

Aleutian Islands Pacific Cod CV Allocation with a Regionalized Delivery Requirement

Discussion Paper

October 2013

At its April 2013 meeting, the Council requested that staff provide a discussion paper to evaluate the impacts of allocating a Pacific cod directed fishing allowance in Area 541/542 (see map below) to the catcher vessel sector (CV), with a regionalized delivery requirement to shoreplants in the Aleutian Island (AI) management area. The Council, concerned about cases of insufficient shoreside processing capacity in the AI, requested the paper include a potential waiver to the delivery requirement and experiences under the Western Aleutian Island golden king crab regional delivery requirements implemented in the BSAI crab rationalization program. The Council also requested the paper explore the need for and impacts of measures to avoid stranding AI initial total allowable catch (ITAC), such as allowing catcher processor activity after a certain date or at higher ITAC levels. Finally, the Council requested the paper provide historical catch and processing distribution across the various sectors (gear and operational type) in AI management areas 541, 542, and 543, as well as a discussion of current processing capacity and activities in Adak and Atka.

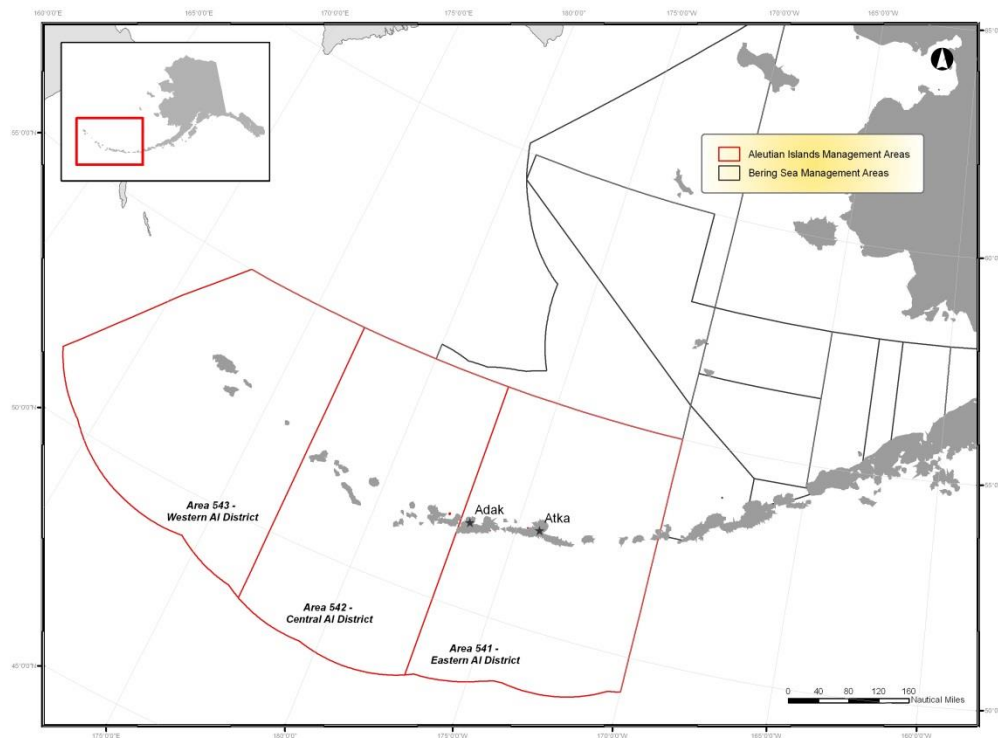
Background

In December 2009, an initial review EA/RIR/IRFA was prepared that proposed establishing processing sideboards on processing vessels eligible under the BSAI crab rationalization program, American Fisheries Act (AFA), and Bering Sea and Aleutian Islands (BSAI) Amendment 80 that receive deliveries of Pacific cod harvested in the Eastern and Central AI (Areas 541 and 542, respectively). In effect, catcher processors, floating processors, and motherships in the three catch share programs above would be limited in the amount of catcher vessel deliveries they could receive of Pacific cod harvested in Area 541 and/or 542 on an annual basis, or prohibited from taking deliveries prior to a specific date. The impetus for the proposed action was to ensure that the historical share of Pacific cod delivered shoreside, primarily to Adak, would continue.

The Council reviewed two discussion papers in December 2008 and February 2009, and then requested that an initial review draft analysis be prepared for a future Council meeting, emphasizing the general need to ensure that it fully explores the ability to protect communities from the additional offshore processing capacity resulting from rationalization programs. The Council originally requested that initial review be scheduled for late 2009, in order to coincide with the review of the ongoing Biological Opinion (BiOp), which among other things, addressed the effects of the status quo BSAI Pacific cod fishery on Steller sea lions. As the BiOp was rescheduled for release in late 2010, the Council rescheduled review of the AI processing sideboard action in early 2011. A supplement to the initial review draft analysis was prepared for the February 2011 Council meeting, but was postponed and not reviewed.

In April 2013, the Council, concerned with shoreside processing protections in the context of the Steller sea lion environmental impact statement (EIS), requested an updated discussion paper of the AI Pacific cod processing sideboard analysis. The discussion paper also reviewed the implications of pending SSC action to set separate Bering Sea and Aleutian Islands (BSAI) acceptable biological catch (ABC) in 2014 for BSAI Pacific cod. The discussion paper clarified that the combined BSAI sector allocations was the approach the Council determined most feasible in October 2011. This approach provides the greatest flexibility for sectors and is the simplest for NMFS to monitor relative to previous alternatives considered in the past. After reviewing the discussion paper, the Council tasked staff to prepare this discussion paper

addressing a CV allocation of Area 541/542 Pacific cod with a regionalized delivery requirement to AI shoreplants.



Affected resource and areas

The Council motion clarifies that the allocation of AI Pacific cod to CVs is in Area 541 (Eastern Aleutian District) and Area 542 (Central Aleutian District) from the Federally-managed and State parallel fisheries. Since the April 2013 motion does not include an allocation of Area 543 (Western Aleutian District) Pacific cod to CVs, this discussion paper does not contemplate the impacts of the CV allocation and shoreside delivery requirement for this management area.

The allocation of AI Pacific cod to CVs for Areas 541 and 542 Pacific cod would apply to all non-CDQ Pacific cod, which includes the Pacific cod fishery in Federal waters and the parallel fishery that occurs in State waters. The State parallel fishery is opened at the same time as the Federal fishery in Federal waters. State parallel fishery harvests accrue toward the Federal total allowable catch (TAC) and Federally-permitted vessels move between State and Federal waters during the concurrent parallel and Federal fisheries. The State opens the parallel fisheries through emergency order by adopting the groundfish seasons, bycatch limits, and allowable gear types that apply in the adjacent Federal fisheries.

Note that the action proposed in the discussion paper would not affect the State-managed Pacific cod fishery that occurs in State waters in the AI. The State-managed fishery was established by the Alaska Board of Fisheries in 2006, and comprises 3% of the Federal BSAI Pacific cod ABC. This fishery is managed by the State and has different sector requirements and seasons than the Federal Pacific cod fishery. Note, the State parallel fishery is also managed by the State, which chooses to manage the fishery similar to the Federal fishery from 3 to 200 miles.

NMFS Management under BSAI Sector Allocations

The following is how NMFS would address separate OFLs and ABCs for Pacific cod in the BS and AI areas recommended by the Plan Team and SSC, and separate TACs recommended by the Council, during the harvest specifications process.

First, the AI State water GHL would be calculated (step 2 below). The GHL is calculated at 3% of the BSAI ABC; under an ABC split it would be calculated as 3% of the combined BS ABC and AI ABC. It is expected that the Council would recommend that the amount resulting from this calculation would be deducted only from the AI ABC to determine the AI TAC (step 3 below).

After calculating the GHL and establishing the TACs, the BS and AI ITACs would be calculated by deducting 10.7% from each TAC for the CDQ allocations. Once the BS ITAC and AI ITAC are calculated, a sector's allocation would be based on the percentage of the BSAI Pacific cod ITAC they receive under Amendments 85/80, multiplied by the combined BS and AI ITACs. In effect, the catch limit for Pacific cod for each area would be determined through the Plan Team, SSC, and Council harvest specifications process, but the sector allocations would continue to be applied to a combined BSAI Pacific cod limit.

1. Harvest specifications process → sets OFLs, ABCs, TACs for BS and AI Pacific cod
2. GHL calculation → $3\% \times (\text{BS ABC} + \text{AI ABC}) = \text{AI Pacific cod GHL}$
3. TAC calculations (maximum possible) → $\text{BS ABC} = \text{BS TAC}$
 $\text{AI ABC} - \text{GHL} = \text{AI TAC}$
4. CDQ allocations → $\text{BS TAC} \times 10.7\% = \text{CDQ BS allocation}$
 $\text{AI TAC} \times 10.7\% = \text{CDQ AI allocation}$
5. Non-CDQ ITACs → $\text{BS TAC} \times 89.3\% = \text{BS ITAC}$
 $\text{AI TAC} \times 89.3\% = \text{AI ITAC}$
6. Non-CDQ sector allocations → $(\text{sector allocation \% under Am.80/85}) \times (\text{BS ITAC} + \text{AI ITAC}) = \text{sector allocation of combined BS and AI ITAC}$

If an ABC/TAC split occurred, and the (combined) BSAI Pacific cod allocations continued, NMFS would manage each area to a separate ITAC and CDQ allocation. Each non-CDQ sector would continue to receive its current BSAI Pacific cod allocation (determined under Amendment 85/80), and that allocation could be harvested anywhere in the BSAI open to Pacific cod fishing (see Table 1). In effect, a sector's allocation could be fished in either the BS or AI, as long as TAC was available in that area. NMFS would be responsible for monitoring each sector's overall BSAI allocation and a single catch limit for each area, using the existing tools to open and close fisheries. Once the Pacific cod ITAC for either the BS or AI was reached, NMFS would issue a closure notice and all non-CDQ sectors would be required to stop directed fishing for Pacific cod in the closed area. The sectors with remaining allocation would then only be allowed to continue directed fishing in the open area. CDQ Program would have a specific allocation of the TAC in each area, managed separately.

Table 1 BSAI sector allocations for Pacific cod

| Sector | % allocation |
|---|--------------|
| Jig vessels | 1.4 |
| Hook-and-line/pot CV < 60' ft (18.3 m) LOA | 2 |
| Hook-and-line CV ≥ 60 ft (18.3 m) LOA | 0.2 |
| Hook-and-line CP | 48.7 |
| Pot CV ≥ 60 ft (18.3 m) LOA | 8.4 |
| Pot CP | 1.5 |
| AFA trawl CP | 2.3 |
| Amendment 80 | 13.4 |
| Trawl CV | 22.1 |
| Table originates from AI_PCOD_ALLOCATION OCT 2013 | |

No changes are anticipated in the process to reallocate Pacific cod among the non-CDQ sectors inseason. If, during the fishing year, NMFS determines that a non-CDQ sector will be unable to harvest the entire amount of its combined BS and AI Pacific cod allocations, NMFS would reallocate the projected unused amount to another sector, per the hierarchy for reallocations provided in current regulations (50 CFR 679.20 (a)(7)(iii)). The reallocated Pacific cod could be taken in either area if open to directed fishing for Pacific cod.

Table 2 provides the estimated 2013 AI and BS ITAC using a 7% AI biomass apportionment. The ITAC calculations in the table assume ABC equals TAC for both AI and BS. Using the 2013 OFL and ABC from the latest harvest specification tables, a 7% AI apportionment would yield an AI ITAC of 10,966 mt, after deducting the 3% GHIL and the 10.7% CDQ allocation. In discussions with NMFS, an ITAC of this level would not result in immediate closure to directed fishing. However, a GHIL of 4.5%, per an October 2013 Alaska Board of Fisheries proposal, would yield an estimated AI ITAC of 7,675 mt, which could result in NMFS closing the Federal AI Pacific cod fishery to directed fishing later in the fishing season to allow for incidental catch. In the fall, NMFS would likely open Pacific cod for directed fishing for a short period if there appeared to be enough Pacific cod for a directed fishery.

Table 2 2013 OFL, ABC, AI GHIL, TAC, ITAC, and CDQ for AI and BS Pacific cod using a 7% AI apportionment and 3% and 4.5% GHIL

| Area | OFL | ABC | AI GHIL (3% of BSAI ABC) | TAC | ITAC | CDQ |
|---|---------|---------|----------------------------|---------|---------|--------|
| AI (7% of BSAI) | 25,130 | 21,490 | 9,210 | 12,280 | 10,966 | 1,314 |
| BS (93% of BSAI) | 333,870 | 285,510 | | 285,510 | 254,960 | 30,550 |
| BSAI | 359,000 | 307,000 | | 297,790 | 265,926 | 31,864 |
| Area | OFL | ABC | AI GHIL (4.5% of BSAI ABC) | TAC | ITAC | CDQ |
| AI (7% of BSAI) | 25,130 | 21,490 | 13,815 | 7,675 | 6,854 | 821 |
| BS (93% of BSAI) | 333,870 | 285,510 | | 285,510 | 254,960 | 30,550 |
| BSAI | 359,000 | 307,000 | | 293,185 | 261,814 | 31,371 |
| Table originates from AI_PCOD_ALLOCATION OCT 2013 | | | | | | |

Seasonal Allowances

A combined BSAI sector allocation would maintain all of the existing BSAI Pacific cod allocations, including the seasonal allowances applicable to ≥60' vessels using pot gear, ≥60' catcher vessels using hook-and-line gear, hook-and-line catcher processors, jig vessels, trawl catcher vessels, and trawl catcher processors. Because there are no sector allocations specific to each area, there would also not be any gear

specific seasonal allowances by each area. This is because there would not be separate BS or AI allocations to apportion on a seasonal basis under a combined BSAI sector allocation, there would only be one BSAI Pacific cod allocation per sector. While the overall guideline for the BSAI Pacific cod fishery continues to be a 70%–30% seasonal split, the seasonal allowances vary by gear type (Table 3).

