
BSAI PACIFIC COD TRAWL CV COOPERATIVE PROGRAM

PUBLIC REVIEW



ROADMAP FOR PRESENTATION

- An overview of significant changes to elements and options and where applicable PPA impacts
 - Including highlighting issues and staff assumptions needing Council direction and clarification (Table 2-2 starting on page 54)
- Community impacts summary
- Overview of the Monitoring Section
- Overview of the implementation and EA
- Summary of how the PCTC Program addresses the purpose and need statement



ELEMENT 1 – COOPERATIVE STYLE

- Voluntary harvester cooperative with processor association
- Voluntary harvester cooperatives selection includes two options for cooperative formation: 1) no limitation on numbers of LLP licenses or % of catch history; 2) 3 eligible LLP licenses
- Harvesters have unlimited discretion to choose any cooperative and may freely move among cooperatives annually
- Under the PPA – cooperative harvest privileges are expected to reduce motivation to race for fish and to optimize harvest of CQ



ELEMENT 2.1

- Eligibility is determined by the use of an LLP license that authorized that vessel's legal landings of qualifying targeted trawl CV BSAI Pacific cod catch
 - Targeted cod catch history during qualifying years would be assigned to the LLP license as QS
 - Trawl CV that hold valid LLP license to use trawl gear in the BSAI but have no QS, they could still harvest cod as incidental catch in other fisheries but could not target cod in the BSAI
- The minimum threshold percent option to be assigned QS under Element 2.1, which ranges from 0.25%-1% by LLP holder, was not selected as part of the PPA



ELEMENT 2.2

- Provides 3 different qualifying year options, with different drop years and with and without C season
- Tables 2-87, 2-88, and 2-89 starting on page 175 provide LLP count and distribution of aggregated annual average qualifying landings by quintile groups under each of the qualifying year years
- Under the **PPA** (2009-2019) – Table 2-88 (page 176) with no C season, no drop years shows that 92 LLP licenses would qualify not including the 7 LLP licenses with transferable AI endorsements that also qualify
 - Lowest quintile group is 44 licenses each having annual average qualifying landings of less than 250 mt which as a group is 12% of the total qualifying landings
 - The 7 LLP licenses with transferable AI endorsements would be included in this quintile group
 - Highest quintile group is 5 licenses each having annual average qualifying landings greater than 1,000 mt which as a group is 17% of the total qualifying landings



ELEMENTS 2.3

- Element 2.3 addresses stacking of multiple eligible LLP licenses on a vessel
 - Includes two options absent an agreement by the license holder at the time of application; qualifying catch history used to generate QS assigned to the license is based on that agreement
 - Option 2.3.1 would divide the qualifying catch history equally between the licenses that authorized the legal landings
 - Option 2.3.2 owner of the vessel that made the landing would assign the catch to the LLP licenses **(PPA)**
 - In cases of multiple LLP licenses on vessel but not multiple area endorsements, the vessel's area specific qualifying catch history used to generate QS will be attributed according to the LLP license's area endorsement
 - In other words, a BS endorsed LLP license that authorized the BS qualified history would receive that history, while an AI endorsed LLP license that authorized the qualified history in the AI would receive that history



ELEMENTS 2.4

- Element 2.4 provides direction that each license will be issued BSAI cod CQ based on its share of the BSAI cod QS, and CQ would not be designed at the seasonal or subarea level
- **NMFS's is recommending to issue CQ by season as a tool to ensure the seasonal limits are not exceeded and allow for seasonal limits to be effectively enforced**
 - It would be difficult to rely solely on cooperative management of the seasonal limits without the ability to enforce the seasonal limits
- NMFS would issue CQ and rely on coop agreements to ensure the seasonal limits are not exceeded
- Rollovers from the A season to B season may occur
- Individual issuance of season CQ would limit the fleet's potential to fish their CQ entirely in one season



ELEMENTS 2.5 - 2.7

- Element 2.5 was selected as the PPA which would only allocate A-season and B-season QS, leaving C-season (15%) as a limited access fishery
 - Leaving the C season as a limited access fishery could reduce the potential of trawl CV sector harvesting all their CQ in the BS and the impacts this could have on other sectors also trying to harvest their allocation in the BS
 - This option would also likely result in some TAC and ICA being reallocated to other sectors later in the year
- Element 2.6 addresses management of groundfish species not allocated
- Element 2.7 would remove AFA BSAI trawl CV Pacific cod sideboard limits
 - **If Element 2.5 were selected as preferred, the Council may want to maintain the existing C season BSAI Pacific cod AFA non-exempt sideboard limits since the C season would be managed as a limited access fishery (Table 2-102 on page 195 provides the sideboard limits)**
 - **The Council may want to consider removing from regulations of the existing AFA non-exempt trawl CVs BSAI halibut PSC sideboard limits for the cod fishery since they are non-constraining relative to the existing halibut PSC limit**



ELEMENT 3 – PROHIBITED SPECIES LIMITS

- Option 3.1 Crab PSC would remain at the TLAS level
- Option 3.2 would establish separate halibut and crab PSC limits for the trawl CV sector and AFA C/P sector
- Option 3.3 would reduce PSC limits by 10% to 35% for halibut and 10% to 45% for crab PSC
- Option 3.4 if Element 2.5 is selected as the preferred alternative, then a separate C season halibut and crab PSC apportionments (5%-15%) before applying PSC limit reductions would be utilized
- Table 2-110 (page 206) provides the percent of halibut PSC apportioned to trawl CV and AFA CP sectors using the 3 qualifying years (assuming 391 mt halibut TLAS cod limit)
- Table 2-111 (page 207) provides percent of the crab PSC apportioned to the trawl CV and AFA CP sectors which is based on the proportion of cod allocated to the two sectors (using 2019 crab PSC limits)



ELEMENT 3 – PROHIBITED SPECIES CATCH LIMITS

- Option 3.3 would reduce halibut and crab PSC apportionment to the trawl CV sector for use in the BSAI cod fishery
- For halibut PSC (Table 2-113 on page 209):
 - At a 10% reduction, a 391 mt TLAS apportionment, would yield 339 mt – 344 mt depending on qualifying years
 - Would have constrained the trawl CV sector in 2012 and 2019
 - At a 35% reduction, at 391 mt TLAS apportionment, would yield 245 mt – 248 mt depending on qualifying years
 - Would have constrained the trawl CV sector 11 years out 16 years (2004-2019)
- For crab PSC limits (Table 2-114 on page 210):
 - Most of the crab PSC reductions would likely be non-constraining given the low PSC of the different crab species. The one exception is red king crab (Zone 1), which would have constrained the sector in the Zone 1 crab savings area in 2011 at 35% to 45% reduction
 - Crab Addendum shows the proposed 2022 crab PSC limits for red king crab (Zone 1) as well as other crab PSC limits



ELEMENT 3 – PROHIBITED SPECIES LIMITS

- Suboption 3.3.3 would phase in PSC limit reduction over 3 years
 - Table 2-119 on page 213 provides a phased in 25% PSC reduction over three years
- Option 3.4 (PPA) establishes a separate C season PSC limits for a trawl CV limited access fishery of between 5% to 15% but didn't select a percentage
 - Table 2-120 on page 215 provides 5% and 15% halibut and crab PSC C season apportionment
 - As shown in Table 2-121 on page 215, average C season PSC relative to the PSC limit is less than the proposed 5% to 15% C season apportionment
 - This results in overfunding the PSC limit for C season while underfunding the A and B season PSC limits, which could further constrain cooperatives for those PSC limits that are projected to be constraining – halibut and red king crab (Zone 1)



