based on how the LLP was defined by Amendments 39 and 60 (see Section 1.2). The Pacific cod stock and cod prices were relatively attractive at a time when some crab stocks were declining, so the cod fishery seemed likely to draw increased participation. Presently, there is a much smaller amount of latent effort but the Pacific cod stock is trending negatively and the pot CP sector, in particular, is experiencing record-low harvest availability (TAC plus rollovers; Figure 3-3). In summary, Amendment 67 was conceived in a time when the threat of latent effort was best characterized by volume (many vessels potentially entering a healthy fishery); this action is being considered in a fishery context where the volume of latent effort is low but the marginal impact of any additional effort might be acutely felt by current participants.

3.6.1. Effects on Latent LLP License Holders

Selecting Alternative 2 would have an unambiguously negative effect on the owners of LLP licenses that lose the Pacific cod endorsement. Figure 3-5 shows that the latent licenses have not been utilized in the BSAI pot CP sector (CDQ or non-CDQ) since 2012 or before. Given that, the appropriate way to

characterize the negative effect is as a lost opportunity rather than a direct reduction to an entity's current fishery participation and revenue generation. Vessels associated with LLP licenses that lose the Pacific cod endorsement would not be able to enter the Federal limited access fishery, nor would they be able to harvest Pacific cod CDQ (see Section 2.1).

Section 3.4.2 describes the fisheries in which the latent LLP license would still be allowed to participate subsequent to the removal of the pot cod endorsement under Alternative 2. Three of four licenses in this group would retain a BS nontrawl endorsement and two would retain an AI nontrawl endorsement. Two latent licenses would retain nontrawl endorsements for the GOA. However, since nontrawl fishing is largely focused on Pacific cod, the remaining cod endorsements are a better gauge of potential access to non-crab species. One of the four latent LLP licenses does not have any cod endorsement aside from the BSAI pot CP fishery; one license can fish pot cod as a CP in the GOA; one license can fish HAL cod in the BSAI; and one license can fish HAL cod in both the BSAI and the GOA. The current set of CP vessels associated with latent licenses would likely continue to participate in the fisheries identified in Section 3.4.5.1: Bering Sea crab, BSAI HAL Pacific cod, and halibut/sablefish IFQ.

Access to the state-managed GHL fisheries in the BS or AI does not require a cod-endorsed LLP license. Alternative 2 would not prevent the owners of latent licenses or the vessels to which they are assigned from participating in those fisheries.³⁵ It is not likely that operators who lose their cod endorsements under this alternative would make a substantial, concerted entry into the GHL fishery. The vessels currently associated with latent licenses have little or no history of reliance on BSAI Pacific cod pot fishing. Each of those vessels exceeds the maximum LOA permitted to participate in the BS GHL fishery. The vessel length limit for the AI GHL fishery is a disqualifier for three of the four vessels currently associated with potentially latent pot CP LLP licenses. While the future transfer of licenses to smaller vessels cannot be predicted, the analysts do not foresee the AI GHL fishery as a "spillover fishery" based on the recent history of CPs' desire to access that fishery and the relative attractiveness of cod fishing given the current stock trend (see Figure 3-1 and Table 3-1).

Removing the Pacific cod endorsement from these licenses would certainly reduce their potential value on the LLP license transfer market. Endorsements are not severable from the license so their marginal market value cannot be priced empirically. The analysts do not attempt to place a specific dollar value on a BSAI Pacific cod pot CP endorsement since the primary drivers of LLP license value appear to be catch history and maximum LOA endorsement (see Section 3.4.2.1).

3.6.2. Effects on Historically Active LLP License Holders

Depending on the option selected to define qualifying catch history years, either four or five of the eight LLP licenses with a Pacific cod endorsement would retain access to the fishery. The owners of those licenses as well as the vessels and crew prosecuting the pot CP fishery would benefit from Alternative 2 in several ways. The benefits generally break down into two categories: stability and operational efficiency.

Section 3.4 describes the current state of the BSAI pot CP fishery and the challenges that it has faced in recent years. The sector is currently operating in an environment of reduced harvest opportunity (TAC) and season length. Alternative 2 potentially benefits the active licenses/vessels by forestalling additional participation, which maintains the current state of the fishery. Maintaining the current state does not *create* operational stability but it does provide a benefit in terms of the dimensions that contribute to stability relative to No Action. The primary dimensions are the pace and the timing of the fishery. The benefits of Alternative 2 are limited in that it would not lengthen the season or increase aggregate harvest opportunity relative to No Action.

³⁵ BS and AI GHL fishery management is described in Section 3.4.1.2.

Owners of historically active licenses that would retain the cod endorsement have testified to the Council that they hope to use the relative stability provided by the alternative to address operational inefficiencies by voluntarily managing their sector in a cooperative fashion. Through cooperation, participants might recover some of the net operating margins that have been lost to lower gross revenues and additional costs experienced in recent years (i.e., 2018 through present, as illustrated in Section 3.4). Cooperative planning would not necessarily assure that the sector increases gross or net revenues but, relative to No Action, the analysts think it likely to stem the losses that have occurred due to operational inefficiencies in how this low-TAC, competitive fishery is being prosecuted. The active participants suggest that precluding new entry via a latent license reduction is a necessary condition for cooperative action. The analysts find this suggestion to be supported by experiences in other limited access fisheries (e.g., GOA trawl CVs), as described below.

Short seasons create costly inefficiencies when vessels are not able to link the timing of Pacific cod fishing with other activities. For example, several of the active pot CPs have historically planned to prosecute the race for B season cod starting on September 1 and then move into the rationalized crab fishery some time after it opens on October 15. Ideally, cod and crab could keep a vessel operating steadily with a full crew until the new year when the Pacific cod A season begins, allowing that group of vessels to have a consistent fishery from September or October through opilio crab fishing in February or March. The dramatically shortened cod seasons (see Table 3-2) create time gaps between cod and crab, causing vessel operators eligible to fish crab to either house crew onshore for weeks while producing no revenue and earning no wages, or purchase extra rounds of airfare to and from high-cost operating ports like Unalaska. The cost of this gap could cause vessel operators to lay off crew after a cod season. One operator noted that they had chosen to prosecute the fall crab fishery as a CV with a smaller crew because the cost of retaining or transporting additional labor was too high; this was a less profitable mode for the vessel and a lost employment opportunity for crew that were not retained (personal communication, February 2020). Crew members who weather the potential gaps between B season cod, crab, and A season cod experience periods with expenses but no income, and thus may be harder to retain as employees. Individuals might choose to seek crew positions in other fisheries or work outside of the fishing industry, meaning that vessel operators lose the experienced labor that makes the sector work efficiently and safely.