Table 3 BSAI Pacific cod seasonal allowances

| | | | |
|---------------|---|----------|--|
| Pot | Jan 1 – June 10 (51%), Sept 1 – Nov 1* (49%) Pot catcher vessels <60' do not have seasonal allowances. | Trawl CV | Jan 20 – April 1 (74%), April 1 – June 10 (11%); June 10 – Nov 1 (15%) |
| Hook and Line | Jan 1 – June 10 (51%), June 10 – Nov 1* (49%) Hook-and-line catcher vessels <60' do not have seasonal allowances. | Trawl CP | Jan 20 – April 1 (75%), April 1 – June 10 (25%); June 10 – Nov 1 (0%) |
| Jig | Jan 1 – Apr 30 (60%) Apr 30 – Aug 31 (20%) Aug 31 – Nov 1* (20%) | | |

*Note: The 2011 SSL protection measures prohibit retention of Pacific cod by Federally permitted vessels of all gear types in Area 543 of the AI. In Areas 541 and 542, directed fishing for Pacific cod is prohibited from Nov. 1 – Jan.1. Previous to the 2011 to these protection measures, pot, hook-and-line, and jig gear were allowed to fish Pacific cod until Dec. 31.

Under a continued BSAI sector allocation, this approach would theoretically allow harvest of all of the AI TAC in the first half of the year, which is effectively no different under status quo. No guidelines currently exist for establishing AI seasonal allowances by gear type or overall, and while the Steller Sea Lion EIS proposes different seasons for BSAI trawl limited access and Amendment 80 CPs, it does not mandate seasonal allowances by gear type in the AI. Thus under combined BSAI sector allocations would continue to be subject to their BSAI seasonal allowances.

Steller Sea Lion EIS

The Steller sea lion EIS, that is scheduled for final action at the October 2013 Council meeting, includes the status quo alternative, which is the reasonable and prudent alternative (RPA) that was implemented by interim final rule in January 2011, Alternatives 2 and 3, which include area limits for Areas 541, 542, and 543, Alternative 4, which would return to the modified 2010 measures, and finally Alternative 5, the preliminary preferred alternative, which would remove catch and participate limits from Area 541 and 542 (Alternative 5).

Based on information contained in Table 8-95 of the *Steller Sea Lion Protection Measures, Preliminary Draft EIS/RIR/IRFA*, Table 4 provides 2013 area limits under Alternatives 2 and 3. Utilizing a 3% State GHL and applying the AI area percentages to the 2013 BSAI Pacific cod ABC would yield an area limit for Area 541/542 of 9,037 mt and 3,243 mt for Area 543. Utilizing a 4.5% State GHL, would yield a limit of 5,649 mt for Area 541/542 and a limit of 2,026 mt for Area 543.

Alternatives 2 and 3 of the Steller sea lion EIS also include provisions that place limits on trawl and non-trawl CP sector catches. These sector limits are not allocations, but limits on the amounts that may be caught by the sectors to which they are assigned. Other sectors, not subject to these limits, could conceivably fully harvest the available Pacific cod. These sector limits are based on historical average catches from 2006 through 2010. Catcher vessels are not subject to sector limits in these areas, although they are subject to the overall area limits. Estimated catch limits for trawl and non-trawl CP sectors are

located in Table 8-96 and Table 8-115 of the *Steller Sea Lion Protection Measures, Chapter 8: Regulatory Impact Review*. Under both Alternatives 2 and 3, the sector limit for trawl CP is 47.01% of Area 541/542 area limit, and the limit for non-trawl CP is 19.23% of Area 541/542 area limit. For Alternative 2, Option 1 (which excludes motherships and the catcher vessels delivering to them from Area 543) the trawl CP sector would receive 28.02% of Area 543 limit. Under Alternative 2, Option 2 and Alternative 3 (which includes motherships and the catcher vessels delivering to them), the trawl CP sector would receive 67.7% of the Area 543 limit. For non-trawl in Area 543, Alternatives 2 and 3 would have a catch limit equal to 32.21% of the Area 543 limit.

As noted in Table 4, the 2013 estimated sector limit for trawl and non-trawl catcher processors (CPs) in Area 541/542, assuming a 3% GHJ, would be 4,248 mt and 1,738 mt, respectively. For Area 543 during the same time period, the trawl CP limit would range from 909 mt to 2,196 mt, while the non-trawl limit would be 1,045 mt. Assuming a 4.5% GHJ, the 2013 sector limits for Area 541/542 would be 2,656 mt and 1,086 mt for trawl and non-trawl CP, respectively. For Area 543, the trawl CP limit would range from 567 mt to 1,372 mt, while the non-trawl CP limit would be 1,086 mt.

Table 4 Estimated area limits and trawl and non-trawl CP sector limits under Alternatives 2 and 3 Steller sea lion protection measures for 2013 utilizing 3% and 4.5% GHJ scenarios

| State GHJ | Sector | Area limit | | Area 543 sector limit | | | Areas 541/542 sector limit | |
|-----------|--------------|------------|---------|-----------------------|----------|-------|----------------------------|-------|
| | | 543 | 541/542 | Alt 2 O1 | Alt 2 O2 | Alt 3 | Alt 2 | Alt 3 |
| 3% | Trawl CP | 3,243 | 9,037 | 909 | 2,196 | 2,196 | 4,248 | 4,248 |
| | Non-trawl CP | | | 1,045 | 1,045 | 1,045 | 1,738 | 1,738 |
| 4.50% | Trawl CP | 2,026 | 5,649 | 567 | 1,372 | 1,372 | 2,656 | 2,656 |
| | Non-trawl CP | | | 653 | 653 | 653 | 1,086 | 1,086 |

Source: Table 8-96 and Table 8-115 of the Steller Sea Lion Protection Measures, Preliminary Draft EIS/RIR/IRFA, March 2013

Table originates from AI_PCOD_ALLOCATION OCT 2013

Table 5 shows the amount of Area 543 and Areas 541/542 Pacific cod area limit available assuming the trawl and non-trawl CP sectors harvest the full sector limits available, which are based on a 60.23% limit for the combined CP limits in Area 543 and a 47.83% for the combined CP limits in Areas 541/542.

Table 5 Estimated area limits and available Pacific cod for trawl and non-trawl CV sectors if CPs harvest the full amounts available to them under their area-sector limits for 2013 utilizing 3% and 4.5% GHJ scenarios

| State GHJ | Sector | Area limit | | Area 543 sector limit | | | Areas 541/542 sector limit | |
|-----------|------------------------|------------|---------|-----------------------|----------|-------|----------------------------|-------|
| | | 543 | 541/542 | Alt 2 O1 | Alt 2 O2 | Alt 3 | Alt 2 | Alt 3 |
| 3% | Trawl and non-trawl CV | 3,243 | 9,037 | 1,290 | 1,290 | 1,290 | 4,715 | 4,715 |
| 4.50% | Trawl and non-trawl CV | 2,026 | 5,649 | 0 | 0 | 0 | 283 | 283 |

Source: Table 8-131 of the Steller Sea Lion Protection Measures, Preliminary Draft EIS/RIR/IRFA, March 2013

Table originates from AI_PCOD_ALLOCATION OCT 2013

Harvest Distribution of AI Pacific cod

The background data provided here utilizes retained harvests from 2003 through August 8, 2013. Sector data through August 8, 2013 are also provided. The source of the data is from NMFS catch accounting system.

Table 6 shows the amount and proportion of retained Pacific cod catch in the BS and AI management area 541/542 and 543, excluding CDQ data. The data in the table show that retained catch from the AI was between 15% and 16% of the combined BSAI retained catch from 2003 through 2004. In 2005 and 2006,

retained catch from the AI declined to about 11% each year. From 2007 through 2010 period, retained catch in the AI relative to the combined BSAI catch increased, ranging from 15% to almost 18%. In 2011 through 2013, harvest from the AI declined significantly due to the implementation of the Steller sea lion protection measures and other factors. In 2011, retained harvest from the AI accounted for 5% of the total, while in 2012 and through August 8, 2013, the AI accounted for 6% and 6.1% of the total harvest, which is below the current 7% biomass estimate for the AI.

The distribution of retained Pacific cod catch within the AI management area also varied significantly depending on the year. In 2003 and 2004, Area 541/542 accounted for 91% to 87% of the AI Pacific cod retained catch. From 2005 through 2007, Area 541/542 retained catch declined relative to Area 543, ranging from 83% to 77%. During the next three years, the proportion of retained Pacific cod from Area 541/542 declined even further ranging from a high of 72% to low of 66%. Finally, with the implementation of the current Steller sea lion protection measures, the proportion of retained catch of Pacific cod in Area 541/542 increased to 100% relative to Area 543.

Table 6 Pacific cod retained catch in the Aleutian Islands and Bering Sea from 2003 through 2013 (in metric tons and percent of total)

| Year | Area 541/542 (mt) | % of AI | Area 543 (mt) | % of AI | Total AI | % of BSAI | BS (mt) | BSAI (mt) |
|------|-------------------|---------|---------------|---------|----------|-----------|---------|-----------|
| 2003 | 28,993 | 91.0 | 2,866 | 9.0 | 31,859 | 16.5 | 161,514 | 193,372 |
| 2004 | 24,656 | 87.2 | 3,631 | 12.8 | 28,287 | 14.6 | 165,429 | 193,716 |
| 2005 | 17,215 | 81.1 | 4,000 | 18.9 | 21,214 | 11.3 | 166,328 | 187,542 |
| 2006 | 14,754 | 77.1 | 4,383 | 22.9 | 19,137 | 11.1 | 153,513 | 172,650 |
| 2007 | 22,946 | 82.9 | 4,731 | 17.1 | 27,677 | 17.8 | 127,587 | 155,264 |
| 2008 | 17,729 | 71.8 | 6,970 | 28.2 | 24,699 | 16.9 | 121,620 | 146,319 |
| 2009 | 17,663 | 69.5 | 7,764 | 30.5 | 25,427 | 16.6 | 127,864 | 153,291 |
| 2010 | 14,338 | 65.7 | 7,493 | 34.3 | 21,831 | 14.8 | 125,637 | 147,468 |
| 2011 | 10,375 | 99.9 | 8 | 0.1 | 10,383 | 5.3 | 184,500 | 194,883 |
| 2012 | 13,148 | 99.9 | 12 | 0.1 | 13,160 | 6.0 | 207,287 | 220,447 |
| 2013 | 8,767 | 100.0 | 3 | 0.0 | 8,769 | 6.1 | 134,841 | 143,610 |

Source: Blend Catch Accounting.

Table originates from pivot file BSAI_Pcod_Sector (08-08) and AI_Pcod_Allocation Oct 2013.

2013 data is through 8 August 2013.

Table 7 shows retained Pacific cod harvest by sector and area from 2003 through August 8, 2013, excluding CDQ harvest. Some of these data are not provided due to confidentiality; other data are masked to protect confidential data that would otherwise be evident due to simple subtraction.

From 2003 through August 8, 2013, the majority of the sectors' harvest of Pacific cod is from the BS, but there continue to be several sectors with notable portions of catch in the AI. Of the AI management areas, Area 541/542 contributed the largest portion of AI Pacific cod catch on an annual basis. During the 2003 through August 8, 2013, the trawl CV and trawl CP sectors were the most active in the AI. The trawl CV sector retained the most AI Pacific cod in terms of metric tons and percentage during the eleven year period; 14% to 51% of their BSAI Pacific cod was harvested in the AI. The trawl CP sector harvested from 4% to 42% of the combined BSAI Pacific cod from the AI. The hook-and-line CP sector had a much lower total annual harvest and allocation than the trawl CV or CP sectors, but it also typically harvests some portion of its BSAI Pacific cod in the AI. Only a few years of data could be provided due to confidentiality.