ELEMENT 3 – PROHIBITED SPECIES LIMITS

- From the perspective of the PPA:
 - Halibut – Assuming a trawl CV limit of 382 mt, C season would be 19 mt and A & B seasons limit after 25% reduction would be 272 mt
 - Remaining 91 mt of halibut PSC remains in the water
 - Despite the flexibility of the harvest specification process and the potential benefits of the use of pot gear to reduce halibut PSC, there is a potential that a 25% halibut PSC limit reduction could constrain cooperatives from harvesting all their CQ during periods of high Pacific cod TACs
 - Crab – Red king crab (Zone 1) would likely be the only crab PSC limit that could be constraining under the proposed 2022 crab PSC limits
 - Factoring in a 35% reduction of red king crab (Zone 1) PSC using 2022 proposed crab limits, would result in 545 animals for cooperative fishing for A and B seasons.
 - Would have constrained the sector in 2008, 2011, and 2016 (Table 2-106 on page 201)
 - Section 3.3 of the EA provides a framework for determining estimated crab PSC when using pot gear to harvest CQ (PPA)
 - Based on PSC composition during 2015-2020 in the BSAI Pacific cod fishery for trawl CV sector and pot CVs $\geq 60'$ sector
 - Table 3-8 (page 451) shows estimated PSC as a result of gear conversion under different pot gear use scenarios
 - As noted in the table, if 2% of the CQ is harvested using pot gear, it is estimated that Zone 1 crab savings area would be closed to cooperative fishing based on the proposed 2022 red king crab (Zone 1) PSC limit



ELEMENT 4 – GOA SIDEBOARDS

- Option 4.1 - All AFA non-exempt CVs and their LLPs will be sideboarded (except when participating in the CGOA Rockfish Program) based on GOA groundfish catch history during qualifying catch years from Element 2
 - Table 2-126 (page 229) shows the new calculated sideboard limits for all non-exempt AFA trawl CVs which are lower than the existing sideboard limits
 - Several of the limits are insufficient limits to allow directed fishing
 - In June, Council included language to prohibit directed fishing in regulations for SEO pollock, WGOA shallow-water flatfish, CGOA and EGOA deep-water flatfish, EGOA POP



ELEMENT 4 – GOA SIDEBOARDS

- In June, the Council did not include language to revise halibut PSC sideboard limits
- The document retained the analysis for revising halibut PSC sideboard limits
- Table 2-127 (page 230) provides the revised halibut PSC sideboard limits
 - Table 2-127 was revised via an erratum on September 23 to replace updated sideboard ratios for 1st – 4th seasons. 5th season sideboard ratios were accurate so was not replaced.
 - In all seasons, halibut PSC limits are lower for both deep and shallow water complexes
 - Three of the seasonal/complex halibut limits are very low and likely insufficient for directed fishing, which would close arrowtooth and rex sole during the 1st season and arrowtooth, rex sole, flathead sole and shallow-water in 4th season
 - Table 2-128 (page 231) shows GOA halibut PSC sideboard ratios aggregated at the season and complex level which could provide greater flexibility for the cooperatives to manage their sideboard fisheries



ELEMENT 4 – GOA SIDEBOARDS

Option 4.2 - AFA GOA-exempt CVs and non-AFA CVs sideboard limits

- Would prohibit GOA sideboard exempt AFA CVs and non-AFA CVs from transferring BSAI cod CQ assigned to the LLP license as a condition of benefiting from GOA sideboard exemption
 - Vessels assigned to qualified GOA exempt LLP licenses do not fish in the GOA during the calendar year, except CGOA Rockfish Program, the holder of the LLP license can lease the CQ that calendar year
 - Option 4.2 and the analysis did not address the 8 under 60' LLP licenses with AI transferable endorsements
 - If the Council intends to include these licenses with transferable endorsements, the motion should be modified since the AI endorsement receives the QS not the LLP license
- Suboption 4.2.1 would authorize AFA GOA exempt CVs and non-AFA CVs to lease their BSAI cod CQ while maintaining their GOA exemption if the LLP license has less than 200 mt, 400 mt, or 600 mt of average annual qualifying cod history
 - Using drop years in Element 2 increases the average annual qualifying catch history which will put some LLP licenses over the exemption limit as noted in Tables 2-135 and 2-136 on page 235 and 236
- Cooperatives would be required to monitor these GOA exempt CVs to ensure they do not lease their CQ unless authorized under Suboption 4.2.1



ELEMENT 5 – PROCESSOR AND COMMUNITY PROVISIONS

- Element 5.1 – Program would not create a closed processor class (page 237) and has not changed substantially.
- Element 5.2 – Establish a limitation on directed trawl CV Pacific cod deliveries to CPs acting as a mothership (page 240).
 - Eligible CPs may select their processing history during the qualifying period or the history associated with their LLP license up to 125% of their processing history. This has the same result as if both firms were allowed to select 125% of their smaller history.
 - Allowing the firms to select their processing history or their LLP license history (up to 125 percent of their processing history) increases the overall limit by about 15 percent relative to their combined processing history (page 241).



ELEMENT 5.2 – LIMIT THE AMOUNT OF PACIFIC COD THAT MAY BE DELIVERED TO CPs ACTING AS A MOTHERSHIP

- Element 5.2 would establish a combined limit for the two qualified C/Ps. The limit would be calculated using the same qualifying years/criteria established under Element 2.
- Processing limits calculated using the processing history of the two eligible CPs would be confidential and may not be reported in this analysis or after the limits are implemented.
- Smaller CP processing limits benefit the shoreside sector and the communities they impact and have greater negative impacts on the CP sector, the CVs that are owned by the C/P sector, the CVs that have limited ability to deliver shoreside, and the communities they impact.
- **Because BSAI Amendment 120 assigned the mothership processing endorsement to the LLP license staff recommends also assigning the processing limit to the same LLP licenses.**



ELEMENT 5.3: LIMIT THE NUMBER OF CV_s THAT MAY DELIVER TO CP_s

- The information presented shows Options 5.3.1 & 5.3.2 separately but the Council has indicated they could both be selected. Combining the two options would increase the percentages listed below by about 0.5%.
- Option 5.3.1 would only allow CVs that are assigned to the 10 LLP licenses that were 75% owned by a firm that owned a CP (as of December 31, 2019) to deliver the CQ derived from QS initially allocated to the LLP license to an eligible CP. Three firms owned LLP licenses that meet this requirement. The catch history associated with those LLP licenses accounted for:
 - 15.5 percent using years 2004 – 2019
 - 15.8 percent using years 2009 – 2019
 - 13.8 percent using years 2014 – 2019



ELEMENT 5.3: LIMIT THE NUMBER OF CV_s THAT MAY DELIVER TO CP_s

- Element 5.3.2 would allow CVs using LLP licenses that were used to deliver 75% (10 LLP license) or 90% (8 LLP licenses) of the qualifying catch history offshore to deliver CQ derived from that LLP license's initial QS allocation to an eligible CP.
- The estimated processing limit is shown in the following table.