The objective of a voluntary cooperative would likely be to afford individual pot CPs some flexibility in when to prosecute the fishery, thus eliminating or minimizing time gaps to a degree. The method by which this is achieved, like the creation and internal administration of a cooperative itself, is outside the Council's purview. Possible strategies to achieve flexibility in fishing effort include agreed upon start dates that might differ from the January 1 and September 1 "hard starts" (after which the sector would still operate as a competitive race), or voluntary catch sharing agreements. A catch sharing agreement could allow a vessel to start its B season activity later without losing potential harvest to vessels that start earlier because they are balancing a different portfolio of fisheries in their business plan (i.e., different opportunity costs of fishing). A vessel might want to fish cod closer to the October 15 crab opener or in mid-December so that cod fishing could run somewhat continuously from the B season to the next year's A season. By contrast, a vessel that is wrapping up halibut/sablefish IFQ prior to the cod B season and has no interest in the fall crab fishery – or any vessel that has control over the timing of its other fisheries – might continue to prefer a September 1 cod opener or be indifferent.

Voluntary catch sharing agreements exist in other Alaska Federal fishing sectors. One close model is the HAL CP sector's Freezer Longline Coalition, which has formalized internal agreements that are consistent from one year to the next.³⁶ Ad hoc catch sharing agreements sometimes emerge in the GOA trawl CV sector when vessels need to work with each other and NMFS inseason managers to keep a fishery open while ensuring that TAC or PSC limits are not exceeded, and attempt to do so in a

³⁶ www.freezerlonglinercoalition.com

reasonably equitable manner. Ad hoc cooperation agreements can be costly to arrange in terms of time and idle physical or human capital. Most importantly, they can be tenuous – vulnerable to participants who hold out or break the agreement. Entities that are less likely to join or abide by an agreement often include those with less to gain individually by maintaining historical fishing patterns or – as the case may be – adapting those patterns. Vessels entering this sector using latent licenses are likely to fit that description. Should a voluntary cooperative emerge and independently choose to allocate harvest opportunities based on past participation, new entrants and historical participants could face difficulty in reaching harvest agreements. If a voluntary cooperative focuses on a mutually delayed start date (no catch sharing agreement), a hold-out or defector who begins fishing on the regulatory season opening date would likely cause all vessels to abandon their business plans and begin fishing immediately. Also, if latent licenses could still enter the fishery then members of a voluntary cooperative might have to choose between granting the new participant something of value from the agreement (e.g., a portion of agreed upon catch shares) or seeing the cooperative collapse and the fishery return to a derby with start dates that are fixed by regulation.

The analysts cannot identify other proactive measures that active fishery participants could reasonably take to insulate themselves against additional competition through entry. The latent LLP licenses could theoretically be purchased but the financial cost – estimated within a range in Section 3.4.2.1 – is likely prohibitive, especially in the current revenue environment. Moreover, the licenses that are considered latent in terms of the Pacific cod pot fishery are generating value for their current owners in other fisheries (see Section 3.4.5.1) so there is little chance that they would all be put forward for sale. Presuming that the sector is currently at maximum participation capacity – given the harvest availability – a purchase strategy would only achieve the effect of Alternative 2 if *all* latent licenses were acquired. (The cod endorsement is not severable from the license and cannot not be purchased separately.)

If Alternative 2 has the effect of slowing down fishing by facilitating a voluntary cooperative model, the analysts would still not predict the action to create a spillover of effort into the BS or AI Pacific cod GHL fisheries. Only one of the active cod licenses is assigned to a vessel that would meet the length restrictions to participate in the state-managed fishery, and that vessel could only participate in the AI state fishery. Under the present condition of a short Federal pot CP season, the GHL fishery occurs after the Federal fishery is concluded so slowing the pace of the fishery or cooperatively sharing the available TAC does not allow a vessel to jump between a Federal and a state-managed fishery. The vessels in the pot CP sector have not historically demonstrated a desire to fish the AI GHL after the Federal fishery closes. Given the low volume of opportunity, this action should not directly alter those decisions.

Alternative 2 could have a positive impact on vessel safety *if* the action results in vessels having more choice over when to fish and less incentive to engage in a derby-style fishery where the timing of fishing is fixed to certain calendar dates (i.e., openers). This would be an indirect outcome and likely contingent on agreements between participating vessels that are outside of the Council’s direct influence. At present, vessels have a strong incentive to begin fishing on January 1 and September 1 regardless of weather conditions. If conditions during a limited access season become less safe, vessels working under a cooperative structure could delay fishing or stand-down mid-season without sacrificing potential catch to vessels that choose to stay on the fishing grounds. A cooperative agreement would not completely eliminate time-pressures since TACs must be taken before the season’s end date, but vessels would have marginally more flexibility relative to Alternative 1. For example, if a vessel planned to fish a “combined” B/A season that begins in December and spans the new year, the vessel would still need to fish a certain amount of its intended harvest before December 31 regardless of weather as the calendar year draws to its end.

3.6.3. Bycatch Considerations

The Council’s purpose and need statement specifically notes the objective of maintaining consistently low rates of halibut and crab bycatch. Section 3.4.3 reports the BSAI Pacific cod pot CP sector’s halibut and crab PSC catch from 1998 through 2020 (A season).³⁷ Historical halibut mortality and crab bycatch (Table 3-7) reflect that the volume of bycatch is highly variable by year and not correlated to the number of active vessels in the fishery. Annual variability in crab bycatch suggests that encounter rates are a function of fishery timing and collocation of crab and Pacific cod, which are largely external environmental conditions. The current race-based nature of the pot CP sector limits vessels’ bycatch response options.