Table 7 Retained Pacific cod catch (mt) and percent of total Pacific cod catch in Area 541/542 and percent of total Pacific cod catch in the Bering Sea and Aleutian Islands areas, by sector, 2003 through 2013

| Year | Sector | Area 541/542 (mt) | % of Area 541/542 total | Area 543 (mt) | AI (mt) | % of sector BSAI total | BS (mt) | BSAI (mt) |
|--------------|--------|-------------------|-------------------------|---------------|---------------|------------------------|----------------|----------------|
| 2003 | HAL CP | 800 | 3 | * | * | * | 92,786 | 93,637 |
| | HAL CV | 33 | 0 | 7 | 40 | 8 | 484 | 524 |
| | JIG | * | * | 0 | * | * | 155 | 156 |
| | POT CP | 0 | 0 | 0 | 0 | 0 | 1,547 | 1,547 |
| | POT CV | 0 | 0 | 0 | 0 | 0 | 20,236 | 20,236 |
| | TRW CP | 10,951 | 38 | 2,808 | 13,759 | 42 | 19,077 | 32,836 |
| | TRW CV | 17,208 | 59 | 0 | 17,208 | 39 | 27,228 | 44,437 |
| Total | | 28,993 | 100 | 2,866 | 31,859 | 16 | 161,514 | 193,372 |
| 2004 | HAL CP | 2,542 | 10 | 395 | 2,937 | 3 | 90,987 | 93,923 |
| | HAL CV | 60 | 0 | 13 | 72 | 10 | 624 | 696 |
| | JIG | 0 | 0 | 0 | 0 | 0 | 231 | 231 |
| | POT CP | 0 | 0 | 0 | 0 | 0 | 3,234 | 3,234 |
| | POT CV | 0 | 0 | 0 | 0 | 0 | 13,957 | 13,957 |
| | TRW CP | 8,616 | 35 | 3,223 | 11,839 | 29 | 29,018 | 40,858 |
| | TRW CV | 13,439 | 55 | 0 | 13,439 | 33 | 27,379 | 40,817 |
| Total | | 24,656 | 100 | 3,631 | 28,287 | 15 | 165,429 | 193,716 |
| 2005 | HAL CP | * | * | * | * | * | 96,616 | 98,744 |
| | HAL CV | 14 | 0 | 8 | 22 | 2 | 1,109 | 1,130 |
| | JIG | * | * | 0 | * | * | 104 | 117 |
| | POT CP | 0 | 0 | 0 | 0 | 0 | * | * |
| | POT CV | 0 | 0 | 0 | 0 | 0 | 13,702 | 13,702 |
| | TRW CP | 7,091 | 41 | 3,988 | 11,079 | 32 | 23,807 | 34,886 |
| | TRW CV | 7,973 | 46 | 0 | 7,973 | 22 | 27,652 | 35,625 |
| Total | | 17,215 | 100 | 4,000 | 21,214 | 11 | 166,328 | 187,542 |
| 2006 | HAL CP | 1,841 | * | * | * | * | 82,343 | 84,596 |
| | HAL CV | 16 | 0 | 4 | 20 | 3 | 633 | 652 |
| | JIG | * | * | 0 | * | * | 81 | 89 |
| | POT CP | * | * | 0 | * | * | 3,065 | 3,148 |
| | POT CV | 305 | 2 | 0 | 305 | 2 | 15,829 | 16,134 |
| | TRW CP | 6,627 | 45 | 2,935 | 9,563 | 28 | 25,102 | 34,664 |
| | TRW CV | 5,875 | 40 | 1,032 | 6,907 | 21 | 26,460 | 33,367 |
| Total | | 14,754 | 100 | 4,383 | 19,137 | 11 | 153,513 | 172,650 |
| 2007 | HAL CP | 792 | * | * | * | * | 65,764 | 68,031 |
| | HAL CV | 45 | * | * | * | * | 407 | 452 |
| | JIG | * | * | 0 | * | * | 82 | 83 |
| | POT CP | * | * | 0 | * | * | 2,614 | 2,755 |
| | POT CV | * | * | 0 | * | * | 14,576 | 14,728 |
| | TRW CP | 9,704 | 42 | 2,195 | 11,899 | 32 | 25,836 | 37,735 |
| | TRW CV | 12,112 | 53 | 1,060 | 13,172 | 42 | 18,308 | 31,480 |
| Total | | 22,946 | 100 | 4,731 | 27,677 | 18 | 127,587 | 155,264 |
| 2008 | HAL CP | 1,832 | 10 | 2,202 | 4,034 | 5 | 71,492 | 75,526 |
| | HAL CV | 169 | 1 | 5 | 173 | 19 | 736 | 909 |
| | JIG | 156 | 1 | 0 | 156 | 89 | 19 | 176 |
| | POT CP | 1,532 | * | * | * | * | * | * |
| | POT CV | * | * | 0 | * | * | 15,433 | 15,514 |
| | TRW CP | 3,085 | 17 | 1,592 | 4,677 | 23 | 15,359 | 20,036 |
| | TRW CV | 10,873 | 61 | 3,107 | 13,980 | 45 | 16,804 | 30,784 |
| Total | | 17,729 | 100 | 6,970 | 24,699 | 17 | 121,620 | 146,319 |
| 2009 | HAL CP | 2,187 | 12 | * | * | * | 78,406 | 83,145 |
| | HAL CV | 12 | 0 | 5 | 17 | 3 | 582 | 599 |
| | JIG | 0 | 0 | 0 | 0 | 0 | 13 | 13 |
| | POT CP | 597 | 3 | * | * | * | * | * |
| | POT CV | 0 | 0 | 0 | 0 | 0 | 10,531 | 10,531 |
| | TRW CP | 3,300 | 19 | 1,624 | 4,924 | 19 | 21,188 | 26,112 |
| | TRW CV | 11,567 | 65 | 3,425 | 14,993 | 51 | 14,398 | 29,390 |
| Total | | 17,663 | 100 | 7,764 | 25,427 | 17 | 127,864 | 153,291 |
| 2010 | HAL CP | 1,859 | 13 | 2,782 | 4,641 | 6 | 66,986 | 71,627 |
| | HAL CV | 11 | 0 | 7 | 18 | 4 | 387 | 405 |
| | JIG | 0 | 0 | 0 | 0 | 0 | 344 | 344 |
| | POT CP | * | * | * | * | * | 2,699 | 3,426 |
| | POT CV | 0 | 0 | 0 | 0 | 0 | 16,707 | 16,707 |
| | TRW CP | 3,210 | 22 | 512 | 3,721 | 14 | 23,233 | 26,955 |
| | TRW CV | 8,534 | 60 | 4,190 | 12,724 | 45 | 15,280 | 28,004 |
| Total | | 14,338 | 100 | 7,493 | 21,831 | 15 | 125,637 | 147,468 |

Source: Blend Catch Accounting.

Table originates from pivot file BSAI_Pcod_Sector (08-08) and AI_Pcod_Allocation Oct 2013.

2013 data is through 8 August 2013.

* Denotes confidentiality

| | | | | | | | | |
|--------------|--------|---------------|------------|-----------|---------------|----------|----------------|----------------|
| 2011 | HAL CP | 1,152 | 11 | 0 | 1,152 | 1 | 95,208 | 96,360 |
| | HAL CV | 44 | 0 | 8 | 52 | 10 | 463 | 515 |
| | JIG | 0 | 0 | 0 | 0 | 0 | 505 | 505 |
| | POT CP | * | * | 0 | * | * | 3,097 | 3,102 |
| | POT CV | 0 | 0 | 0 | 0 | 0 | 23,933 | 23,933 |
| | TRW CP | 1,448 | 14 | * | * | * | 29,354 | 30,802 |
| | TRW CV | 7,726 | 74 | 0 | 7,726 | 19 | 31,939 | 39,666 |
| Total | | 10,375 | 100 | 8 | 10,383 | 5 | 184,500 | 194,883 |
| 2012 | HAL CP | 3,138 | 24 | * | * | * | 109,853 | 112,993 |
| | HAL CV | 100 | 1 | 7 | 107 | 15 | 589 | 697 |
| | JIG | 0 | 0 | 0 | 0 | 0 | 85 | 85 |
| | POT CP | 0 | 0 | 0 | 0 | 0 | 4,178 | 4,178 |
| | POT CV | 1,417 | 11 | 0 | 1,417 | 6 | 20,999 | 22,416 |
| | TRW CP | 2,091 | 16 | 2 | 2,092 | 6 | 31,608 | 33,700 |
| | TRW CV | 6,403 | 49 | 0 | 6,403 | 14 | 39,975 | 46,378 |
| Total | | 13,148 | 100 | 12 | 13,160 | 6 | 207,287 | 220,447 |
| 2013 | HAL CP | * | * | * | * | * | 59,863 | 60,318 |
| | HAL CV | 2 | 0 | 0 | 2 | 0 | 957 | 958 |
| | JIG | 0 | 0 | 0 | 0 | 0 | * | * |
| | POT CP | 0 | 0 | 0 | 0 | 0 | 1,840 | 1,840 |
| | POT CV | 2,161 | 25 | 0 | 2,161 | 12 | 16,103 | 18,264 |
| | TRW CP | 795 | 9 | * | * | * | 20,334 | 21,130 |
| | TRW CV | 5,354 | 61 | * | * | * | 35,736 | 41,091 |
| Total | | 8,767 | 100 | 3 | 8,769 | 6 | 134,841 | 143,610 |

Source: Blend Catch Accounting.

Table originates from pivot file BSAL_Pcod_Sector (08-08) and AL_Pcod_Allocation Oct 2013.

2013 data is through 8 August 2013.

* Denotes confidentiality

Starting in 2011, the AI Pacific cod fishery changed substantially with the implementation of the Steller sea lion RPA protection measures. Since 2011, the harvests in the AI are significantly lower for all sectors (except the pot CV sector) compared to previous years. The overall harvest distribution between the two areas was 5% in the AI and 95% in the BS for 2011 and 6% in the AI and 94% in the BS for 2012 and 2013.

Looking at harvest distribution during 2011 and 2012 in the AI, the trawl CV sector's percentage of Area 541/542 was 74% in 2011 and 49% in 2012, while the trawl CP distribution was 14% and 16%, respectively. For 2013, the trawl CV sector has harvested 61% of the Area 541/542 Pacific cod, while the trawl CP sector harvested 9%. One sector that has increased their harvest of Area 541/542 Pacific cod since the implementation of the Steller sea lion protection measures is the pot CV sector. In 2011 and 2012, the pot CV sector harvested 14% and 16% of Area 541/542 Pacific cod, while in 2013 they have harvested 25% through August 8, 2013.

Figure 1 shows the average location of Pacific cod harvest by trawl CPs for the AI management area from 2004 through 2010. Targeted catch was primarily located in Area 543 along the shelf north of Agattu Island. Further east in Area 542, catch occurred along Kiska and Amchika Islands and on Petrel Banks. In Area 541, the majority of the catch occurred off of Atka North Cape with some fishing between Adak and Atka. Most of the Pacific cod catch was in critical habitat except the fishing in areas on Petrel Bank, west of Atka North Cape, and southeast of Segum Pass. The area off Atka North Cape seems to be important area for most sectors; however, under Alternatives 2 and 3 the area inside critical habitat is closed. Figure 2 shows the catch that occurred in 2011 and 2012 by trawl CPs. Due to the closures in Area 543, overall catch by trawl CPs decreased and was primarily located off Atka North Cape, Petrel Banks, and southeast of Segum Pass.