Harvest % Threshold	2004-2019	2009-2019	2014-2019
75%	7.9%	10.3%	10.6%
90%	7.5%	7.2%	8.8%



ELEMENT 5.2 & 5.3 – GENERAL IMPACTS

- Smaller CP processing limits benefit the shoreside sector and have greater negative impacts on the CP sector.
- CVs that are owned by the CP sector and the CVs that have limited ability to deliver shoreside may be most negatively impacted.
- CP firms will lose the advantage of attracting CVs by offering faster turn-around time than shoreplants under the PCTC.
- CP firms could use CQ they are allocated to attract CVs if they are allocated less CQ than they are allowed to process.
- Eligible CPs currently produce an H&G product so they will likely need to offer a higher percentage of first wholesale value than shorebased processors that focus on higher valued fillet production to attract deliveries.
- Firms that own CVs (and LLP licenses) would want to be able to take deliveries from their CVs at approximately the same level of CQ assigned to their LLP licenses.
- Independent CV owners and CVs owned by CP firms could be in a weaker bargaining position when trying to obtain a delivery market or may need to lease their CQ.



ELEMENT 5.4: HARVEST QS TO PROCESSORS

- Would allocate a percentage of the available harvest quota to processors that took directed BSAI Pacific cod deliveries during the qualifying years. The range considered is 0%, if the Council does not select this option, up to 30% of total available harvest.
- This option only applies to BS processors (defined as all processors except AI shoreplants as defined under Element 6) if AI processors are granted an allocation or set-aside under Element 6.
- Allocations will be based on the same criteria as established under Element 2 for harvesters.
- Processor owned CVs may only harvest or control an amount of CQ equal to that amount they would have brought into the cooperative absent a processor allocation.



ELEMENT 5.4: UPDATED TABLES

Table 2-144 Number of processing firms that qualify and the total processing history under Element 5.4

Seasons	Processors	2014-2019	2009-2019	2004-2019
All	Processors #	11	11	12
	Quantity (mt)	187,161	338,450	457,706
Excludes C	Processors #	10	10	11
	Quantity (mt)	182,786	331,340	447,309

Table 2 145 Percentage of QS allocated to processing firms by grouping

Processing Firms	2014-2019 All Seasons	2009-2019 All Seasons	2004-2019 All Seasons
Top 4 firms	78.7%	79.9%	79.3%
Bottom 6-8 firms	21.3%	20.1%	20.7%
Processing Firms	2014-2019 A & B Seasons	2009-2019 A & B Seasons	2004-2019 A & B Seasons
Top 4 firms	78.4%	79.5%	79.5%
Bottom 6-8 firms	21.6%	20.5%	20.5%



SSC COMMENTS ADDRESSED

- Analysis and discussion of processor allocations under Element 5.4 was expanded.
 - Literature review
 - Stranded capital and compensation
 - Market power
 - AFA interactions
 - Holding of asset value
 - Processor allocation impact on CVs movement between cooperatives



SSC COMMENTS ADDRESSED

■ Literature review

- The work of Matulich et al. was retained in the analysis with limited revisions.
- Additional information was included regarding processor allocations and are discussed in the following slides.



SSC COMMENTS ADDRESSED

- Guldin and Anderson (2021) developed the first quantitative study of harvest share allocations to processors using data from the whiting IFQ fishery.
 - The authors determined that processors used processor-owned quota in informal ex-vessel market negotiations.
 - Processors were able to offer quota to match a portion of deliveries and attract landings to their facility while charging catcher vessel operators a contracting premium on quota pounds transferred during some seasons when the whiting TAC was close to binding.
 - Processors utilized the quota during seasons when the TAC was not binding but charging price premiums was not evident in the data.
 - The paper concluded that additional research is required on the allocation of harvest shares to processors policy, particularly regarding welfare outcomes of harvesters and processors and overall efficiency.



SSC COMMENTS ADDRESSED

- Stranded capital and compensation
 - Concept was brought to the Council by Dr. Scott Matulich when it was developing the AFA and Crab Rationalization.
 - Processors operate in remote areas where millions of dollars were invested in plants that are designed to process specific species and the plants have no other or very limited value. Loss of access to these fish would result in the processor's investment being lost. Stakeholders have noted that there are substantial differences between the geographic location and concentration of processors in the whiting and BSAI Pacific cod fisheries and that the alternative uses of those properties are not directly comparable.
 - Dr. Wilen and Dr. Fell reviewed the issues raised by Dr. Matulich and came to somewhat different conclusions
 - Dr. Wilen concluded that the IFQ whiting fishery was unlikely to generate significant processing stranded capital. Most capital involved in whiting processing was stated to be malleable and not likely to be devalued as a result of rationalization. He also stated that if policy makers judge it desirable to consider compensation for processors, a legitimate process would tie compensation to anticipated or demonstrated capital losses. He concluded that current policies proposed on the U.S. West Coast to transfer harvester quota are arbitrary and unsupported by empirical estimates of the magnitude of the problem.
 - Dr. Fell et al. found in their study that the allocation of harvest shares to processors are not necessary to prevent harvesters from having too much market power.



SSC COMMENTS ADDRESSED

■ Market power

- Changes in market power are expected to be realized from the proposed action, including allocations of harvest shares to processors, relative to the status quo, but quantitative measures of the change were not calculated.
- Dr. Lee G. Anderson (2008) stated that *“the difficulty of defining market power and of measuring the gains or losses of various actions such that they can be approved as part of a management plan should not be understated”*.
- Appendix A and Appendix E (Analysis of the Impact of the Initial Quota Share Allocation on Long-Term Quota Share Distribution) from the Pacific Council EIS was included as reference.
- Market power in an industry is influenced by new entrants, the number of harvesters, the number of processors, availability of substitutes, and competitive rivalry. These were described in terms of no limits on processor entry, limited harvester entry, and competition that has existed between harvesters and processors throughout the document..
- While it is widely acknowledged that the allocation structure will result in shifts in market power, we cannot address the issues of whether the market forces before the LAPP was implemented were optimal or the amount of quota that should be issued to processors under the PCTC to achieve the Council’s desired outcome.
- Independent CVs that are not associated with a pollock cooperative are likely to be in the weakest bargaining position.



SSC COMMENTS ADDRESSED

■ AFA interactions

- A section was added that described the relation between AFA CVs and the Pacific cod fishery. p. 253
- About 85% of the BS Pacific cod harvested by these vessels was delivered to their AFA cooperative processor.
- This indicates a relatively strong linkage between members of AFA cooperatives in other fisheries.
- Note that the AFA allows cooperatives to deliver 10% of their pollock to another cooperative to increase CVs bargaining power. The percentage of Pacific cod delivered to other processors has been slightly greater than the amount of pollock that may be delivered to another processor under the AFA.



SSC COMMENTS ADDRESSED

- Holding of asset value
 - LLP license owners will still realize an increase in asset value relative to the status quo.
 - Any allocation of harvest shares to processors will reduce the underlying asset value held by the LLP license owners relative to not allocating harvest shares to processors.
 - Firms that own processors and LLP licenses may will receive QS based on processing history and LLP license fishing history. p. 249
 - The asset value of QS may be used as collateral for loans or compensation for leaving the fishery. Lower asset values may reduce the size of a loan that could be secured and would reduce to the value LLP holders receive for exiting the fishery.