Alternative 2 is most likely to influence bycatch outcomes insofar as it affects the pace of the fishery relative to the status quo. The action alternative would not necessarily reduce the number of active vessels but would eliminate the possibility that additional vessels enter the fishery and exacerbate “race for fish” conditions, all else equal. Broadly speaking, a race for fish is expected to result in worse – or at least more volatile – bycatch outcomes because vessels are sacrificing greater catch opportunity if they stop deploying gear to spend time moving away from areas where they are encountering higher bycatch rates. If the historically active vessels that retain the cod endorsement independently choose to coordinate fishing activity, as described in Section 3.6.2, participants might be able to respond to bycatch events without bearing a high internal opportunity cost.

Spatial catch data for this sector cannot be shown due to confidentiality restrictions. The analysts assessed spatial fishing patterns and observed that the vessels in the pot CP sector do not all fish in the same areas of the BS and AI. No particular region of the BSAI is clearly associated with higher levels of halibut or crab bycatch. However, different areas correlate to bycatch of certain crab species. For example, fishing farther north in the Bering Sea corresponds to greater incidence of blue king crab bycatch, which is unsurprising given that species’ defined stock boundary (see Figure 3-8). Selecting Alternative 2 would not directly influence where pot CPs fish. However, if the indirect impacts of the action slow the pace of the fishery or otherwise reduce competition between vessels, it is possible that CPs could alter their spatial fishing patterns. There is no evidence available to conclude that different spatial effort distribution would increase or decrease bycatch. As a result, the most likely connection between the action alternative and bycatch outcomes is whether vessels modify their behavior to mitigate the race to fish and avail themselves of the opportunity to move when bycatch rates are high. Even if the opportunity cost of moving is reduced, retrieving gear and spending time moving still poses operational costs. Given that halibut and crab bycatch are not limited in the sense that the sector could be closed, the extent to which vessels will choose to move off of bycatch hot spots is uncertain.

3.6.4. Community Considerations

Section 3.4.6 identified the communities in which the most direct effects of Alternative 2 are likely to occur. Regarding active LLP license and vessel ownership, those communities are the Seattle, WA MSA and Anchorage, AK. Regarding active vessel operations, the most involved communities are the Seattle MSA and Unalaska, AK. The latent licenses that could lose the cod endorsement under Alternative 2 are currently owned by entities that report residences of Kodiak, AK, Wasilla, AK, and the Seattle MSA. Impacts on crew for active or potentially active vessels are likely distributed across a variety of geographies based on residence, but data are not available to list specific communities or estimate the distribution of active crew residence. It is assumed, based on the prevalence of pot CP ownership location and homeport, that many crew members reside in or around the Seattle MSA.

³⁷ That section also reports bycatch of non-PSC FMP species (Table 3-5 and Table 3-6). Bycatch volume in the pot CP sector is relatively low; 93% of total catch from 2014-2020 (A season) was Pacific cod (~29,000 mt out of ~31,000 mt).

For the LLP licenses that would retain the Pacific cod endorsement, the action alternative is not expected to have negative impacts on the communities of LLP ownership, vessel ownership, or vessel operation. Those license-holders and their associated platforms/operations would be able to continue participation as TAC levels allow. The action would not reduce the combined level of effort in the sector (TAC utilization), though TAC itself might rise or fall due to external environmental factors. Those communities could be said to benefit by avoiding a worse outcome if selecting the action alternative means that available harvest is not spread across more operations, and if what operational efficiencies still exist for these participants are not further limited by reduced season length. On a scale relative to the total fishing activity that is associated with high-volume fishing communities such as the Seattle MSA and Unalaska, the magnitude of these benefits is small (see Section 3.4.6, Table 3-11). In other words, the potential benefits of the action are rather acute to the active participants associated with the pot CPs that retain the endorsement.

The communities associated with LLP licenses that could lose the cod endorsement would not necessarily be worse off relative to the status quo but could be adversely impacted relative to the No Action alternative (Alternative 1). Under the status quo, the communities that are linked by ownership to latent LLP licenses do not depend on, or derive direct benefits from, the BSAI pot cod CP sector; those licenses have not been deployed in the fishery since 2012 or before. However, selecting Alternative 2 eliminates a future opportunity for residents of these, or other, communities to enter the fishery. That opportunity would still exist under Alternative 1. It is not possible to characterize the potential community-level benefits that would be forgone if latent endorsements are removed because licenses are transferrable and could ultimately be utilized by an entity with a different community-impact profile – i.e., what vessel it would be deployed on, whom that vessel employs, or how and where that vessel's revenues would be spent in the economy.

Any potential entry into the fishery that becomes impossible under Alternative 2 would not likely have altered the dominance of Unalaska as the central community for port services and product transfers in this sector. With that said, the analysts note that one LLP license at risk under Alternative 2 is owned by an entity listing a Kodiak residence. It is possible that this entity would be more likely to conduct crew changeovers and provisioning in Kodiak, which could bring a small marginal increase in economic activity for that community. However, that effect would be small relative to the fishery-driven economy in Kodiak, and the future activity of a license that has not been deployed in this fishery is based only on speculation. Should the license be deployed in the BSAI pot CP fishery, it is just as likely that the license would have changed hands by that time, thus becoming associated with a different community of ownership or operation base.

This analysis does not consider possible effects on local and state tax revenues because the action alternative, itself, would not affect the amount of fish harvested or the location of product offload and transshipment. Similarly, this analysis does not include a Pacific cod "market profile" detailing the disposition of product and whether it would be entering foreign or domestic markets because this action does not directly impact that aspect of the fishery's collective business.

3.7. Management and Enforcement Considerations

This section summarizes the monitoring requirements for CPs that use pot gear in the BSAI groundfish fisheries. The section focuses on some of the current challenges with observer data collections and provides recommendations for improving the quality and timeliness of the data that are used to manage and enforce the activities of pot CPs under Alternative 2. This section is intended to inform the Council of NMFS and industry's intention to continue improving data collections in the pot CP sector. Aside from monitoring and data collection challenges, NMFS staff did not identify other issues that needed to be analyzed or brought to the Council's attention in regards to inseason management and enforcement that could occur subsequent to selecting the action alternative.

Because of the short seasons and limited number of vessels participating in the fishery, NMFS is completely reliant on timely and accurate observer data to manage the BSAI Pacific cod Pot CP sector. Since 2014, NMFS has identified a concern with the timeliness of the observer data available for this fleet. This concern is important because observer data is the sole basis on which to manage a fishery that has a relatively small allocation, short seasons, and typically only three to five vessels participating each season. These characteristics mean that if observer data are changed or deleted during the observer debriefing process after the season there could be a relatively large impact on final catch estimates. Imprecise estimates could result in a TAC overage or TAC remaining that could otherwise have been harvested.