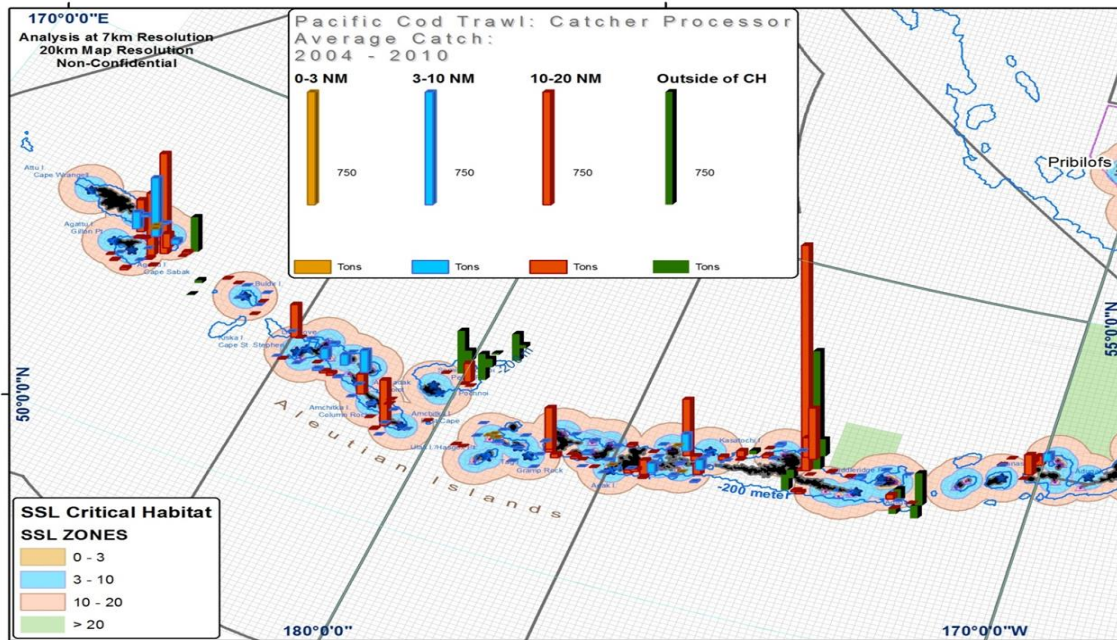


Figure 1 2004 through 2010 average location of Pacific cod harvest by trawl CPs

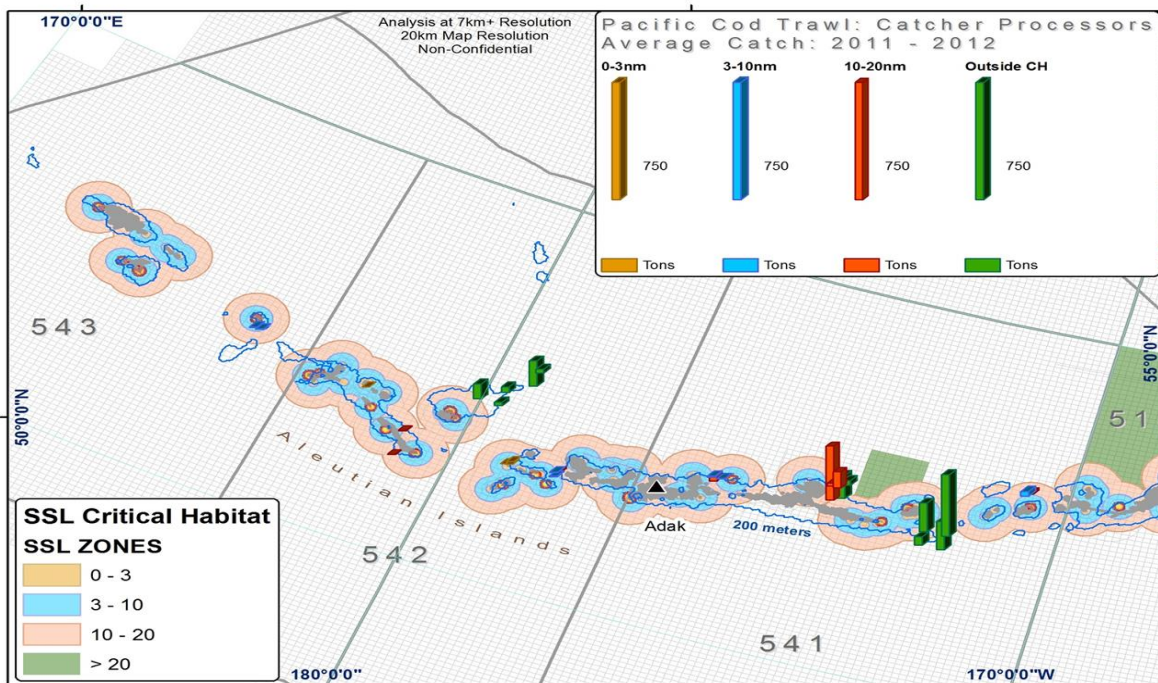


Figure 2 2011 through 2012 average location of Pacific cod by trawl CPs

Figure 3 and Figure 5 show the average location of Pacific cod catch by trawl catcher vessels from 2004 through 2010. This represents catch patterns that occurred prior to the current Steller sea lion RPA. Figure 3 represents the locations used by trawl catcher vessels that deliver to shoreside processors. As a result of being associated to fixed shoreside locations, most of the catch is concentrated in areas near the ports of Adak and Atka. Atka North Cape is the most important area to this sector and vessels harvesting

fish in this area deliver to Adak, Akutan, and Dutch Harbor. The area southeast of the port of Adak also is important to these vessels.

Figure 5 shows the catcher vessels that deliver to motherships. These vessels are not associated to a processor with a fixed location. This catch is not as concentrated in areas near a port, but more of this catch is in Area 543. The area used by these vessels is similar to the area used by trawl catcher/processors. This is primarily because vessels that operate as motherships are also vessels that operate as trawl catcher/processors. Outside of Area 543, Atka North Cape also is important to these vessels.

Figure 4 and Figure 6 show the average location of Pacific cod catch by trawl catcher vessels from 2011 and 2012. This represents where catch occurs under the existing Steller sea lion RPAs. As expected, the catch by vessels delivering to motherships did not occur in Area 543 because of the retention prohibition. Catch by vessels delivering shoreside remained in similar locations as prior years, though in amounts less than had been observed from 2004 through 2010. Overall, the catch seems to have concentrated into the area east of Atka North Cape that has shown to be an important area for all trawl sectors. Alternatives 2 and 3 would reduce most of the catch in that area.

In 2011 and 2012, there were many factors for the decrease of catch in the Aleutian Islands. One possible factor is the implementation of the Steller Sea lion RPA management measures. However, factors other than the interim final rule's Steller sea lion protection measures are believed to have had a greater impact on total Pacific cod catch by trawl catcher vessels in the Aleutian Islands.

In the early months of 2011, there was no operating shoreside processor in the Aleutian Islands. Catcher vessels delivering to shoreside processors fished in the Bering Sea, closer to operating processors in Akutan and Dutch Harbor. In 2011 and 2012, fishermen indicated that the catch rates and size of Pacific cod in January and February were above average. Vessels fished where they were experiencing good Pacific cod fishing and indicated that they were unlikely to move to the Aleutian Islands until it was warranted. In 2012, catcher vessels that could not reach profitable pollock fishing grounds due to the ice edge advance fished for Pacific cod longer than usual. This resulted in an overall increase in Bering Sea trawl catcher vessel Pacific cod effort. The result of all these factors was that the 2012 fishery closed about a month earlier than normal. In 2012, there was an operating shoreside processor in the Aleutian Islands. However, the A season trawl catch vessel Pacific cod allocation was reached soon after vessels began moving to the Aleutian Islands in late February.

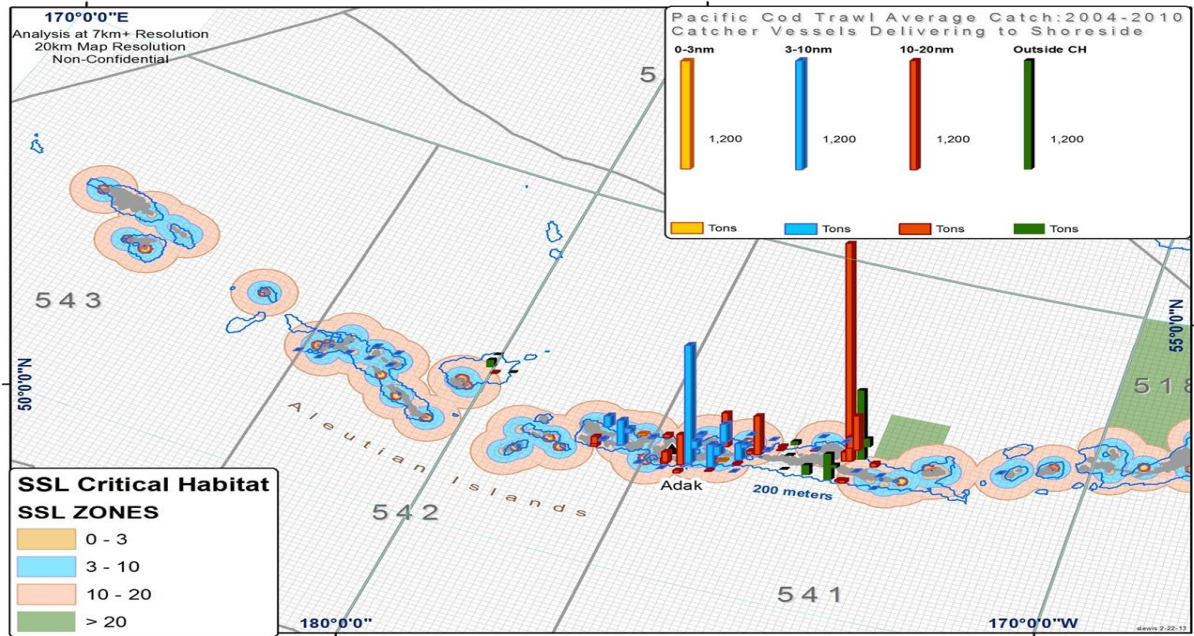


Figure 3 2004 through 2010 average location of Pacific cod harvested by trawl CVs delivering to shoreside plants

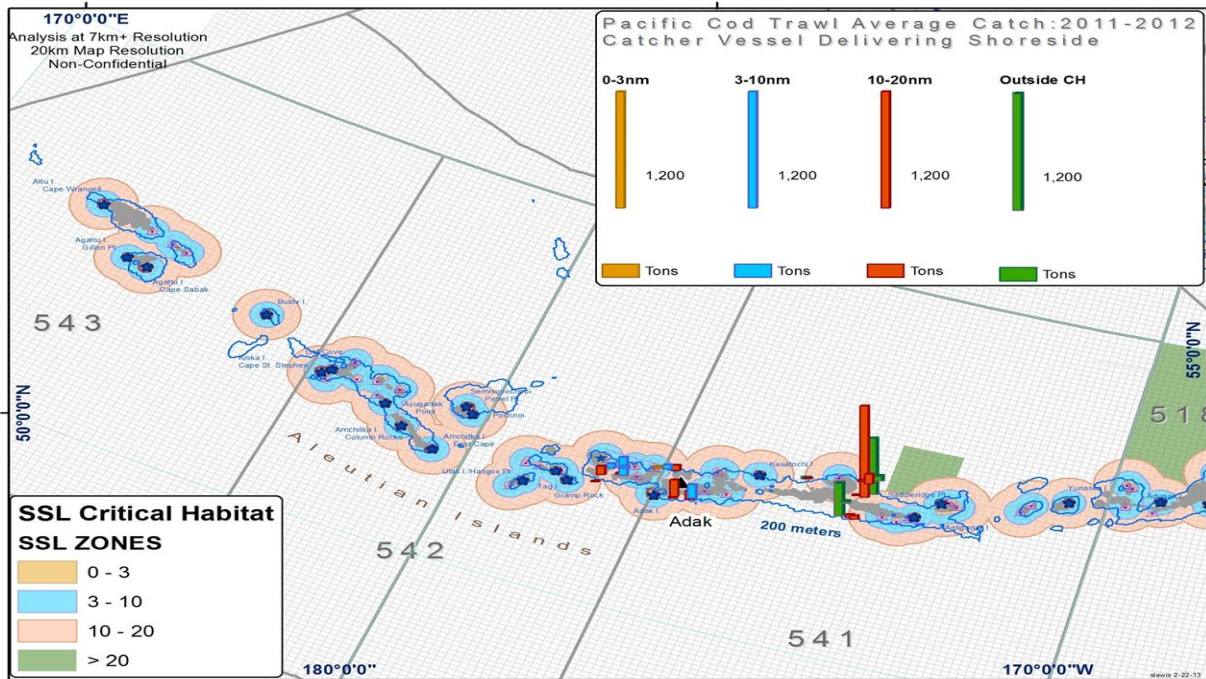


Figure 4 2011 through 2012 average location of Pacific cod harvested by trawl CVs delivering to shoreside plants

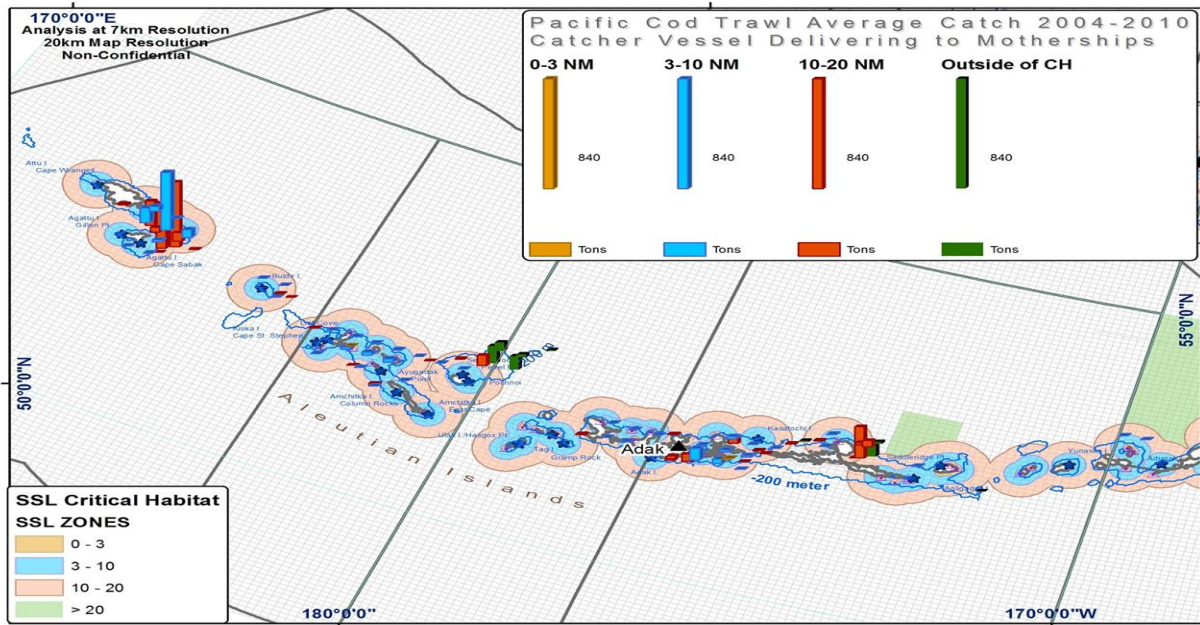


Figure 5 2004 through 2010 average location of Pacific cod harvested by trawl CVs delivering to motherships