NEW ASSUMPTIONS IN ELEMENT 5.4

- If a processor does not associate with a cooperative (assign their CQ to a cooperative), it is assumed that processor's CQ would be divided among cooperatives in the same proportion as the CQ assigned to each cooperative by the associated processor that year.
- If a processor is associated with more than one cooperative during a year, the CQ derived from their processor permit would be divided between the cooperatives in the same proportion as the CQ derived from LLP licenses assigned to each cooperative.



ELEMENT 6 – ALEUTIAN ISLANDS PROCESSOR PROVISIONS

- Element 6.1 (cooperative set-aside) and Element 6.2 (AI processor allocation) are mutually exclusive and Element 6 is not additive to Element 5.4 (processor allocations).
- Element 6.1 would establish a set-aside of 10% - 25% of the A-season trawl CV sector directed BSAI harvest that cooperatives would be allocated for delivery to AI shoreplants. Cooperatives must describe how the set-aside would be administered in the intercooperative agreement.
- Element 6.2 would establish an annual allocation of CQ to AI plant operators or an entity representing the community, equal to the lesser of 5.5% - 10% of the total BSAI trawl CV Pacific cod quota during years the community notifies NMFS a plant will be operating in those communities.



Element 6.1: AI Processor Set-Aside (PPA updated table)

Year	TAC	ITAC	ITAC as % of TAC	CV % of ITAC	Trawl CV annual apportionment total	Trawl CV A season apportionment	A-season hindcast ICA	10% of A season less A season ICA	25% of A season less A season ICA	% to equal 5,000 mt
2003	207,500	191,938	92.5%	22.1%	42,418	31,390	2,578	2,881	7,203	17.4%
2004	215,500	199,338	92.5%	22.1%	44,054	32,600	2,590	3,001	7,502	16.7%
2005	206,000	190,550	92.5%	22.1%	42,112	31,163	3,578	2,758	6,896	18.1%
2006	194,000	174,067	89.7%	22.1%	38,469	28,467	2,690	2,578	6,444	19.4%
2007	170,720	157,916	92.5%	22.1%	34,900	25,826	1,193	2,463	6,158	20.3%
2008	170,720	152,453	89.3%	22.1%	33,692	24,932	1,717	2,322	5,804	21.5%
2009	176,540	157,916	89.5%	22.1%	34,899	25,826	2,415	2,341	5,853	21.4%
2010	168,780	150,975	89.5%	22.1%	33,365	24,690	2,085	2,261	5,651	22.1%
2011	227,950	203,559	89.3%	22.1%	44,987	33,290	2,200	3,109	7,772	16.1%
2012	261,000	233,073	89.3%	22.1%	51,509	38,117	4,207	3,391	8,477	14.7%
2013	260,000	232,180	89.3%	22.1%	51,312	37,971	2,178	3,579	8,948	14.0%
2014	253,894	226,727	89.3%	22.1%	50,107	37,079	951	3,613	9,032	13.8%
2015	249,422	222,734	89.3%	22.1%	49,224	36,426	2,031	3,439	8,599	14.5%
2016	251,519	224,606	89.3%	22.1%	49,638	36,732	1,798	3,493	8,733	14.3%
2017	239,399	213,784	89.3%	22.1%	47,246	34,962	2,489	3,247	8,118	15.4%
2018	203,831	182,021	89.3%	22.1%	40,227	29,768	1,770	2,800	6,999	17.9%
2019	180,689	161,355	89.3%	22.1%	35,659	26,388	2,982	2,341	5,852	21.4%
2020	155,595	138,946	89.3%	22.1%	30,707	22,723	4,270	1,845	4,613	27.1%
Average						31,019	2,429	3,102	7,755	16.1%
Std Dev						5,000	874	517	1,292	



Element 6.1: AI Processor Set-Aside

- Whether Pacific cod will be delivered to the AI shoreplant(s) depends on the willingness of the cooperatives (through the intercooperative agreement) to work with the communities/processors to ensure that Pacific cod CQ is harvested under the set-aside and the willingness of the AI shoreplant operator(s) to offer competitive exvessel prices and delivery terms.
- A set-aside reduces the bargaining power of the AI shoreplants relative to an allocation where the shoreplant operator or the community holds the CQ.
- Because the set-aside only applies to the A season, cooperatives could hold out and wait for the set-aside to expire and fish the Pacific cod during the B season.



Element 6.2: AI Processor Allocation

- Element 6.2 would allocate from 5.5% to 10% of the annual CQ issued to either AI plant operators or an entity representing the community.
- If the Council issues quota to a community entity it will need to establish eligibility criteria under MSA 303A(c)(3), and require the communities to submit sustainability plans that meet the criteria specified through rulemaking (or at minimum developed by Council, approved by Secretary, published in Federal register).
- The sustainability plan must demonstrate how the plan will address the social and economic development needs of coastal communities, including those that have not historically had the resources to participate in the fishery, for approval based on criteria developed by the Council.
- Adak or Atka may withdraw its intent to operate during the season and any unused quota would be reissued to the other AI shoreplant in years that two communities file an intent to operate or to the other PCTC cooperatives in years only one AI plant was active. There is no other reallocation timeline established if the AI plant is unable to use all of its CQ as there was under Amendment 113.
- If no AI community files an intent to operate for an upcoming fishing year the CQ derived from NMFS held QS is issued to other QS holders in the same proportion as their initial allocation.



Element 6.2: AI Processor Allocation (updated table using only A & B season allocations to the PCTC)

Year	TAC	ITAC	ITAC as % of TAC	CV % of ITAC	CV total A&B Season(mt)	Hindcast ICA for A&B season	5.5% of A&B season directed fishery (mt)	10% of A&B season directed fishery (mt)	% of trawl CV to equal 5,000 mt	mt difference between 5,000mt and 5.5%	mt difference between 5,000mt and 10%
2003	207,500	191,938	92.5%	22.1%	36,056	2,578	1,841	3,348	13.9%	3,159	1,652
2004	215,500	199,338	92.5%	22.1%	37,446	2,592	1,917	3,485	13.4%	3,083	1,515
2005	206,000	190,550	92.5%	22.1%	35,795	3,582	1,772	3,221	14.0%	3,228	1,779
2006	194,000	174,067	89.7%	22.1%	32,698	2,690	1,650	3,001	15.3%	3,350	1,999
2007	170,720	157,916	92.5%	22.1%	29,665	1,194	1,566	2,847	16.9%	3,434	2,153
2008	170,720	152,453	89.3%	22.1%	28,638	1,776	1,477	2,686	17.5%	3,523	2,314
2009	176,540	157,916	89.5%	22.1%	29,665	2,464	1,496	2,720	16.9%	3,504	2,280
2010	168,780	150,975	89.5%	22.1%	28,361	2,296	1,434	2,606	17.6%	3,566	2,394
2011	227,950	203,559	89.3%	22.1%	38,239	2,487	1,966	3,575	13.1%	3,034	1,425
2012	261,000	233,073	89.3%	22.1%	43,783	4,469	2,162	3,931	11.4%	2,838	1,069
2013	260,000	232,180	89.3%	22.1%	43,615	2,745	2,248	4,087	11.5%	2,752	913
2014	253,894	226,727	89.3%	22.1%	42,591	1,388	2,266	4,120	11.7%	2,734	880
2015	249,422	222,734	89.3%	22.1%	41,841	2,330	2,173	3,951	12.0%	2,827	1,049
2016	251,519	224,606	89.3%	22.1%	42,192	2,973	2,157	3,922	11.9%	2,843	1,078
2017	239,399	213,784	89.3%	22.1%	40,159	5,074	1,930	3,509	12.5%	3,070	1,491
2018	203,831	182,021	89.3%	22.1%	34,193	2,862	1,723	3,133	14.6%	3,277	1,867
2019	180,689	161,355	89.3%	22.1%	30,311	3,727	1,462	2,658	16.5%	3,538	2,342
2020	155,595	138,946	89.3%	22.1%	27,400	6,042	2,740	2,136	18.2%	2,260	2,864
Average					34,180	2,624	1,880	3,418	14.6%	3,120	1,582
Std Dev					5,410	966	285	518			



Element 6.2: AI Processor Allocation

- Halibut PSC would be apportioned at the same percentage that CQ is allocated so the AI shoreplant would apportioned a pro-rata share of the PSC.
- Crab PSC would not be apportioned to the AI shoreplant because the CQ must be harvested from the AI and delivered to a processor in the AI. Crab PSC limits are only established for areas in the BS.