Observers typically deploy for up to 90 days before returning for a final debriefing. Observer data are evaluated during the debriefing process to ensure that the information used for fisheries management was collected using established protocols and is accurate and complete. If it is determined that data collection protocols were not followed or the data are not reliable, the observer data may be deleted and replaced with industry reported production data to estimate total catch. Because the pot CP sector's fishing seasons have become so short, observers often do not need to swap out mid-season. As a result, there may only be one observer per vessel for the duration of each A and B season. If the data collected by one observer is deleted or changed during the debriefing process it could result in up to half of the data for a season being altered. This is a disproportionately large impact of a single change in observer data compared to other fisheries. This, along with the lag between when the data are collected and when catch estimations are finalized during debriefing further complicates the timely management of this fleet. The short duration of the seasons in this fishery also means that there may not be an opportunity for managers to do a mid-cruise data check with observers during the season.

BSAI pot CPs are among the most challenging deployments faced by observers because of the pace of fishing, the sampling workload, and the need for very close communication between the captain and the observer. NMFS strives to keep as much data as is reliable and not delete large amounts of data without exhausting every other remedy first. Nevertheless, of the 13 fishing seasons (A and B seasons) in the six years from 2014 through 2019 and the 2020 A season, NMFS has replaced all or a portion of the observer data with industry reported production data for a vessel in nine seasons. In some seasons, the observer data from more than one vessel was replaced with industry reported production data. In some cases, catch estimates were significantly affected by the data changes. On one occasion data replacement resulted in doubling the harvest estimate for one vessel.

The timeliness of observer data submission can also impact NMFS's ability to effectively manage the fishery. During the 2019 B season observer data may have been delayed because some observer data was received in the Catch Accounting System (CAS) up to five or six days after the hauls were retrieved. Observers are instructed to transmit data once per day when deployed onboard CPs using pot gear in the full coverage category.³⁸ CPs using fixed gear may qualify to be placed in the partial coverage category if their average weekly production is below 79,000 lbs. (35.8 mt). All vessels affected by this action are currently in the full coverage category because their average weekly production is higher than the threshold that would qualify for placement in the partial coverage category.

To address concerns expressed by industry and NMFS about the data sources for catch estimates in this sector, additional monitoring requirements are necessary, similar to what is used in other fisheries.

³⁸ See Figure 2-10 of the 2020 Observer Sampling Manual (AFSC 2019) (AFSC) Alaska Fisheries Science Center. 2020 Observer Sampling Manual. Fisheries Monitoring and Analysis Division, North Pacific Groundfish Observer Program. AFSC, 7600 Sand Point Way N.E., Seattle, Washington, 98115. Available at: <https://www.fisheries.noaa.gov/resource/document/north-pacific-observer-sampling-manual>.

3.7.1. Requirements for Implementing Alternative 2

To address industry and NMFS concerns about observer data quality and availability for inseason management of this sector, NMFS would require the following monitoring elements to implement Alternative 2:

- Require observers deployed on BSAI pot CPs participating in the BSAI groundfish fisheries to have a level 2 deployment endorsement
- Require BSAI pot CPs participating in the BSAI groundfish fisheries to comply with the pre-cruise meeting notification before beginning a fishing trip
- Require BSAI pot CPs participating in the BSAI groundfish fisheries to provide a certified observer sampling station and motion compensated platform scale for the observer's use

NMFS also recommends continued engagement with the fishing industry to explore other monitoring options to address NMFS and industry data needs. Additional tools could include requiring two observers to sample every haul (currently a requirement on trawl CPs), or the use of a flow scale or other at-sea scale to measure the total haul weight (currently a monitoring option for hook-and-line CPs targeting Pacific cod). These monitoring tools have provided industry with better tools to manage their catches in other sectors.

Requirements for observer coverage, observer experience level, and other monitoring and enforcement requirements such as at-sea catch weighing and electronic reporting are designed to maximize the quality of data used to estimate catch and bycatch. Estimates of discarded Pacific cod, halibut PSC, and other bycatch species are derived solely from observer data. For this reason, it is important that observer data used by NMFS for inseason management be as complete and accurate as possible.

One way to minimize the need for modifying or deleting data during the debriefing and data quality checking process is to deploy highly skilled, experienced observers, who have the requisite experience to adapt to changing sampling situations, and to successfully apply sampling techniques appropriately. Observer experience level is not the only way to measure aptitude or ability. Each observer has a unique set of skills and handles stress differently; it does not mean that less experienced observers are not capable of sampling on pot CPs. However, experience does affect the amount of data collected (the size of samples, or the number of samples) and the ability for that observer to quickly adapt to atypical situations.

Table 3-13 Summary of the benefits and costs of NMFS recommended monitoring requirements for BSAI pot CPs

| NMFS Recommendation | Benefit | Cost |
|---|---|--|
| Require Level 2 Observers | Improve observer data quality and potentially reduce data deletions during debriefing | May reduce observer provider deployment flexibility |
| Require Pre-Cruise notification | Improve observer data quality and potentially reduce data deletions during debriefing | Vessel time to notify NMFS (5 min) and to participate in pre-cruise meeting (30 min) |
| Require Observer Sampling Station | Improve observer data quality and reduce observer workload | Cost of installation and space on deck and inspection by NMFS |
| Require certified motion compensated platform (MCP) scale | Improve precision of weight estimates | Cost of purchase and maintenance, and inspection by NMFS |

3.7.2. Background Information

This section includes additional detailed information about the existing observer related monitoring requirements for CPs using pot gear in the BSAI groundfish fisheries (referred to throughout this section as pot CPs). Because the vessels affected by this action may also participate in the groundfish CDQ fisheries and the monitoring requirements may be different, those are also described here.

3.7.2.1. BSAI Pot CP Monitoring Requirements

Table 3-14 summarizes the monitoring requirements for pot CP vessels participating in the non-CDQ groundfish fisheries. Observer coverage requirements are specified in regulation at § 679.51(a)(2)(i) and (vi)(4). Additional monitoring requirements for CPs using pot gear in the groundfish CDQ fisheries are specified in regulation at § 679.32(c)(3)(i)(E).