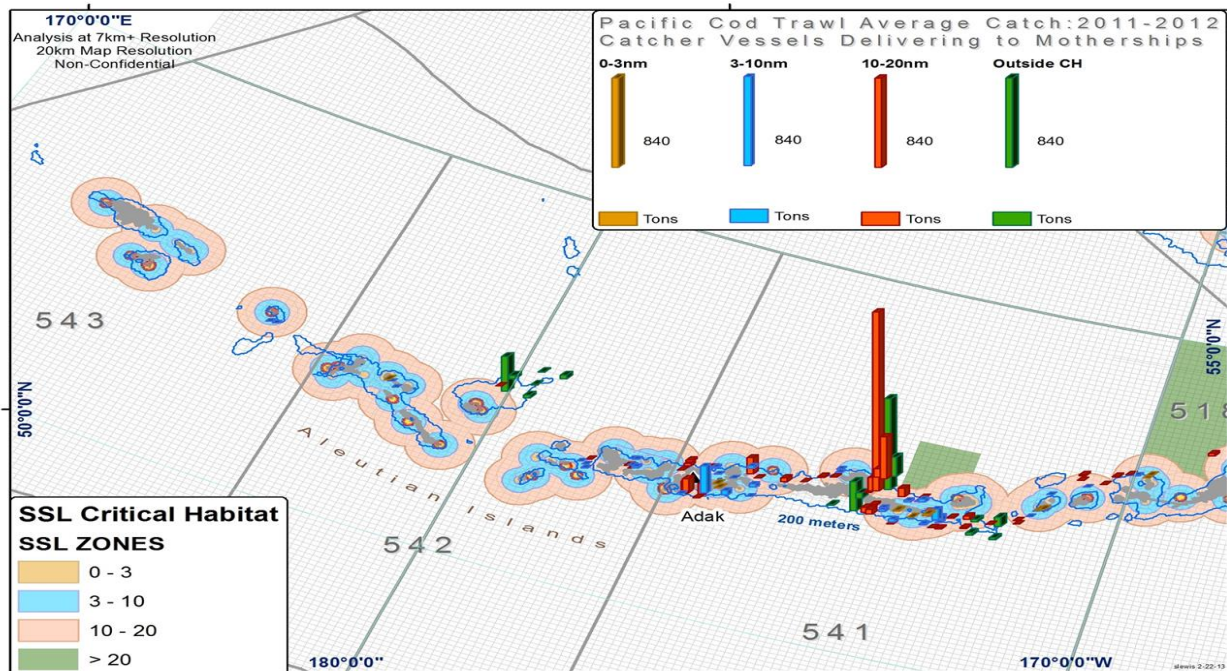


Figure 6 2011 through 2012 average location of Pacific cod harvested by trawl CVs delivering to motherships

Figure 7 shows the average location of harvest by non-trawl vessels from 2004 through 2010. This represents the catch patterns that may occur under Alternative 4. Compared to trawl vessels, the catch by non-trawl vessels is not concentrated in several specific areas. Non-trawl catch seems to occur in all areas where depths are less than 200 m and fishing is allowed. As a result, the majority of catch by these vessels occurs in critical habitat. Alternatives 2 and 3 from the Steller sea lion EIS would likely result in harvest locations similar to Figure 7.

Figure 8 shows where harvest occurred in 2011 and 2012 under regulations similar to Steller sea lion RPA. As a result, no fishing occurred in Area 543 and fishing concentrated more in Area 541 where the shelf edge is broader than other areas. The broader shelf edge gave the non-trawl vessels the area required to deploy their gear efficiently.

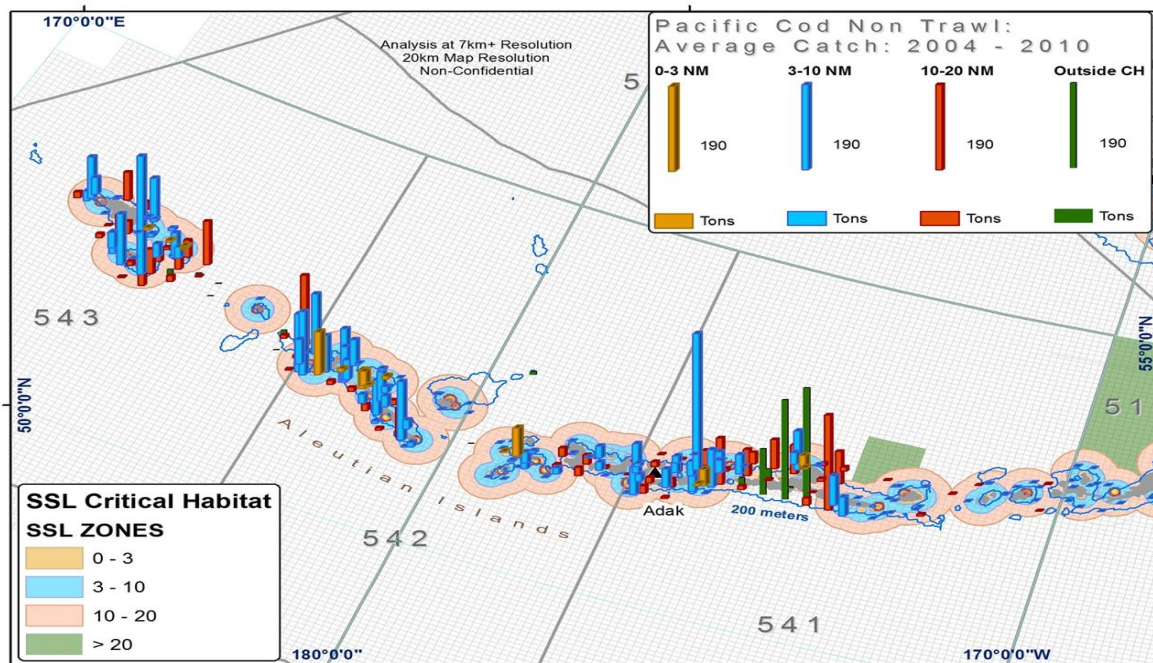


Figure 7 2004 through 2010 average location of Pacific cod harvested by non-trawl vessels (hook-and-line, pot, and jig gear)

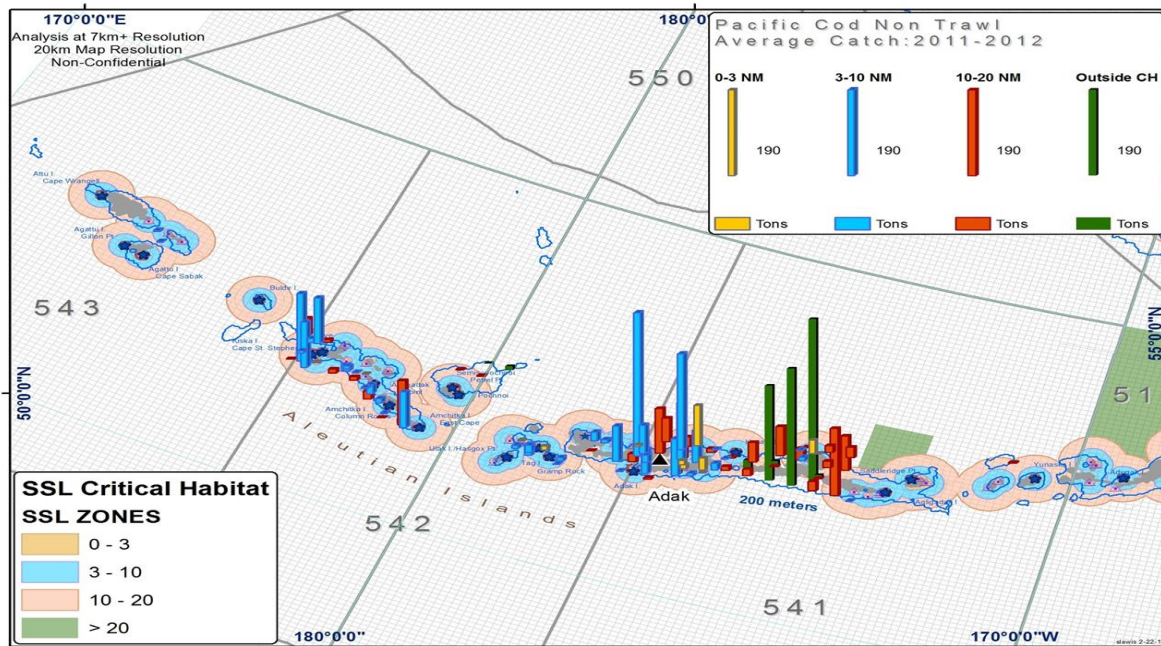


Figure 8 2011 through 2012 average location of Pacific cod harvested by non-trawl vessels (hook-and-line, pot, and jig gear)

The timing of the BS and AI Pacific cod fishery differ depending on the area. During the 2010 through 2012, the Pacific cod fishery first starts in the BS immediately following the January opener and then peaking in mid-February. Effort in the AI appears to start in earnest mid-February followed by a peak harvest in mid-March (see Figures 9 and 10).

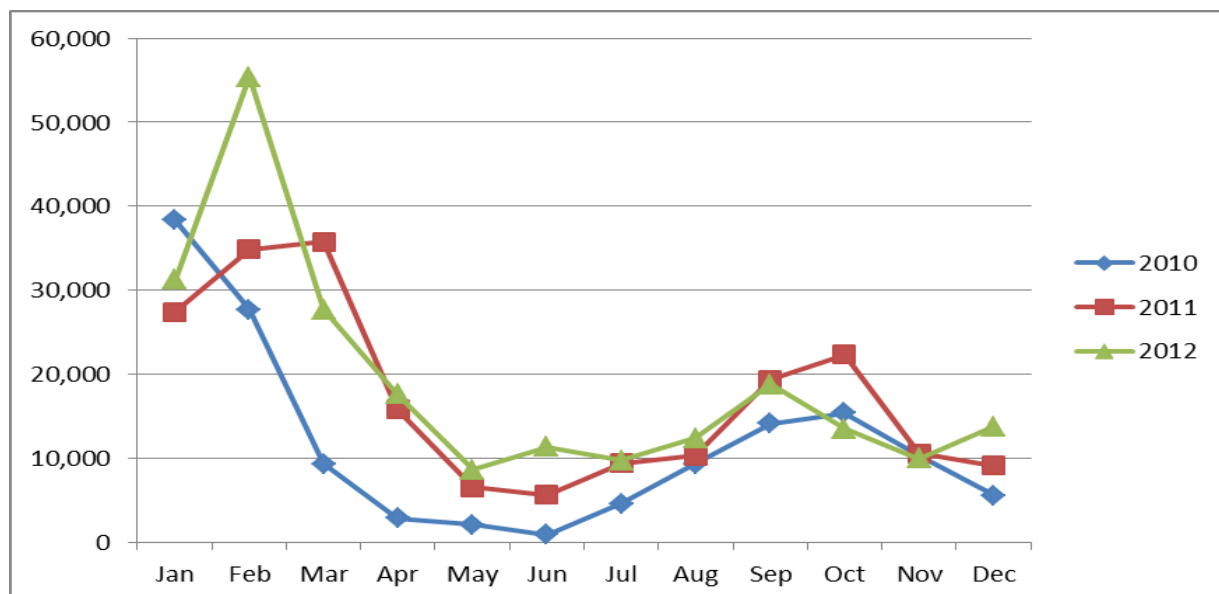


Figure 9 Total retained harvest of Bering Sea Pacific cod by month, 2010 through 2012