Element 6.2.3 - AI Small Vessel Provisions

- This provision would require the AI plant(s) to set-aside 10% to 50% of their allocation for harvest by trawl CVs that are <60' LOA and have a transferable AI endorsement assigned to the LLP license.
- Providing the <60' trawl vessels with exclusive access to the AI processor allocation increases the small vessels market power and decreases the AI plants market power when negotiating delivery terms and conditions.



ELEMENT 7.1: TRANSFERS OF QS ASSIGNED TO LLP LICENSES

- Limited changes were made to the document with the exception of Element 7.1.1 and post delivery transfer timing.
- Element 7.1.1 allows transfers of QS for LLP licenses associated with the non-exempt AFA CVs during a 90-day window starting after the initial allocation of QS to LLP licenses.
- The effectiveness of this rule would be limited if the window of time to complete the transfers is limited to 90 days after the initial allocation of QS. Persons could delay the process and let the 90-day period expire.
- NMFS will not be involved in the dispute settlement process. It would only be notified on an ongoing dispute and the resolution of the dispute.
- If the timing of the 90-day process is changed by the Council, NMFS will work with staff to implement the intent of motion.



ELEMENT 7.4: POST DELIVERY TRANSFERS

- Element 7.4 addresses post delivery transfers of CQ, which if a cooperative limit is exceeded, the cooperative may agree to a transfer with another cooperative to cover any harvest overages.
- If the Council limits the PCTC to the A & B seasons the post delivery transfers must be completed by August 1 to avoid potential sanctions, versus the December 31 date if the C season is also allocated.
- Despite the absence of specific constraints on overall use of post-delivery transfers, the provision is likely to be used in a limited way. Participants are only likely to rely on the provision for unintended small overages.



ELEMENT 8: OWNERSHIP AND USE CAPS

- Section 303A(c) of the MSA requires that the Council consider excessive consolidation in the harvesting and processing sectors to ensure that LAPP permit holders do not acquire an excessive share in the program by:
 - Establishing a maximum share, expressed as a percentage of the **total limited access privileges**, that a limited access privilege holder is permitted to hold, acquire, or use; and
 - Establishing any other limitations or measures necessary to prevent an inequitable concentration of limited access privileges.
- The Council should consider what is an excessive share of the limited access privileges for the PCTC program and articulate a rationale for how its ownership and use caps will prevent any person from acquiring an excessive share of limited access privileges.



VESSEL AND PROCESSOR USE CAPS

- Vessel use caps – Council is considering a range from 3 to 5 percent of all CQ with a grandfather provision.
 - Considering the historical use of vessels to generate the projected initial allocations under Element 2.2.1, Element 2.2.2, and Element 2.2.3, from five to seven vessels harvested 3 percent or more of the total qualifying catch history. No vessels were reported to have harvested more than 4.5 percent of the qualifying catch history under any primary option considered.
 - On an annual basis, there were a total of nine vessels that exceeded the 5% limit from 2009-2019. Of the nine, the one never exceeded 9.0%, one never exceeded 8.0%, 3 never exceeded 7.0%, and 4 never exceeded 6.0%.
- Processor use caps – Council is considering a range from 20 – 30 percent of all CQ at the facility level with a grandfather provision.
 - The Council is currently not considering a firm level cap.
 - Most firms only operate one plant
 - The establishment of plant level processing caps are expected to have the greatest impact on firms that currently operate more than one processing facility and would like to consolidate processing into one (or at least fewer plants) that they operated for BSAI Pacific cod to improve efficiency under the LAPP.
 - Implementing the facility level cap, even with a grandfather provision, could limit at least one firm's ability to operate in an economically efficient way.
 - **Calculation of the processor use cap is not specified but is assumed to be based on the average processing over the qualifying period.**



ELEMENT 14: GEAR CONVERSION

- Allows BSAI Pacific cod trawl CV CQ to be harvested using pot gear.
 - CVs must be listed in the cooperative application submitted to NMFS. The number of vessels and the amount of CQ that may be harvested with pot gear is unknown
- The provision is expected to provide cooperatives the opportunity to reduce groundfish bycatch and have a mixed impact on PSC.
 - The analysis uses historical PSC usage by gear type in the Pacific cod fishery and assumptions about the percentage of CQ that would be harvested using pot gear to estimate potential changes in halibut and crab PSC usage. Table 3-8.

BSAI Trawl CV Sector PSC as a result of gear conversion scenarios.

PSC Species	0.5% (1.4%)	1% (2.9%)	5% (14.5%)	10% (29%)	20% (59%)
Halibut mortality (mt)	-1.20	-2.40	-11.99	-23.97	-47.94
Red King crab (Zone 1)	159	329	1,647	3,295	6,578
C. bairdi (Zone 1)	938	1,945	9,723	19,447	38,824
C. bairdi (Zone 2)	168	348	1,739	3,477	6,942
C. opilio PSC (COBLZ)	-0.20	-0.17	-0.83	-1.65	-3.54
Chinook	-5.24	-10.47	-52.37	-104.73	-209.47
Non-chinook	-0.56	-1.12	-5.59	-11.18	-22.37



REVISIONS TO FISHING COMMUNITIES SECTION(S)

- Several community harvest and processing sector engagement indicators updated with 2020 and 2021 data.
 - BSAI Pcod trawl catcher vessels *(Section 2.7.9.1.1, Page 121)*
 - Shore-based processors *(Section 2.7.9.1.2, Page 139)*
 - Other potentially affected sectors *(Section 2.7.9.1.4, Page 146)*
- **Other potentially affected sectors discussion expanded**
(Section 2.7.9.1.4, Page 146)
 - BSAI Pcod HAL and pot < 60' rollover reallocation discussion has been expanded. *(Page 151; new Table 2-78, Page 152)*
 - A new hook-and-line CP discussion, including patterns of CDQ ownership, has been added. *(Page 152; new Table 2-79, Page 153)*



REVISIONS TO FISHING COMMUNITIES SECTION(S) (CONTINUED)

- Additional information/detail added on:
 - Shoreside processing operations (based on add'l industry outreach).
(Section 2.7.9.1.2, Page 139; Section 2.7.9.2.1 Alaska communities, Page 155)
 - AFA cooperatives relevant to potential community effects. *(Page 143)*
 - Deliveries of AI trawl-caught Pcod to shoreside processors. *(Page 142; new Table 2-75, Page 143)*
- Community effects section has been revised in response to:
 - Changes in Alternatives 2a and 2b and the addition of Alternative 3 (the PPA). *(Section 2.9.5.2, starting on Page 392)*
 - No new types of effects have been identified.