Table 3-14 Summary of observer-related monitoring requirements for pot CPs in the groundfish fisheries of the BSAI and GOA

| | Non-CDQ Groundfish | CDQ Groundfish |
|-----------------------|---|---|
| Observer Requirements | Unless placed in the partial observer coverage category, a CP must have at least one certified observer aboard the vessel at all times. | A CP using pot gear in the groundfish CDQ fisheries must have at least one lead level 2 observer aboard the vessel. More than one observer must be aboard if the observer workload restriction would otherwise preclude sampling as required. |
| Sampling Station | Not required | Provide an observer sampling station as described at §679.28(d) |
| Pre-Cruise meeting | Not required | Pre-cruise meeting: Notify the Observer Program when the vessel will be carrying an observer who has not previously been deployed on that vessel within the last 12 months |

In 2018, NMFS modified requirements applicable to observers for obtaining a nontrawl lead level 2 (LL2) observer deployment endorsements and implemented a pre-cruise meeting requirement for vessels required to carry a nontrawl LL2 observer (83 FR 30528, June 29, 2018). This action affected CP vessels

using nontrawl gear including CPs using hook-and-line gear to fish for Pacific cod in the BSAI and CPs using pot gear to fish for groundfish CDQ. In 2017, during the analysis of the alternatives considered for that action, the Observer Program issued a clarification memo to observer providers and NOAA OLE provided outreach to pot CPs because of compliance concerns with the nontrawl LL2 observer requirement when groundfish CDQ fishing.

NMFS has consistently required experienced observers with specific deployment endorsements for vessels participating in groundfish catch share programs because of the unique incentives to misreport catch that are created by the act of assigning quota and therefore accountability to individual entities (cooperatives or vessels). Catch share programs with additional monitoring and equipment requirements include the CDQ Program (63 FR 30381, June 4, 1998); the pollock fishery AFA Program (67 FR 79692, December 30, 2002); the Amendment 80 Program (72 FR 52668, September 14, 2007); the Central GOA Rockfish Pilot Program (71 FR 67210, November 20, 2006); and its successor the Central Gulf of Alaska Rockfish Program (76 FR 81248, December 27, 2011).

Observer deployments on vessels using single pots are particularly difficult for observers because the sampling design is based on units of fishing effort and for vessels using single pots, defining the sampling frame is particularly difficult because fishing effort is hard to define if pots are pulled out of order or in a varied way. As of 2017, the rate of data deletion for observers deployed on CPs using pot gear was higher than the comparative number of deployments for observers deployed on CPs using any other gear type, with the deletions totaling 6 percent of all deletions and only 2 percent of all observer deployments.³⁹

Prior to implementing the training option for an observer to obtain a nontrawl LL2 deployment endorsement, there was a concern about availability of qualified observers for deployment on nontrawl CPs. The non-CDQ pot CP sector is the only CP sector in the full coverage category where an observer can deploy to obtain experience that would qualify the observer for a nontrawl LL2 deployment endorsement. Prior to implementing the training option, observer providers could maximize the number of LL2 qualified observers by rotating new observers on pot CPs and removing them as soon as they reached the required 30 sampled sets. Fast rotation of new observers on these vessels could contribute to the relative high data deletion rate because new observers, on their first or second contract, are more likely to have data deleted than more experienced observers. Since observer providers now have the ability to put observers through LL2 training rather than deploying them on these pot CPs, a decrease in the number of first-time observers deployed on pot CPs would be expected. However, due to the expense of putting an observer through the LL2 training, this practice of rotating new observers on pot CPs may be ongoing.

A CP using pot gear when groundfish CDQ fishing is required to carry a nontrawl LL2 observer. Observer data are used as the authoritative record for estimates of target species catch that accrues toward a CDQ allocation. There are two pot CPs that have regularly participated in this fishery. The CDQ program is a catch share program that requires additional accountability for allocated species. When these vessels participate in non-CDQ groundfish fisheries, they are required to carry one observer at all times but that observer does not have to be nontrawl LL2 certified. However, when the same vessels participate in groundfish CDQ fishing they are required to carry a nontrawl LL2 observer. These vessels are also required to have an observer sampling station and motion compensated observer scale while participating in CDQ fisheries, but are not required to do so during non-CDQ fisheries. These vessels contract directly with observer provider firms for observer coverage and are in direct competition for nontrawl LL2 observers with the hook-and-line CP fleet.

³⁹ National Marine Fisheries Service (NMFS) 2017. Final Regulatory Impact Review for Proposed Regulatory Amendment to Address the Potential for a Shortage of Nontrawl Lead Level 2 Observers. November 2017. NMFS Alaska Regional Office, Juneau, AK 99801. Available at: <https://www.fisheries.noaa.gov/resource/document/final-regulatory-impact-review-proposed-regulatory-amendment-address-potential>.

3.7.2.2. Observer Deployment Logistics

A vessel in the full coverage category contracts directly with a permitted observer provider to procure observer coverage. Four observer provider companies are currently permitted by NMFS and actively provide observer services to vessels and processors participating in North Pacific fisheries. The four companies are A.I.S., Inc.; Alaskan Observers, Inc.; Saltwater, Inc.; and Techsea International.⁴⁰

A principal activity of these companies is to provide observers for the North Pacific Observer Program, and most of them also provide observers for other observer programs within or outside of Alaska, or are involved in other business activities. These observer providers contract with individual fishing operations to supply observers. They also contract with individual observers and deploy them on fishing vessels and at processing plants as necessary to meet the requirements of the fishing operations. Vessels cannot request specific individuals and are prohibited from discriminating on a number of other grounds, including gender.

3.7.2.3. Observer Deployment Endorsements

Observer deployment endorsements are defined at 50 CFR 679.53 and include general certification and annual deployment endorsement requirements as well as “level 2” and three types of “lead level 2” endorsements based on specific experience and gear type requirements. All observers must attend an annual briefing and a subsequent pre-cruise briefing for additional deployments throughout the year. The training and experience requirements to gain the various deployment endorsements are summarized in Table 3-15.