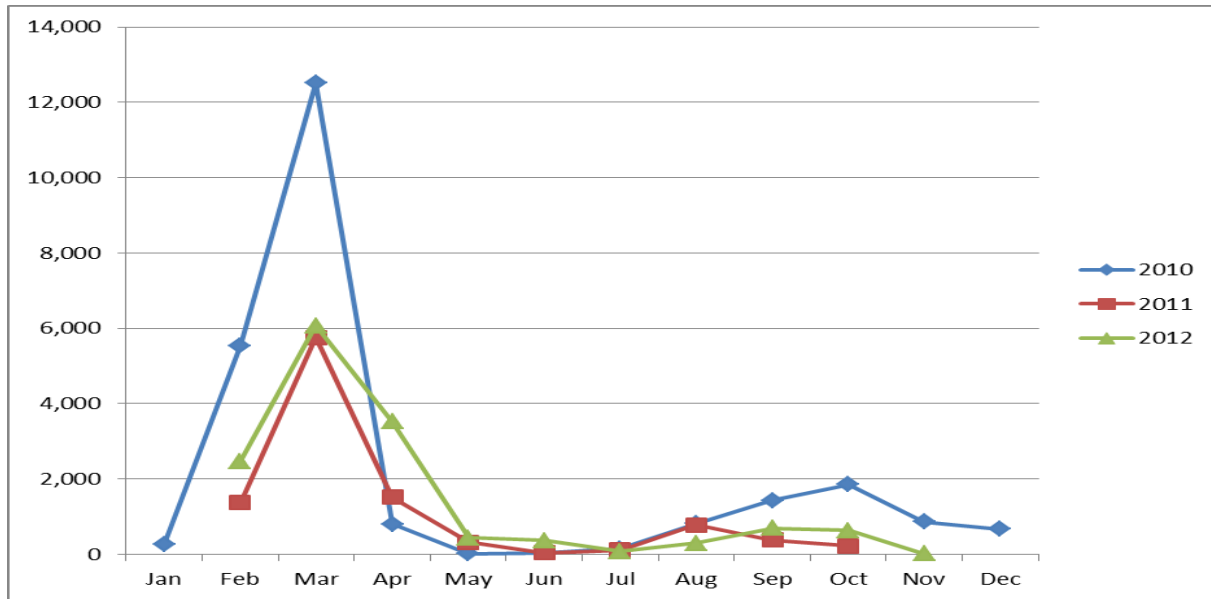


Figure 10 Total retained harvest of Aleutian Islands Pacific cod by month, 2010 through 2012

Figure 11 shows when Pacific cod fishing occurs in the Aleutian Islands by sector during 2004 through 2010. The chart represents the average percentage of Pacific cod harvested in a single week in relation to the total harvest of Pacific cod in the Aleutian Islands. On average, trawl catcher/processors start fishing for Pacific cod in week 8, mid-February, and continue fishing for Pacific cod through week 12 in late March. This is due to Pacific cod aggregating in the Aleutian Islands during this time period, allowing efficient harvest by trawl vessels. Catch of Pacific cod outside of that time period is mostly incidental catch in other fisheries. Fishermen have indicated that it is hard to find aggregations of Pacific cod in sufficient amounts to warrant trawling after mid-April. Trawl catcher vessels, including mothership activity follow the same pattern. The spike in activity on week 14 corresponds with the April 1 opening of the B season fishery for trawl gear.

Non-trawl vessels spread the catch of Pacific cod in the Aleutian Islands throughout the year. Seasonality of the non-trawl fishery still occurs with A season catch in the Aleutian Islands starting to increase in week 7, mid-February, and continuing until week 17 at the end of April. The B season catch of Pacific cod in the Aleutian Islands by non-trawl vessels in week 33 corresponds with August 15, the B season start date for hook-and-line catcher/processors that occurred in the baseline years 2004–2010. After 2010, the August 15 date was changed to June 10 and in 2011 and 2012 catch of Pacific cod in the Aleutian Islands occurred as early as week 30 at the end of July.

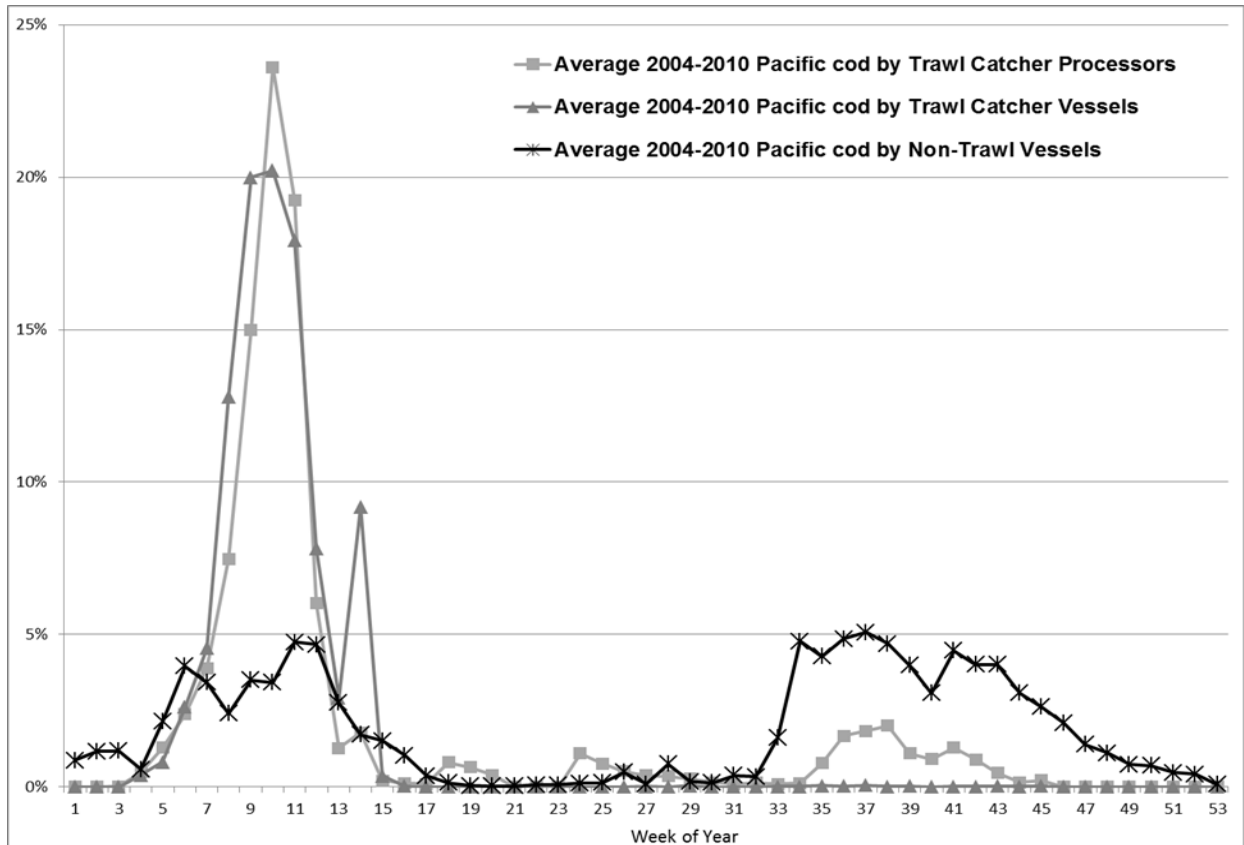


Figure 11 2004 through 2010 average weekly percentage of Pacific cod catch by sectors

Distribution of AI Pacific Cod Processing

This section provides a summary of Pacific cod processing history in Area 541/542 from 2003 through 2012. Historically, a portion of the BSAI Pacific cod ITAC allocated to catcher vessels has been harvested in Area 541/542. A portion of this AI harvest has also typically been processed offshore, by motherships, floating processors, or catcher processors acting as motherships.

During the 2003 through 2009 period, the majority of Area 541/542 Pacific cod was delivered shoreside, primarily to the plant in Adak. Currently, the only two communities in the AI (Area 541) with shoreside processing plants are Adak and Atka. Adak is the only plant, at this time, located in the AI with the capability to process large quantities of Pacific cod. The plant in Atka does not currently have a Pacific cod processing operations, but Aleutian Pribilof Island Community Development Association (APICDA) has indicated they are planning to add a Pacific cod capability in the near future; in the past, Atka has used a floating processor to provide processing for Pacific cod and other species.

Table 8 provides the annual count of CVs that deliver Area 541/542 Pacific cod to the offshore sector and shorebased processor plants and a count of offshore mothership and floating processors from 2003 through 2012. The number of CVs that delivered to the offshore sector has ranged from a low of 9 in 2005 to a high of 23 in 2010. The number of offshore motherships and floaters receiving Area 541/542 Pacific cod from CVs during 2003 through 2012 has ranged from a high of 6 in 2008 to a low of 3 in 2003 and 2005. CVs delivering Area 541/542 Pacific cod to any shoreplant has ranged from a high of 55 in 2008 to a low of 14 in 2011.

Table 8 Number of CVs delivering to offshore and shoreplants and the number of AFA/crab/AM 80 motherships and floaters

| Year | Number of CV delivering to AFA/Crab/AM80 motherships and floaters (Areas 541 & 542) | Number of AFA/Crab/AM 80 motherships and floaters (Areas 541 & 542) | Number of CV delivering to shoreplants (Areas 541 & 542) |
|------|---|---|--|
| 2003 | 18 | 3 | 47 |
| 2004 | 12 | 4 | 30 |
| 2005 | 9 | 3 | 25 |
| 2006 | 11 | 4 | 35 |
| 2007 | 13 | 5 | 44 |
| 2008 | 21 | 6 | 55 |
| 2009 | 13 | 5 | 33 |
| 2010 | 23 | 5 | 21 |
| 2011 | 14 | 4 | 14 |
| 2012 | 13 | 4 | 34 |

Source: Blend Catch Accounting.

Table originates from pivot file BSAI_Pcod_Vname (08-27) and AI_Pcod_Allocation Oct 2013.

While the deliveries of Area 541/542 Pacific cod cannot be provided on an individual sector level due to confidentiality, Table 9 shows how much of the total catch catcher vessel Pacific cod harvest from Area 541/542 was delivered to the offshore sector versus shoreside sector. To avoid confidentiality restrictions concerning shoreside landings of Area 541/542 Pacific cod, the landings to the shoreplants in Adak and Atka were combined with several other shoreplants in other Alaska communities. The data shows that the shoreside sector received an increasing share of the Area 541/542 Pacific cod deliveries from 2003 through 2007. Shoreside deliveries ranged from 52% in 2003 to 83% in 2007, with an average share across those years of about 73%. The plant in Adak received the majority of the shoreside deliveries of Area 541/542 Pacific cod. In contrast, the offshore sectors received a high of 48% in 2003 and a low of 17% in 2007, with an average share across those years of about 27%.

In 2008, the shoreside share of Area 541/542 Pacific cod diminished to 42%, while the offshore sectors increased to 58%. In 2009, the processing distribution was similar to the previous year, with shoreside share at 71% and the offshore sector at 29%. In 2010 and 2011, the closure of the shoreside plant in Adak significantly impacted the processing distribution of Area 541/542 Pacific cod between the shoreside processor and offshore processing vessels. The shoreside portion of Area 541/542 Pacific cod diminished to 4% in 2010 and 1% in 2011, while offshore sectors increased dramatically to 96% in 2010 and 99% in 2011. In 2012, the portion of Area 541/542 Pacific cod delivered to shoreside processors increased to 61% due to the Adak plant accepting deliveries of Pacific cod, while the amount delivered to offshore processors declined to 39%.

Table 9 Amount of CV Pacific cod harvested in Areas 541/542, by processing sector, 2003 through 2012

| Year | CV deliveries to AFA/Crab/AM80 motherships and floaters (Areas 541 & 542) | | | Shoreside landings (Areas 541 & 542) ¹ | | | CV cod landings in Areas 541 & 542 | Total CV cod catch in BSAI | Percent of Areas 541 & 542 CV cod landings relative to total CV cod catch in BSAI |
|------|---|---------|-----------|---|---------|-----------|------------------------------------|----------------------------|---|
| | mt | % of AI | % of BSAI | mt | % of AI | % of BSAI | | | |
| 2003 | 8,209 | 48% | 13% | 9,033 | 52% | 14% | 17,242 | 65,353 | 26 |
| 2004 | 4,153 | 31% | 7% | 9,345 | 69% | 17% | 13,498 | 55,700 | 24 |
| 2005 | 1,521 | 19% | 3% | 6,478 | 81% | 13% | 8,000 | 50,574 | 16 |
| 2006 | 1,324 | 21% | 3% | 4,879 | 79% | 10% | 6,203 | 50,242 | 12 |
| 2007 | 2,147 | 17% | 5% | 10,163 | 83% | 22% | 12,310 | 46,743 | 26 |
| 2008 | 6,514 | 58% | 14% | 4,764 | 42% | 10% | 11,278 | 47,382 | 24 |
| 2009 | 3,307 | 29% | 8% | 8,272 | 71% | 20% | 11,579 | 40,532 | 29 |
| 2010 | 8,016 | 96% | 18% | 291 | 4% | 1% | 8,307 | 43,254 | 19 |
| 2011 | 7,726 | 99% | 12% | 43 | 1% | 0% | 7,769 | 64,617 | 12 |
| 2012 | 3,056 | 39% | 4% | 4,864 | 61% | 7% | 7,927 | 69,551 | 11 |

Source: Blend Catch Accounting.

Table originates from pivot file BSAI_Pcod_Sector (08-08) and AI_Pcod_Allocation Oct 2013.

¹Includes landings to Adak, Akutan, Dutch Harbor, and other Alaska communities.

Adak and Atka Processing Capacity and Activity

As noted above, there are two AI communities with shoreplants: Adak and Atka. This section briefly profiles these communities, as they are the expected beneficiaries of the AI regionalized delivery requirement.