REVISIONS MADE IN RESPONSE TO FISHING COMMUNITY RELATED SSC COMMENTS

- The SSC ***recommended*** distinguishing consolidation from specialization in Pacific cod and other species.
 - Discussion has been revised to more clearly distinguish between consolidation of effort/direct participation in the Pacific cod fishery and vessels that would remain active in commercial fishing outside of the Pacific cod fishery by focusing on other fisheries in their annual round portfolio.
 - From a community perspective, retention of active local vessels focused on other fisheries would be a key to minimizing adverse effects of the consolidation of CV effort in the BSAI Pacific cod trawl fishery as, for example, crew would still be employed, fish would still be delivered, and support service businesses would still have those vessels as a part of their customer base.

(Page 293 + summary of effects tables)



REVISIONS MADE IN RESPONSE TO FISHING COMMUNITY RELATED SSC COMMENTS (CONT.)

- The SSC ***recommended*** distinguishing consolidation from specialization in Pacific cod and other species (continued).
 - Within Alaska, trawl CV and LLP license ownership largely concentrated in Kodiak and among CDQ groups.
 - Whether individual Kodiak CVs would choose to harvest or lease out CQ would be influenced by initial allocation amount, other opportunities available to the vessel in the BSAI versus the GOA, and the efficiency of the vessel in harvesting BSAI Pcod relative to other CVs in the same co-op, among other factors. *(Page 394)*
 - In 2019, of the Kodiak vessels active in the fishery, 57/43 percentage split between AFA/non-AFA vessels (but caveat re: small numbers). For comparison: Seattle MSA and Newport OR both 83/17; Other WA and Other OR both 67/33. *(Page 124, Table 2-52)*
 - Existing patterns of community dependency on the fishery via shore-based processing are unlikely to fundamentally change under the PPA.
 - Unalaska/Dutch Harbor and Akutan (and Adak when operational). *(Page 395)*
 - King Cove and Sand Point – differential effects expected. *(Page 396)*



REVISIONS MADE IN RESPONSE TO FISHING COMMUNITY RELATED SSC COMMENTS (CONT.)

- The SSC ***recommended*** general consideration of the implications of climate change on the harvesting fleet and engaged communities be included in the cumulative effects section.
 - The analysis now notes that the PPA would allow for greater predictability for fishery participants and would provide for increased operational, spatial, and temporal flexibility in response to a range of potential changes in short- and long-term fishery conditions.
 - This flexibility has the potential for decreasing vulnerability to adverse conditions and increasing resilience following adverse events or accompanying adverse trends, including adverse effects of climate change, for involved individuals, entities, and communities. *(Page 397 + summary of effects tables)*



ELEMENT 11 – MONITORING

- All vessels harvesting CQ in the PCTC program will be in the full coverage category with the exception of CVs delivering unsorted codends to a mothership
- NMFS has developed recommendations for monitoring and enforcement provisions necessary to track quota, harvest, PSC, and use caps



SUMMARY OF EFFECTS OF ALTERNATIVES

- Section 2.9.7, Effects on Monitoring and Enforcement begins on page 400 of the Analysis
- Table 2-161 provides an updated summary of the effects of the action
- The Council Motion specified that all vessels harvesting CQ will be in full coverage. Element 11 is not intended to modify the observer coverage exception provided for CVs delivering unsorted codends to a mothership or the current observer data transmission requirements for non-AFA CVs.
- Updates to this section:
 - NMFS recommendations for data transmission and ATLAS requirements
 - Benefits transmitting data at-sea
 - Costs of transmitting data at-sea



SUMMARY OF EFFECTS OF ALTERNATIVES

Vessel Category	Currently required by regulation?		NMFS Recommendations under PCTC program		Vessel Count
	Computer with ATLAS software	Data Transmission	Computer with ATLAS software	Data Transmission	
≥125 FT LOA	Yes	At-sea	Yes	At-sea	11
Less than 125 FT LOA and AFA eligible	Yes	Not required (although at least 31 have at-sea transmission and voluntarily provide it)	Yes	At-sea	39
60 - 125 FT LOA	No	Not required	Yes	At-sea	11
Less than 60 FT LOA	No	Not required	Yes	Facilitated by vessel at the end of a trip	6
Total					67

Source: NMFS April 2020, table originates from BSAI_Trawl_Open_Access_2018_to_2021



SUMMARY OF EFFECTS OF ALTERNATIVES

ATLAS and Data Transmission

- NMFS recommendations for data transmission:
 - Require at-sea data transmission for vessels greater than 60 FT LOA
 - Require facilitation of data transmission at the end of the trip for vessels less than 60 FT LOA
- Data quality benefits of at-sea transmission:
 - Increases the timeliness of data needed for management
 - Reduces likelihood of data being changed or deleted
 - Enables inexperienced observers to come up to speed more quickly
 - Enables observers to notify NMFS staff of compliance concerns



SUMMARY OF EFFECTS OF ALTERNATIVES

At-Sea Data Transmission Options

Table 2-191. Marine Satellite Options for Transmitting Data at-sea

Service Package	Purchase Price	Rental Price per month	Internet cost per month	One time installation cost ¹
KVH basic package	N/A	Starting at \$650	Unlimited internet included in monthly rental price Phone usage is 10c a minute	Seattle = 125 hr x 16 = \$ 2000 Dutch Harbor = 160/hr x 16 = \$ 2,560 ²
Intellian VSAT with Marlink's Sealink VSAT	N/A	~\$500	~\$1700	\$5,000
Inmarsat Fleet One Cobham Sailor Terminal with 10m Antenna	\$2,995 ³ - \$3,495 ⁵	\$ 700 ³	\$219 ⁵ - \$2,300	Cost to install in Seattle: 125 hr x 16 = \$2000 Cost to install in Dutch Harbor: 160/hr x 16 = \$2,560 ²
KVH TracPhone HTS VSAT TrackPhone V7-HTS	\$29,995 ⁴	\$2,499 ³	\$799 - \$11,499	unknown
Network Innovations Sailor 600 Maverick VSAT	\$25,000 - \$32,000 ⁵	NA	\$703 - \$1,054 ⁵	Up to \$5,000 in Seattle or Dutch Harbor ⁵

¹ Installation costs do not include maintenance costs or upgrades

² Installation costs quoted from Mackay Marine in Seattle, Washington

³ Cost information provided by Satellite Phone Store

⁴ Cost information provided by Ground Control Global Satellite Communications

⁵ Cost information provided by Network Innovations



SUMMARY OF ENVIRONMENTAL ASSESSMENT

- Overall, the EA of the current alternatives did not identify any significant effects on the biological, physical, or human environment.
- The sections presented in this EA focus on Pacific cod (Section 3.2), incidental catch (Section 3.3), Prohibited Species Catch (PSC) (Section 3.4), and marine mammals (Section 3.5).