Table 3-15 Observer training and experience requirements for the various observer deployment endorsements

| Endorsement | Requirements |
|-------------------------------|--|
| Observer Certification | Minimum eligibility Initial observer training |
| Level 2 | Observer certification 60 data collection days Met expectation on last cruise |
| Lead Level 2 nontrawl gear | Level 2 endorsement 2 cruises (contracts)—at least 10 days each Successfully completed LL2 training or briefing as required 30 sampled sets (nontrawl gear) or 100 sampled hauls (trawl gear) |
| CP Lead Level 2 trawl gear | Level 2 endorsement 2 cruises (contracts) 100 sampled hauls on a CP using trawl gear or a mothership |

3.7.2.4. NMFS Role in Observer Training and Deployment

FMA is responsible for providing training, briefing, debriefing, and inseason advising for observers who collect catch data on board fishing vessels and at onshore processing plants, and for quality control/quality assurance of the data provided by these observers. Division staff process data and make it available to the NMFS AKRO Sustainable Fisheries Division (SFD) for total catch and bycatch monitoring and to scientists in other AFSC divisions for stock assessments, ecosystem investigations, and an array of research investigations. FMA currently has a total of 48 staff located in Seattle, WA,

⁴⁰ Observer Provider responsibilities are detailed at 50 CFR 679.52.

Anchorage, AK, Kodiak, AK, and Dutch Harbor, AK. FMA staff are responsible for a suite of activities in Seattle, WA, and at three field offices located in Alaska, including the following activities: Provide fishery dependent data to Agency staff, fishing industry, and the public. In-season advising support to observers in the field. Observer training and gear provision. Observer data debriefing and quality control. Field office support for observers while deployed in Anchorage, Kodiak, and Dutch Harbor. Data management services for processing and managing observer data. Analytical services for monitoring and reporting Observer Program deployment performance.

Table 3-16 Summary of vessel participation, number of observer deployments, number of first-time observers, and substantive observer data changes for observers deployed on BSAI pot CPs (2014 through 2019)

| | Vessels | Number of distinct observer deployments [^] | Of those observer deployments, how many occurred during an observer's first cruise? | Number of deployments with substantive [*] data change during debriefing | A-Season Duration (days) | B-Season Duration (days) |
|------|---------|--|---|---|--------------------------|--------------------------|
| 2014 | 4 | 19 | 5 | 5 | 26 | 122 |
| 2015 | 4 | 27 | C | 4 | 35 | 122 |
| 2016 | 4 | 14 | C | 3 | 29 | 75 |
| 2017 | 5 | 20 | 4 | C | 25 | 122 |
| 2018 | 5 | 16 | C | C | 20 | 20 |
| 2019 | 5 | 13 | C | C | 15 | 15 |

^C denotes confidential information due to fewer than three entities reported.

[^] An observer deployment that started in one year and continued into the next year is counted as a distinct deployment in both years.

^{*} A substantive data change means that the data change affected catch estimates used to manage the fishery.

Source: NMFS Alaska Region

3.7.2.5. Pre-Cruise Meeting

A pre-cruise meeting provides an opportunity for Observer Program staff to participate in a conversation between the vessel crew and a new observer prior to embarking on a trip. This allows staff to clarify expectations and provide knowledgeable advice about anticipated sampling scenarios that an observer may encounter at sea. Establishing a notification requirement to provide the opportunity for conducting pre-cruise meetings prior to an observer's first assignment on a pot CP will better prepare the observer and the crew to work together collaboratively and develop clear communication strategies. Pre-cruise meeting notifications are currently required for pot CPs participating in groundfish CDQ fishing and are offered on a voluntary basis as requested. Pre-cruise meetings are typically available in Dutch Harbor or Kodiak, or, upon request and pending staff availability, in other ports such as Seattle or Anchorage.

3.8. Potentially Affected Small Entities (Regulatory Flexibility Act Considerations)

The Regulatory Flexibility Act (RFA), first enacted in 1980 and amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (5 U.S.C. 601-612), is designed to place the burden on the government to review all regulations to ensure that, while accomplishing their intended purposes, they do not unduly inhibit the ability of small entities to compete. The RFA recognizes that the size of a business, unit of government, or nonprofit organization frequently has a bearing on its ability to comply with a Federal regulation. Major goals of the RFA are 1) to increase agency awareness and understanding of the impact of their regulations on small business, 2) to require that agencies communicate and explain their findings to the public, and 3) to encourage agencies to use flexibility and to provide regulatory relief to small entities. The RFA emphasizes predicting significant adverse economic impacts on small entities as

a group distinct from other entities, and on the consideration of alternatives that may minimize adverse economic impacts, while still achieving the stated objective of the action.

Section 603 of the Regulatory Flexibility Act (RFA) requires that an initial regulatory flexibility analysis (IRFA) be prepared to identify whether a proposed action will result in a disproportionate and/or significant adverse economic impact on the directly regulated small entities, and to consider any alternatives that would lessen this adverse economic impact to those small entities. As of 2017, NMFS Alaska Region prepares the IRFA in the classification section of the proposed rule for an action. Therefore, the preparation of a separate IRFA is not necessary for the Council to recommend a preferred alternative. This section of the RIR provides information that NMFS will use to prepare the IRFA for this action if the Council recommends implementation of the action alternative – namely an estimate of the number of small, directly regulated entities to which the proposed action will apply. When the agency publishes a final rule, it must prepare a Final Regulatory Flexibility Analysis, unless, based on public comment, it chooses to certify the action.⁴¹ This RIR, in its entirety, identifies the general nature of the potential economic impacts on both small and non-small directly regulated entities.

The RFA recognizes and defines three kinds of small entities: 1) small businesses, 2) small non-profit organizations, and 3) small government jurisdictions. Any small entities that might be directly regulated by this action would be harvesting/processing entities (LLP license owners and/or vessel owners) that fall into the “small business” category. A small business includes any firm that is independently owned and operated and not dominant in its field of operation. Businesses classified as primarily engaged in commercial fishing are considered small entities if they have combined annual gross receipts not in excess of \$11.0 million for all affiliated operations worldwide (81 FR 4469; January 26, 2016). Since at least 1993, NMFS has considered CPs to be predominantly engaged in fish harvesting rather than fish processing. Under this classification, the threshold of \$11.0 million in annual gross receipts is appropriate.