Adak is located on Kuluk Bay on Adak Island in the Aleutian chain. It is the southernmost community in Alaska. It lies 350 miles west of Unalaska in the Aleutian Island chain and is not a CDQ community. The Aleut Corporation acquired the majority of Adak's former military facilities in 2004. Since that time, the Aleut Corporation has continued its efforts to develop Adak as a civilian community with a private sector economy focused heavily on commercial fishing. Adak is pursuing a broad range of fisheries for a resident fleet to be able to deliver to Adak Fisheries, the shoreside processor located on Adak.

The development of a local residential fleet has been a goal of the local leadership, but currently the locally-owned catcher vessel fleet is small. In addition, the fleet is limited in their fishing opportunities in the AI subarea, due to the size and range of the vessels.

Most commercial fishing deliveries to Adak are to a single processing plant from larger vessels from outside the area. Of the species processed, Pacific cod, halibut, and sablefish have been the primary species. The community has also seen some crab and Pacific cod activity related to other companies, but these companies are not physically located in the community. During the 2003 to 2009, the Adak processing plant was most activate from January through March followed by a relatively quiet period from April through June, and then running about half-speed from July through September before activity tapering off from October into November. The A season Pacific cod fishery is the main source of income for the plant (and raw fish tax revenue for the City of Adak), accounting for about 75% of the plant revenue. The plant has the capability to process one million round pounds (454 mt.) of Pacific cod daily.¹

As noted in the October 2012 version of the Steller Sea Lion Protection Measures EIS, Chapter 10: Community Impacts, during 2004 through 2010, the Adak shoreplant accepted deliveries of Pacific cod from Area 541 every year. The shore-based processor accepted deliveries from Area 542 for every year 2004 through 2009, and accepted deliveries from Area 543 for every year 2004 through 2008. As part of the EIS, Adak Fisheries (now Adak Seafood) did provide a confidentiality waiver for harvest volume for the years 2002 through 2008. The volume of Pacific cod landings from the AI subarea processed at Adak Fisheries was substantial, accounting for an average of 63% of the total CV landings of Pacific cod from

¹ Source: Dave Fraser, Adak Community Development Corporation, July 2013.

the AI subarea. In some years, the proportion of Pacific cod from the AI subarea landings processed at the shore plant was over 80%. The high level of processing at the Adak facility suggests an overwhelming importance the plant plays in the AI Pacific cod fishery. The vast majority of AI Pacific cod comes from Area 541.

With no other shore-based processor in the community, the Pacific cod processing activity at the Adak shoreplant accounted for a large proportion of effort and local employment in Adak. The A season Pacific cod fishery “overwhelms anything else that happens during the rest of the year, not just in terms of volume at the plant, but in terms of crew utilizing local businesses (the fuel, dock, store, and bar); without A season cod, the plant does not survive” (EDAW 2008).

Again citing information from Chapter 10 of the Steller sea lion EIS, one of the difficulties of the Adak shoreplant has been the numerous ownership changes since its establishment in 1999 as Adak Seafoods. In mid-July 2000, Norquest became a predominant partner. In January 2002, Icicle Seafoods became a relatively equal partner in the operation, which operated as Adak Fisheries, LLC. Other ownership changes ensued, although until recently, the company still operated as Adak Fisheries, LLC. In 2009, the price of Pacific cod dropped to less than half of the 2008 price. As a result, Adak Fisheries, LLC. struggled to meet its financial obligations, and in the end, filed for Chapter 11 bankruptcy in September 2009. During 2010 and 2011 fishing years, financial difficulties surrounding the Adak shoreplant resulted in no processing of Pacific cod. In 2012, the shoreplant was once again open for business, processing a large portion of Area 541/542 Pacific cod. In April 2013, Icicle Seafoods closed its operation in Adak citing concerns about the health of the region’s Pacific cod resource and increased regulatory uncertainty surrounding AI Pacific cod. In June 2013, the City of Adak was the highest bidder in an auction for the processing equipment formerly owned by Adak Seafood, LLC. The intent of the purchase by the City was to keep the processing equipment in place as a turnkey operation in order to facilitate the expedited reopening of the plant. The City of Adak is currently working with Aleut Enterprise, the owner of the processing building, to find an operator for the fish processing plant in time for the 2014 Pacific cod A season.

Atka is located on Atka Island towards the end of the Aleutian Island archipelago. Atka is a CDQ community, represented by APICDA, and has a small onshore processor (Atka Pride Seafoods) which serves the local fleet and employs local residents. The processing plant is a joint venture between APICDA Joint Ventures and the Atka Fisherman’s Association. They formed Atka Pride Seafoods in 1994, began processing in 1995, and have processed every year since. The primary species processed are halibut and sablefish, and the commercial fleet delivering to Atka is involved mainly in those fisheries. The shore processor recently completed a \$4 million expansion, and will begin another major round of improvement in 2014 to make the plant a year-round operation. Once these improvements are completed sometime in 2014 or 2015 at the latest, the processing capacity of the shoreplant will be up to and no more than 400,000 round pounds of Pacific cod per day (181 mt.)².

Impacts of AI Pacific Cod Allocation and Regionalized Delivery Requirement

Catcher Vessel Allocation

This section provides a brief description of the CV direct fishing allowance (TAC minus CDQ and ICA) of Area 541/542 Pacific cod to the CV sectors and its potential impacts. As noted in Table 7, amongst the CV sectors, trawl vessels consistently harvested the greatest portion of Area 541/542 Pacific cod amongst all the CV sectors. Between 2003 and August 2013, the trawl CV sector harvested 56% of the total Area 541/542 Pacific cod. The other sectors that have harvested a sizable portion of Area 541/542 Pacific cod during the 2003 through August 2013 period are the trawl CP sector at 30% and hook-and-line CP sector

² Source: Larry Cotter and John Sevier, APICDA, August 2013.

at 10%. In 2012 and 2013, the pot CV sector contributed an increasing portion of Area 541/542 Pacific cod harvest.

An Area 541/542 Pacific cod allocation to the CV sectors would cause the displacement of historical CP sector participants from the fishery. As noted in Table 7, from 2003 through August 8, 2013, the trawl CP sector harvested the largest CP proportion of Area 541/542 Pacific cod at 30% followed by the hook-and-line CP sector at 10%. Depending on the proportion of the allocation of Area 541/542 Pacific cod to the CV sector, these two CP sectors will likely be effect from this allocation. As noted in Table 10, the average annual first wholesale value of Area 541/542 Pacific cod fishery for the trawl CP sector was \$8.5 million, while the average annual first wholesale value of the Area 541/542 Pacific cod fishery for the hook-and-line CP sector was \$2.8 million. Depending on the portion of the Area 541/542 Pacific cod allocated to the CV sectors, these CP sectors will likely lose some portion of the first whole value earned from harvesting and processing of Area 541/542 Pacific cod. Although the CP sectors could catch their portion of the sector's Pacific cod allocation in the BS to compensate for the loss of AI Pacific cod, there are disadvantages to the CP sectors from being displaced from the AI Pacific cod fishery. Antidotal reports indicate that AI Pacific cod are larger in size and command a higher price in the marketplace than BS Pacific cod. If true, then some portion of the AI Pacific cod first wholesale value cannot be replaced from BS Pacific cod. In addition, there are likely some economies of scale for some CP vessels that operate in this fishery in addition to other AI fisheries, so a loss of the AI Pacific cod fishery could increase costs for these CP vessels through a loss of economies of scale. Finally, a CV allocation could result in more localized pressure on the Pacific cod located around Adak and Atka since CV trawl vessels tend to fish for Pacific cod in those areas versus CP trawl vessels (see Figures 1 through 4).

Table 10 First wholesale value for the hook-and-line CP and trawl CP sectors from Area 541/542 Pacific cod fishery from 2003 through 2012

| Year | Hook-and-line | Trawl | Total |
|---------|---------------|------------|------------|
| 2003 | 927,728 | 12,697,806 | 13,625,533 |
| 2004 | 2,979,410 | 10,098,668 | 13,078,078 |
| 2005 | 2,948,300 | 9,841,072 | 12,789,371 |
| 2006 | 3,227,198 | 11,618,236 | 14,991,153 |
| 2007 | 1,625,864 | 19,923,755 | 21,837,486 |
| 2008 | 3,775,964 | 6,359,927 | 13,294,625 |
| 2009 | 2,735,344 | 4,127,668 | 7,609,310 |
| 2010 | 2,800,298 | 4,834,063 | 8,724,419 |
| 2011 | 1,936,897 | 2,435,413 | 4,381,610 |
| 2012 | 4,704,585 | 3,134,642 | 7,839,227 |
| Average | 2,766,159 | 8,507,125 | 11,817,081 |

Source: AKFIN Comprehensive Blend Catch Accounting.

Table originates from pivot file 541542_PCOD_CP(09-04) and AI_Pcod_Allocation Oct 2013.

Another potential effect from an allocation of Area 541/542 Pacific cod to the CV sectors is the risk that in some circumstances, there may not be enough fishing capacity to harvest all of Area 541/542 Pacific cod allocation. It is likely that this risk increases as the portion of Area 541/542 Pacific cod allocated to the CV sectors increases. As noted above, the trawl CV sector has harvested the largest portion of Area 541/542 Pacific cod from 2003 through August 8, 2013, at 56%. With the exception of the recent increase harvest by the pot CV sector, all other CV sectors harvest significantly smaller quantities of Area 541/542 Pacific cod. As a result, in those unusually circumstances when the trawl CV sector harvests all of their A

season BSAI sector allocation in BS prior to harvesting their CV allocation in Area 541/542, there is a risk that a large portion of the CV allocation would remain unharvested.

One way to avoid the risk of stranding Pacific cod is open the fishery to other vessels. If the trawl CV sector does not have sufficient A season BSAI Pacific cod allocation to harvest the Area 541/542 Pacific cod during the A season fishery, NMFS could authorize the CP sectors to harvest Area 541/542 Pacific cod. The difficulty of this approach is the timing of the AI Pacific cod fishery. As noted in Figures 9 and 10, the AI Pacific cod fishery tends to immediately follow the BS Pacific cod fishery. Assuming this trend continues in the future, once notified of the opening, there may not be sufficient time for CP vessels to move into the AI Pacific cod fishery in sufficient numbers to harvest the entire A season limit.

Another approach that might be used to address potential stranding of Area 541/542 Pacific cod is to open deliveries of Pacific cod to other processors at higher area catch limit levels. It is assumed that this approach would require Area 541/542 Pacific cod to be delivered to AI shoreplants when the area limit is below a specific amount, and when the area limit exceeds that specific amount, any amount over that area limit could be delivered to processors other than AI shoreplants. An important element of this approach is determining an appropriate area limit that would trigger open deliveries. Too high of an area limit would likely result in stranded Area 541/542 Pacific cod, while too low of an area limit would likely reduce the benefits of the delivery requirement. Table 8 provides some historical context for Area 541/542 Pacific cod harvest and processing by the shoreside processors, recognizing that shoreside landings reported in this table include not only Adak, but Akutan, Dutch Harbor, and other Alaska communities. Other factors that could be used to set an appropriate area limit for open deliveries is the number of processing days for A season Area 541/542 Pacific cod, which is approximately 28 days under current RPA limitations (Figure 11), combined with processing capacity of the two shoreplants. For Adak, the reported processing limit is 1 million round pounds per day (454 mt)³, and for Atka the processing limit is up to but no more than 400,000 round pounds per day (181 mt)⁴. Extrapolating the processing capacity of the two AI shoreplants over a 28 day fishery, both shoreplants combined could process a maximum of 17,780 mt. This maximum production capacity of the two shoreplants over a 28 day period could be used as area limit that would trigger open deliveries.

Regionalized Delivery Requirement

The regulations define a shoreside processor as any person or vessel that receives, purchases, or arranges to purchase, unprocessed groundfish except CPs, motherships, buying stations, restaurants, or persons receiving groundfish for personal consumption or bait (§ 679.2). The definition of a shoreside processor does not specifically exclude a stationary floating processor (SFP), which is defined as a vessel of the United States operating as a processor in Alaska State waters that remains anchored or otherwise remains stationary in a single geographic location while receiving or processing groundfish harvested in the GOA or BSAI. If the Council wants to exclude SFPs from regionalized delivery requirement, the Council should be explicit in its motion to exclude SFPs.

Unlike previous regionalized delivery requirements that were mandated by Congress or based on the authority in the Limited Access Privilege Program (LAPP) of the Magnuson-Stevens Act (MSA), this delivery requirement would likely rely on a two relatively broad and discretionary management measures of the MSA for Council authority. Specifically, the MSA provides a definition of “fishing community” and the MSA also require fishing communities to be considered in the development of the fishery impact statement. In the MSA, the term “fishing community” is defined as a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and U.S. fish processors that are

³ Source: Dave Fraser, Adak Community Development Corporation, July 2013.

⁴ Source: Larry Cotter and John Sevier, APICDA, August 2013.

based in such communities. In addition, National Standard 8 requires that conservation and management measures in fishery management plans “shall, consistent with the conservation requirements of this Act take into account the importance of fishery resources to fishing communities in order to (1) provide for the sustained participation of such communities, and (2) to the extent practicable, minimize adverse economic impacts on such communities.”