SUMMARY OF ENVIRONMENTAL ASSESSMENT

- *Pacific cod*
 - Not likely to alter Pacific cod stocks beyond what has already been considered.
- *Prohibited Species Catch*
 - Impacts on PSC species are not expected to be significant
 - Under Alternatives 2a and 3; estimated that if ~5% CQ is fished with pot gear instead of trawl gear, red king crab (Zone 1) PSC limit could be exceeded and could result in an area closure. This conservative estimate has a number of caveats and is based on PSC limits from 2015-2020.
- *Incidental catch*
 - Not likely to substantially alter incidental catch in the fishery.
 - Gear conversion element under Alternatives 2a and 3 may alter composition of incidental catch but could result in less incidental catch overall.



SUMMARY OF ENVIRONMENTAL ASSESSMENT

- *Marine Mammals*
- Incidental Take
 - Action not expected to substantially alter incidental take in the fishery.
 - Alternatives 2a and 3 could result in more takes of humpback whales but this would be minimal.
- Prey availability
 - Action unlikely to have significant impacts if no changes in seasonal allocation.
- Disturbance Effects
 - Action unlikely to have significant impacts.



SUMMARY OF EFFECTS OF ALTERNATIVES

- **Implementation and Effects on the Agency**
- **Modifications to Section 2.9.7.3**

Initial Allocations (pg. 416)

- 90-day transfer period
- General appeals process



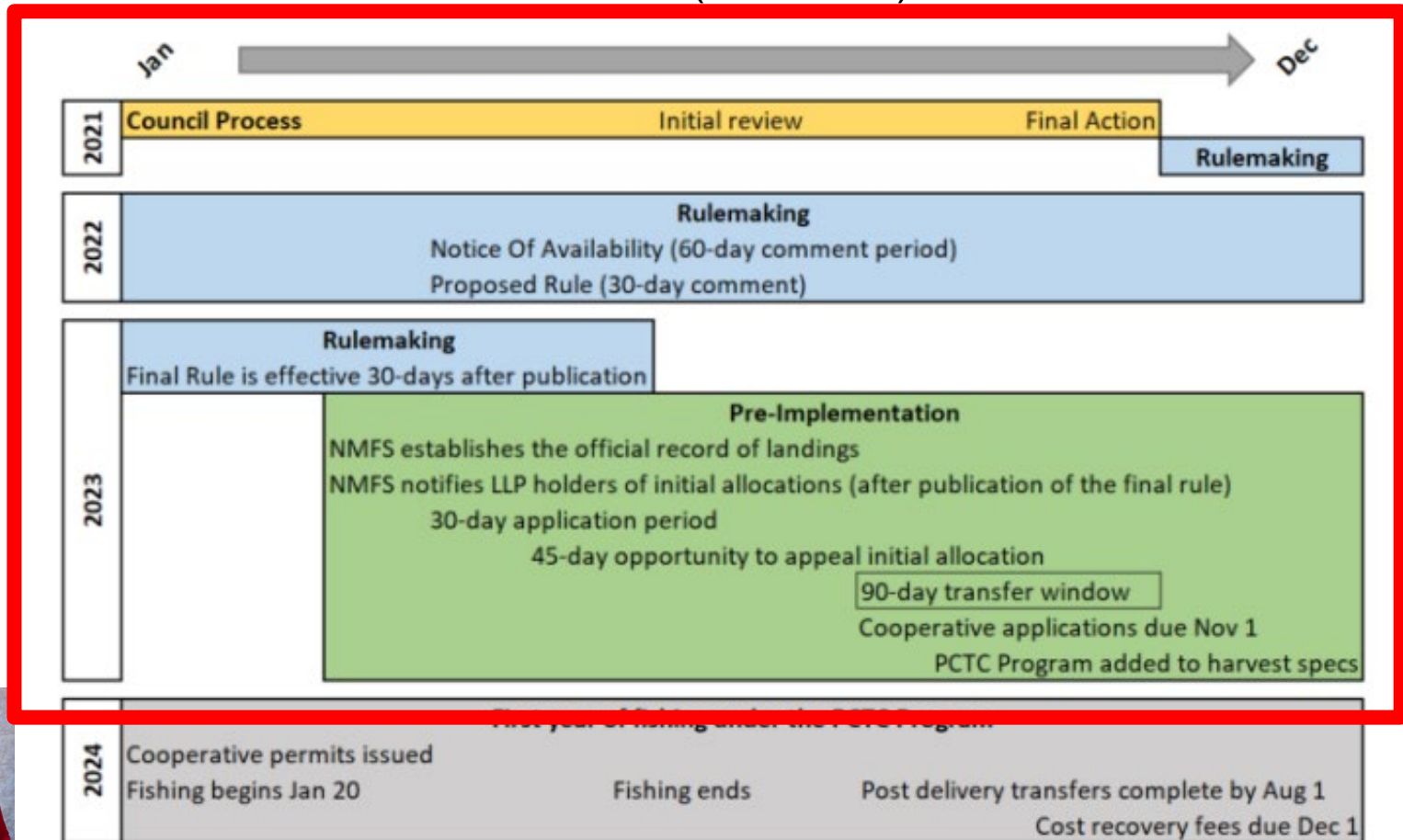
Annual Processes (pg. 418)

- Cooperative Applications
- Inseason management
- Permits and transfers
- Cost recovery
- Cooperative Reports