The SBA has established “principles of affiliation” to determine whether a business concern is “independently owned and operated.” In general, business concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. NMFS considers members of fishing cooperatives affiliated for purposes of applying thresholds for identifying small entities. In making this determination, NMFS considered SBA’s “principles of affiliation” at 13 CFR 121.103. Specifically, in § 121.103(f), SBA refers to “[A]ffiliation based on identity of interest,” which states “[A]ffiliation may arise among two or more persons with an identity of interest. Individuals or firms that have identical or substantially identical business or economic interests (such as family members, individuals or firms with common investments, or firms that are economically dependent through contractual or other relationships) may be treated as one party with such interests aggregated.” If business entities are affiliated, then the threshold for identifying small entities is applied to the group of affiliated entities rather than on an individual entity basis.

A directly regulated and adversely impacted small entity would be one that loses its BSAI Pacific cod endorsement as a result of the historical participation threshold established by the action alternative

⁴¹ When an agency publishes a proposed rule, it must either ‘certify’ that the action will not have a significant adverse economic impact on a substantial number of small entities, and support that certification with the ‘factual basis’ upon which the decision is based; or it must prepare and make available for public review an Initial Regulatory Flexibility Analysis (IRFA). Under section 603 of the RFA, an IRFA “shall describe the impact of the proposed rule on small entities.”

(Alternative 2). The action alternative would directly affect the owner of an LLP license, and the direct impact would only be adverse if the Pacific cod endorsement were removed. LLP license owners whose endorsement is not removed would theoretically experience a positive impact, as described in Section 3.5. Entities who do not currently own an LLP license but could have purchased one of the latent licenses in the future and benefited from the Pacific cod endorsement – had the endorsement not been removed under the action alternative – might be indirectly impacted but are not identifiable and are not directly regulated by this action.

Because the regulatory definition of a small fish harvesting business is based on the value of harvest – and harvest is tracked according to the vessel on which it was harvested and not by the LLP license that was assigned to the vessel – the analysts are forced to estimate the number of small entities in this fishery based on recent activity by vessels with cod-endorsed BSAI CP pot gear LLPs. AKFIN estimates that during the most recent fishing year for which revenue data are available (2019) zero of the five BSAI pot CP vessels that fished for Pacific cod had combined annual gross fishing receipts of \$11.0 million or less and are thus considered small entities. Of those CPs, two vessels exceeded the small entity threshold as a result of cooperative affiliation with other vessels in a BS Crab Rationalization Program cooperative. No CP active in the 2019 Pot CP sector exceeded the small entity threshold solely as a result its Pacific cod catch. As a caution, the analysts note that vessels in this sector might have generated revenues from activities in Alaska fisheries such as salmon tendering that do not fit into the definition of fish harvesting and for which revenue data are not available; any such revenues cannot be included in this analysis.

Two vessels to which inactive (latent) cod-endorsed BSAI CP pot gear LLP licenses were assigned generated fishing revenues in other fisheries. Neither of those vessels are considered small entities according to the SBA definition as a result of cooperative affiliation with other vessels in the BS Crab Rationalization Program cooperative or the Freezer Longline Cooperative.

3.9. Summation of the Alternatives with Respect to Net Benefit to the Nation

This section will be completed for public review upon the Council's selection of a preliminary preferred alternative. This section is typically designed to compare the preferred alternative to No Action. If Alternative 2 is selected – given the narrowly defined suite of alternatives (one action alternative) and the small scope of the considered action relative to the large footprint of North Pacific federal fisheries, the discussion here will largely mirror the discussion of the action alternative in Section 3.6.

4. Magnuson-Stevens Act and FMP Considerations

4.1. Magnuson-Stevens Act National Standards

Below are the 10 National Standards defined in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and a brief discussion of how each alternative is consistent with the National Standards, where applicable. In recommending a preferred alternative, the Council must consider how to balance the National Standards. This section is typically completed for the public review draft after the Council has indicated a preliminary preferred alternative. The draft language below is only included to give the public additional opportunity to provide comment and will be revised and expanded upon in the subsequent draft.

National Standard 1 — Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.

The action alternative would not affect the expected harvest rate of the BS or AI Pacific cod stocks relative to no action. The active BSAI Pacific cod pot CP fleet is currently fishing at, or near, the TAC level and any vessel associated with a license that retains the endorsement would likely continue to do so. Initial and final TAC for the pot CP sector is managed by NMFS within the bounds approved by the Council following the guidance of the SSC. Final TAC includes inseason reallocations made by NMFS for the purpose of maximizing harvest within the prescribed limits.

National Standard 2 — Conservation and management measures shall be based upon the best scientific information available.

The analysis provided to the Council is based on the best scientific information available. The data provided through AKFIN draw on the NMFS Catch Accounting System, the North Pacific Fishery Observer Program, and industry reports (e.g., COAR). The data presented in the document will be vetted by the SSC. Scientific information on the status of the Pacific cod stock is incorporated by reference to other documents and does not need to be included in this RIR as NMFS Alaska Region Office has preliminarily determined to seek a categorical exclusion under NAO 216-6 because the potential change to regulations would not likely result in substantial modification of fishing location, timing, effort, authorized gear types, or harvest levels relative to the status quo and relative to what has been analyzed in previous approved actions. Any pursuant regulatory changes are not anticipated to affect, individually or cumulatively, the human environment

National Standard 3 — To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

The considered action alternative does not affect how the Pacific cod stock is managed in the BS and AI FMP areas. The action alternative would not affect sector allocations, nor would it affect how ABC is specified on a subarea basis with TAC administered at the BSAI level.

National Standard 4 — Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be; (A) fair and equitable to all such fishermen, (B) reasonably calculated to promote conservation, and (C) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

The considered action alternative is based on a standard of historical catch in the fishery, irrespective of the residency of LLP license holders. A license that does or does not retain its endorsement under the action alternative may be freely transferred between residents of different states after any implementation

of new regulations in the same manner that they are currently able to be transferred. Residency in a particular U.S. state is not a prerequisite for holding a BSAI Pacific cod pot gear CP endorsed LLP license. The residency of a license holder whose LLP license might lose its endorsement under the action alternative is not dispositive. The geographies associated with ownership residency of LLP licenses that would retain or lose the endorsement under the action alternative are, in many cases, the same.

The BSAI pot CP sector is a limited access fishery and thus there is no allocation of fishing privileges or potential for excessive shares of such privileges.

National Standard 5 — Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources, except that no such measure shall have economic allocation as its sole purpose.