Although National Standard 8 recognizes the importance of fishery resources to fishing communities and requires the Council to consider community impacts, there is a fundamental question of how to balance the requirements of this standard with the other national standards in the MSA. National Standard 8 states that “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...” [MSA 301(a)(8)]. Thus, it is fairly clear that measures to protect community interests must remain consistent with the overall conservation goal of fisheries management to “prevent overfishing, while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.” [MSA 301(a)(1)]. In effect, if a core conservation measure is necessary, it follows that community interests are of secondary priority. However, greater ambiguity exists when balancing interests under National Standard against one another, as there is no explicit hierarchy to their importance. Requirements that the Council consider efficiency in the utilization of fishery resources, as state in National Standard 5, for example, may or may not take precedence over the consideration of community interests under National Standard 8 (Kimball, 2003).

If the Council moves forward with a regionalized delivery requirement for the AI Pacific cod fishery, it will be crucial for the Council to identify their specific goals associated with an allocation of Area 541/542 Pacific cod to the CV sectors with a regionalized delivery requirement to AI shoreplants, of which there are only two in the foreseeable future and how those goals meet the MSA and different National Standards.

Since Adak and Atka are currently the only AI communities with the potential AI shorebased processing facility at this time, these processors are likely the only communities that will benefit from a regionalized delivery requirement. Despite the absence of a local CV fleet, Adak does receive a significant benefit through shore-based processing of Pacific cod from Area 541/542 Pacific cod, and as a port of goods and services for CVs and CPs immediately before and after the Area 541/542 Pacific cod fishery. As noted Table 10, the exvessel value paid to the CVs delivering Area 541/542 Pacific cod to the shoreside processors ranged from \$9.9 million in 2007 to a low of \$29 thousand in 2011. Looking at the first wholesale value of Area 541/542 Pacific cod delivered to shorebased processing plants ranged from high of \$16.9 million in 2007 to a low of \$73 thousand in 2011.

The Council’s April 2013 motion concerning the AI Pacific cod allocation and delivery requirement did not specify a specific allocation to the CV sectors. At a minimum, Alternatives 2 and 3 from the Steller sea lion EIS could provide an allocation to trawl and non-trawl CV sectors. As noted in Table 4, the Steller sea lion EIS places limits on trawl and non-trawl CP sector catches in Area 541/542 and Area 543, so at a minimum, if the CP vessels harvest the full amount of Area 541/542 Pacific cod available, 52% of the area Pacific cod TAC would be available for the trawl CV and non-trawl sectors. However, since the Steller sea lion EIS does not restrict delivery of Area 541/542 Pacific cod, some if not all of this Pacific cod could be delivered to motherships or CPs acting as motherships. As noted in Table 5, the 52% of Area 541/542 Pacific cod using 2013 TAC would be 4,715 mt. A requirement to deliver, at a minimum the Steller sea lion EIS required 52% of Area 541/542 Pacific cod ensured for the CV sectors to AI communities with shorebased processors could provide an annual opportunity for economic activity. This activity would likely occur January through March and from July through September. Of course, the Council could provide a greater allocation of Area 541/542 Pacific cod than the 52% that could be allocated to the CV sectors from the Steller sea lion EIS. Given the dependency of Adak on shore-based processing of Pacific cod from the AI, substantial community-level impacts in the form of increased

economic activity are anticipated for Adak from a CV allocation coupled with a delivery requirement to AI communities with shorebased processors. Yet, the uncertainties surrounding the operation of the Adak plant bring any potential community benefits from a regionalized delivery requirement into question.

In contrast to the increased economic activity for the Adak shoreplant, the offshore processing vessels will experience a reciprocal decline in the Area 541/542 Pacific cod economic activity. As noted in Table 11, the ex-vessel value and the first wholesale value of Area 541/542 Pacific cod fishery for the offshore group has been similar to the shoreside group. The ex-vessel value paid to CVs delivering Area 541/542 Pacific cod to offshore processors ranged from a high of \$8 million in 2008 to a low of \$1.1 million in 2006. First wholesale value ranged from a high of \$13 million in 2011 to a low of \$1.8 million in 2005.

Table 11 Ex-vessel and first wholesale value of Area 541/542 Pacific cod for the offshore processing and shoreside processing

| Year | CV deliveries to AFA/Crab/AM80 motherships and floaters for Areas 541 & 542 Pacific cod | | Shoreside landings for Areas 541 & 542 Pacific cod ¹ | | Total ex-vessel value for Areas 541 & 542 Pacific cod (\$) | Total wholesale value for Areas 541 & 542 Pacific cod (\$) |
|------|---|----------------------|---|----------------------|--|--|
| | Ex-vessel value (\$) | Wholesale value (\$) | Ex-vessel value (\$) | Wholesale value (\$) | | |
| 2004 | 1,438,632 | 4,215,241 | 4,940,733 | 8,960,770 | 6,379,365 | 13,176,012 |
| 2005 | 834,218 | 1,851,187 | 3,418,533 | 8,628,638 | 4,252,751 | 10,479,825 |
| 2006 | 1,117,861 | 2,082,272 | 3,696,228 | 6,890,168 | 4,814,089 | 8,972,439 |
| 2007 | 2,005,352 | 3,884,692 | 9,922,846 | 16,900,350 | 11,928,197 | 20,785,042 |
| 2008 | 8,011,571 | 11,668,067 | 5,952,529 | 8,407,745 | 13,964,100 | 20,075,812 |
| 2009 | 1,638,430 | 3,313,337 | 4,432,902 | 9,824,832 | 6,071,332 | 13,138,169 |
| 2010 | 4,061,626 | 11,950,463 | 142,547 | 418,484 | 4,204,173 | 12,368,947 |
| 2011 | 4,705,230 | 13,024,867 | 29,351 | 73,322 | 4,734,582 | 13,098,189 |
| 2012 | 1,734,501 | 4,654,657 | 3,349,148 | 7,941,192 | 5,083,650 | 12,595,849 |

Source: AKFIN Comprehensive Blend Catch Accounting.

Table originates from pivot file BSAI_Pcod_Value (08-15) and AI_Pcod_Allocation Oct 2013.

As a port of goods and services, Adak receives a substantial amount of economic activity that multiples locally for a range of goods and series that exist in the community. Depending on the proportion of Area 541/542 Pacific cod to the CV sectors, the benefits to Adak from the shorebased processing could increase. As noted in Chapter 10 of the Steller Sea Lion Protection Measures EIS, CV port visits associated with the AI Pacific cod fishery make up virtually all of the CV groundfish target-related port visits in Adak in 2004 through 2011. Again, this confirms the high degree of dependency of Adak on CV port visits while targeting Area 541/542 Pacific cod.

One of the impacts of allocating Area 541/542 Pacific cod to CV with delivery requirements to AI communities with shorebased processors is the potential reduction in CP port visits, which, as indicated in the Steller Sea Lion Protection Measures EIS, Chapter 10: Community Impacts, may be a source of significant economic activity for AI communities. Vessels may use these port visits for crew transfers, provisions, fueling, product offloads, and purchases of other local goods and services, among other activities. For Adak in particular, support services related to CP port calls make up a substantial portion of the local fishing economy. As a result, allocations of Area 541/542 Pacific cod to the CV sectors greater than Steller sea lion EIS Pacific cod limit for CPs will likely result in lost economic activity for Adak from CP port visits. In addition, as with other constraints on landings, regionalized delivery requirements can reduce market and processing innovations that might be developed without the constraint.

Exemption of Regionalized Delivery Requirements of AI Pacific cod

There may be a need for an exemption from delivery requirements given the following reasons: 1) will likely only be two AI shoreplants in the immediate future, 2) the Adak shoreplant has an inconsistent processing history over the last decade, 3) and the Atka shoreplant is estimated to only be capable of processing 5,068 mt of Pacific cod in a 28 day period. Recognizing this limitation in a regionalized delivery requirement, the Council requested the paper include a discussion of a potential waiver to the delivery requirement. In addition, the Council also requested the paper include the experiences under the

Western Aleutian Island golden king crab regional delivery requirements implemented in the BSAI crab rationalization program.

Currently, only the Adak shoreplant has the potential to process a significant amount of Area 541/542 Pacific cod. There are currently uncertainties surrounding this processing plant, which highlights the risk of having insufficient processing capacity in the AI Pacific cod fishery. The processing capacity of the two plants combined during a four-week period is approximately 17,780 mt. Comparing this processing capacity to the current Area 541/542 Pacific cod area limit under SSL Alternatives 2 and 3 (Table 4) and existing harvest of Area 541/542 Pacific cod under the existing RPA limitations (Table 6), there appears to be sufficient processing capacity. However, if the Adak shoreplant is not operating, the one remaining plant does not have the capacity to process all of the Area 541/542 Pacific cod, which will result in stranding of AI Pacific cod.

One approach to address insufficient processing and stranding of Area 541/542 Pacific cod would be to have no delivery requirement after a specific date. After that specific date, Area 541/542 Pacific cod could be delivered to either offshore processors or shoreplants in the AI or outside the AI. However, one of the difficulties of this approach is the short AI Pacific cod fishery. As noted in Figures 10 and 11, the AI Pacific cod fishery occurs in a relatively short two month period early in the fishing year (February and March). This is due to Pacific cod aggregating in the Aleutian Islands during this time period, allowing efficient harvest by trawl vessels. Once the aggregation of AI Pacific cod has passed, catch of AI cod diminishes significantly due to a loss of harvest efficiency. To effectively address the loss of processing capacity from a closure of the Adak shoreplant using this approach, NMFS would have exempt delivery requirements prior to the opening of the A season. This would allow processing of Area 541/542 Pacific cod in other shoreplants and offshore.

A better approach may be to have NMFS exempt regionalized delivery requirements prior to the A season AI Pacific cod fishery if the Adak plant indicates it will not take deliveries of Pacific cod. This approach is similar to the exemption processed used in the Western Aleutian Islands golden king crab fishery.

In the Western AI golden king crab fishery, participants in the past had voiced concerns with processing capacity. Specifically, the crab rationalization program required that 50% of the catcher vessel Class A IFQ be landed in the area west of 174° West longitude (the West region). The purpose of this delivery requirement was to support processing facilities in the remote West region. In the past, shore-based crab processing in the west region occurred only at the Adak shoreplant. The 2009/2010 Western Aleutian Islands golden king crab TAC was 2.835 million pounds, with 283,500 pounds for the Adak community allocation. The fleet consists of two CVs and a one CP. Two individual processor quota (IPQ) holders hold nearly 99% of the entire West designated individual processor quota. The season starts on August 15 and ends on May 15 of the following year.

In August of 2010, the operator of the Adak shoreplant filed for bankruptcy. Closure of the Adak plant precluded the ability for CVs to delivery crab harvested with their West designated individual fishing quota (IFQ). West designated IPQ holders lacked a facility to process crab with their West designated IPQ. The bankruptcy filing prompted participants in the fishery to assert that an exemption from the regional landing requirement should be available to address a shortage of processing capacity in the West region. In response, the Council recommended the NMFS undertake emergency rulemaking provide a regional landing exemption in the 2009-2010 season, which was implemented February 18, 2010 and extended August 17, 2010 and was in effect through February 20, 2011. At the same time the Council advanced Amendment 37 to the crab program which provided an exemption from the West region landing requirement, in the event that qualifying interested parties agree to that exemption. Amendment 37 was implemented on April 25, 2011.

Amendment 37 established regulations for eligible contract signatories in the Western Aleutian Islands golden king crab fishery to apply for an exemption to the West regional delivery requirements that apply to all West-designated IFQ and IPQ holders. Contract signatories include quota share holders with 20% of the West-designated quota share, processor shareholders with 20% of the West-designated quota share, and the municipalities of Adak and Atka. The regulations allow these signatories to complete an application to NMFS requesting an exemption from the West regional delivery requirements. Eligible participants could submit an application to NMFS anytime during the crab fishing year. Upon approval of the application, NMFS exempts all West-designated Class A IFQ and IPQ from the West delivery requirements for the remainder of the crab fishing year. Such an exemption enables all West-designated Class A IFQ and IPQ holders to deliver and receive Western Aleutian Islands golden king crab at processing facilities outside of the West region. Since implementation in February, 2011, NMFS has approved an application for annual exemption for this crab fishery for the 2011/2012 crab fishing year and the 2012/2013 crab fishing year. Although the application for an exemption has not been submitted for the 2013/2014 crab fishing year, it is likely an application will be submitted given the Adak plant is closed at this time.

Given the experience with the AI crab delivery requirements, the Council may want to include an exemption from regionalized delivery requirements of AI Pacific cod to AI shoreplants if the Adak shoreplant is closed. However, since the Western AI golden king crab is a limited access program and the AI Pacific cod fishery is not, the approach used to exempt Western AI golden king crab fishery from the regional delivery requirements may not be appropriate. A better approach for the AI Pacific cod fishery may be to have NMFS exempt regionalized delivery requirements prior to the A season AI Pacific cod fishery if the Adak shoreplant indicates it will not take deliveries of Pacific cod.

List of Prepares

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