The analysis of the action alternative extensively covers the potential for operational efficiency gains within the historically active fleet. However, that efficiency is not directly achieved by implementing the action alternative; rather, it is contingent upon subsequent voluntary cooperation among participants. Those efficiency gains would likely occur on the production side of the fishery – i.e. harvest operation. The BSAI Pacific cod pot CP sector has historically harvested available TAC at a high rate, so this action is not seeking to remedy a situation where there is inefficiency in the utilization of harvestable Pacific cod.

National Standard 6 — Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

The considered action alternative indirectly addresses variation in the fishery resource and catches in that it reacts to overcapacity – or potential overcapacity – in the context of the declining available harvest that has been observed for approximately the last six to eight years (see Table 3-1). The potential removal of endorsements is a one-direction shift in potential capacity, and thus is inherently inflexible in the future event that available harvest of Pacific cod in this sector increases dramatically relative to recent levels.

National Standard 7 — Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

The considered action alternative is not expected to create additional management costs. Analysis of the action alternative finds that reducing the potential for latent capacity to enter the fishery might allow for voluntary cooperation between active participants that could be cost saving for the fleet.

National Standard 8 — Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of National Standard 2, in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.

The information in Section 3.4.6 identifies that this fishery primarily interacts with a small set of communities in terms of LLP license ownership, vessel/crew operations, and the transfer of product processed at-sea. That section also places the gross revenue associated with this fishery in the context of all fisheries under the Council's purview, concluding that this sector is a relatively small piece of total economic production in the potentially affected communities. The considered action alternative is not likely to alter the sustained participation of the communities that have been historically involved in the BSAI Pacific cod pot CP fishery.

National Standard 9 — Conservation and management measures shall, to the extent practicable, (A) minimize bycatch, and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

The considered action alternative does not directly impact the expected amount of prohibited species bycatch that will occur in the fishery. However, relative to the No Action alternative, it is possible that voluntary cooperation between active participants could create a less competitive environment where vessels have fewer disincentives to take actions to minimize bycatch by spending time and resources to change the time and area of fishing, all else equal. The historical bycatch data included in this analysis show that crab bycatch – the primary prohibited species category for this fishery – is highly variable on an annual basis.

National Standard 10 — Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

The considered action alternative does not directly impact the operations of active vessels in the fishery. However, as with other National Standards, the action alternative could create conditions that allow participants to cooperate voluntarily. While this is beyond the Council’s direct authority, it could be anticipated that cooperation resulting in a less competitive fishery might allow vessels to make operational choices that promote safety with less internal opportunity cost than they would experience under a race for a TAC that is fished at a time-certain point on the calendar.

4.2. Council’s Ecosystem Vision Statement

In February 2014, the Council adopted the following as Council policy:

Ecosystem Approach for the North Pacific Fishery Management Council

Value Statement

The Gulf of Alaska, Bering Sea, and Aleutian Islands are some of the most biologically productive and unique marine ecosystems in the world, supporting globally significant populations of marine mammals, seabirds, fish, and shellfish. This region produces over half the nation’s seafood and supports robust fishing communities, recreational fisheries, and a subsistence way of life. The Arctic ecosystem is a dynamic environment that is experiencing an unprecedented rate of loss of sea ice and other effects of climate change, resulting in elevated levels of risk and uncertainty. The North Pacific Fishery Management Council has an important stewardship responsibility for these resources, their productivity, and their sustainability for future generations.

Vision Statement

The Council envisions sustainable fisheries that provide benefits for harvesters, processors, recreational and subsistence users, and fishing communities, which (1) are maintained by healthy, productive, biodiverse, resilient marine ecosystems that support a range of services; (2) support robust populations of marine species at all trophic levels, including marine mammals and seabirds; and (3) are managed using a precautionary, transparent, and inclusive process that allows for analyses of tradeoffs, accounts for changing conditions, and mitigates threats.

Implementation Strategy

The Council intends that fishery management explicitly take into account environmental variability and uncertainty, changes and trends in climate and oceanographic conditions,

fluctuations in productivity for managed species and associated ecosystem components, such as habitats and non-managed species, and relationships between marine species. Implementation will be responsive to changes in the ecosystem and our understanding of those dynamics, incorporate the best available science (including local and traditional knowledge), and engage scientists, managers, and the public.

The vision statement shall be given effect through all of the Council's work, including long-term planning initiatives, fishery management actions, and science planning to support ecosystem-based fishery management.

In considering this action, the Council is being consistent with its ecosystem approach policy. As described in Section 1.1 (Purpose and Need), the proposed action alternative is motivated by the effects of reduced harvest availability (ABC/TAC, plus in-season reallocations from other BSAI Pacific cod sectors) combined with stable or increasing participation in a sector that has unconstrained competition within the limited number of currently permitted participants. Changing conditions in the fishery have resulted in shorter, less stable fishing seasons that may provide fewer benefits to harvesters and communities in terms of productivity, as well as less flexibility to mitigate shellfish prohibited species catch.

5. Preparers and Persons Consulted

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6. Data Sources

This analysis was prepared using data from the NMFS catch accounting system, which is the best available data to estimate total catch in the groundfish fisheries off Alaska. Total catch estimates are generated from information provided through a variety of required industry reports of harvest and at-sea discard, and data collected through an extensive fishery observer program. In 2003, NMFS changed the methodologies used to determine catch estimates from the NMFS blend database (1995 through 2002) to the catch accounting system (2003 through present).

The catch accounting system was implemented to better meet the increasing information needs of fisheries scientists and managers. Currently, the catch accounting system relies on data derived from a mixture of production and observer reports as the basis of the total catch estimates. The 2003 modifications in catch estimation included providing more frequent data summaries at finer spatial and fleet resolution, and the increased use of observer data. Redesigned observer program data collections were implemented in 2008 and include recording sample-specific information in lieu of pooled information, increased use of systematic sampling over simple random and opportunistic sampling, and decreased reliance on observer computations. As a result of these modifications, NMFS is unable to recreate blend database estimates for total catch and retained catch after 2002. Therefore, NMFS is not able to reliably compare historical data from the blend database to the current catch accounting system.

This document primarily relies upon LLP license information provided by NMFS Alaska Region Restricted Access Management (RAM) Division, and AKFIN's Comprehensive Fish Ticket and Comprehensive PSC databases.