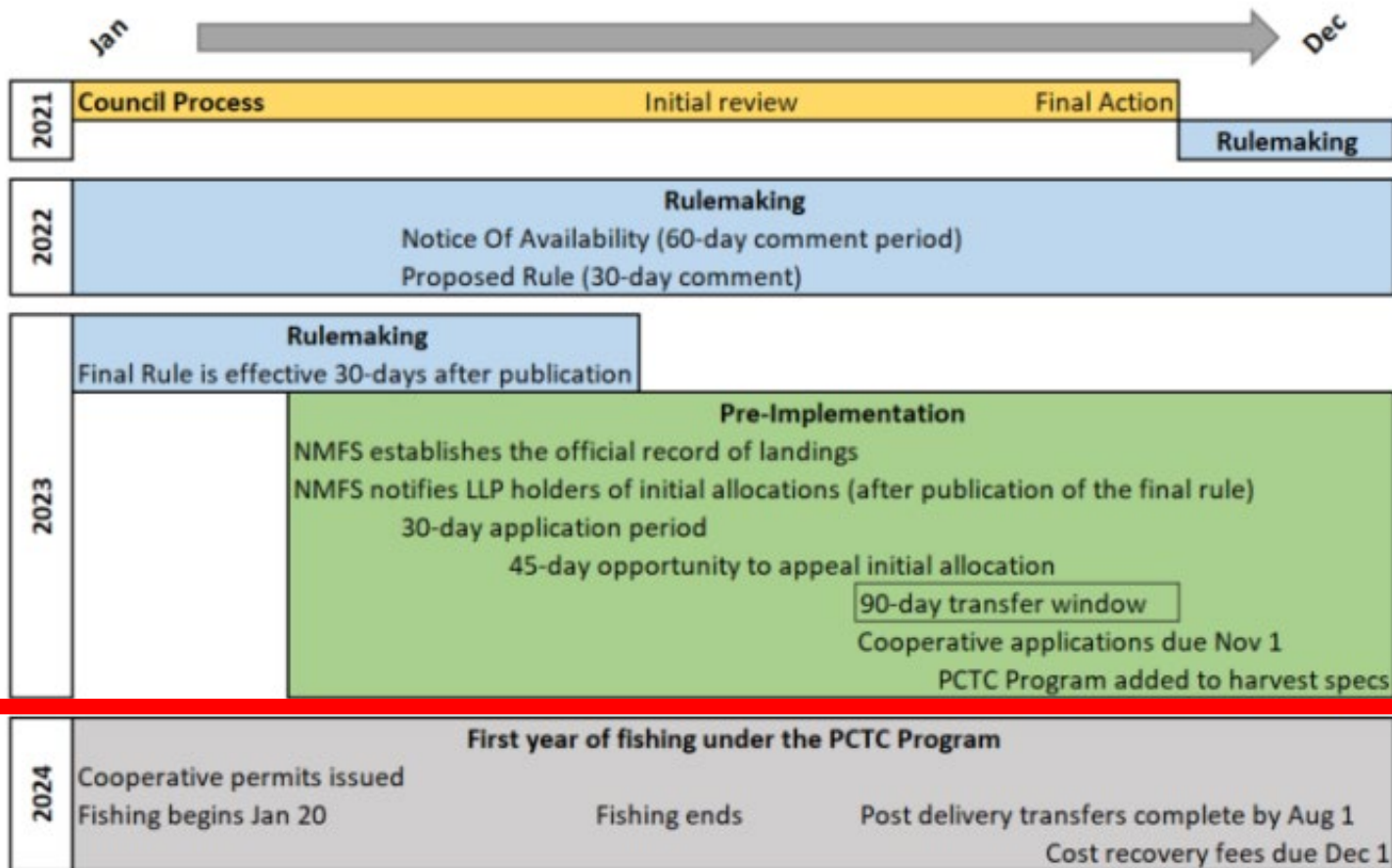
SUMMARY OF EFFECTS OF ALTERNATIVES

- Implementation and Effects on the Agency
- Modifications to Section 2.9.7.3 (continued)



SUMMARY OF EFFECTS OF ALTERNATIVES

- Implementation and Effects on the Agency
- Modifications to Section 2.9.7.3 (continued)



SUMMARY OF PROGRAM AS IT RELATES TO THE PURPOSE & NEED

- Purpose & Need
 - TAC steadily decreasing and pace of fishery increasing
 - Compressed season
 - Decreased ability to maximize fishery value
 - Negatively impacting all fishery participants
 - Discourages fishing practices that can minimize bycatch
 - Threatens the sustained viability of the fishery
 - Cooperative-based program to improve the prosecution of the fishery
 - Promote safety
 - Stability in the harvesting and processing sectors
 - Minimize bycatch to the extent practicable
 - Increase the value of the fishery
 - Sustained participation of the fishery dependent communities
 - Ensure sustainability and viability of the resource



SUMMARY OF PROGRAM AS IT RELATES TO THE PURPOSE & NEED

- Improve the prosecution of the fishery – pace expected to slow as harvesters are no longer racing and processors no longer need to add additional processing capacity
- Promote safety – Slower fishery would reduce incentive to fish in extreme weather events, reduce number of vessels on grounds, and potentially reduce gear interactions on grounds
- Stability in the harvesting and processing sectors – PCTC Program would result in stable harvesting and processing sectors similar to other LAPPs
 - Several elements and options in this package are designed to promote stability including allocations to harvesters and processors to balance market power, ability to transfer quota, greater accountability for PSC usage
 - Some elements and options could result in tradeoffs to include 1) reduce PSC levels could create greater instability for the harvesting and processing sectors to achieve a minimizing of bycatch; 2) limits on CP sector acting as mothership could somewhat reduce the stability of that sector and the CVs delivering to them in order to provide sustained participation of fishery dependent communities



SUMMARY OF PROGRAM AS IT RELATES TO THE PURPOSE & NEED

- Minimizing bycatch to the extent practicable – individual and cooperative accountability of PSC usage provides greater incentive to avoid PSC and will ensure fishing practices that minimize PSC and PSC apportionments within cooperatives and across cooperatives will have high value derived from the cod CQ
- Increasing the value of the fishery – Slower paced fishery to allow harvesters to deliver higher quality cod to processors, shoreside processors would have the ability to slow throughput and produce higher quality fillets
- Providing for the sustained participation of fishery dependent communities – allocation of QS to LLP licenses, non-severability provisions, and ownership and use caps serve to limit consolidation of harvesting and processing activity across communities, GOA sideboards designed to protect GOA community fleets from increased competition, limits on CPs processing and processor allocations could stabilize landings in communities with previous history of BSAI cod processing, and AI provisions could benefit western AI region (and potentially have adverse impacts to communities in other regions)



SUMMARY OF PROGRAM AS IT RELATES TO THE PURPOSE & NEED

- Ensuring the sustainability and viability of the resource – NMFS and Council will continue to utilize best science available to establish harvest levels for the BSAI cod fishery, individuals and cooperatives will ensure they do not exceed their available quota or risk being subject to fines by the cooperatives or OLE, and ICA for cod fishery will continue to be established for the sector



PERCENT OF CRAB PSC REDUCTION FOR TRAWL CV SECTOR IN BSAI PACIFIC COD FISHERY FROM 2019 TO 2022

PSC species and area and zone	2019 Trawl CV crab PSC apportionment (90.6% of Pacific cod TLAS)(animals)	2022 Trawl CV crab PSC apportionment (90.6% of Pacific cod TLAS)(animals)	Trawl CV allocation for cooperatives after PSC reduction (PPA -35% reduction of trawl CV apportionment after C season removals) (animals)	Percent reduction in crab PSC limit for trawl CV from 2019 to 2022	Percent reduction in crab PSC limit for trawl CVs comparing 2022 with PPA reduction factored in
Red king crab (animals) Zone 1	2,676	883	545	67.0%	79.6%
<i>C. opilio</i> (animals) COBLZ	89,657	45,555	28,130	49.2%	68.6%
<i>C. bairdi</i> crab (animals) Zone 1	54,360	46,039	28,429	15.3%	47.7%
<i>C. bairdi</i> crab (animals) Zone 2	45,299	38,436	23,734	15.2%	47.6%



2019 CRAB PSC LIMITS UNDER ALTERNATIVE 3 (PPA)

2019 Crab PSC limits (Alternative 3 PPA- 5% C season apportionment and 35% reduction)

PSC species and area and zone	Total crab PSC (animals)	BSAI crab PSC TLAS apportionment (animals)	BSAI crab TLAS Pacific cod apportionment (animals)	AFA CP crab PSC apportionment (9.4% of Pacific cod TLAS) (animals)	Trawl CV crab PSC apportionment (90.6% of Pacific cod TLAS)(animals)	C season trawl CV limited access apportionment (PPA - 5% of Trawl CV crab apportionment) (animals)	Trawl CV allocation for cooperatives after PSC reduction (PPA - 35% reduction of trawl CV apportionment after C season removals) (animals)	Crab PSC limit not apportioned due to 35% reduction to trawl CV apportionment (animals)
Red king crab (animals) Zone 1	97,000	26,489	2,954	278	2,676	134	1,653	890
<i>C. opilio</i> (animals) COBLZ	11,916,450	3,420,143	98,959	9,302	89,657	4,483	55,363	29,811
<i>C. bairdi</i> crab (animals) Zone 1	980,000	411,228	60,000	5,640	54,360	2,718	33,567	18,075
<i>C. bairdi</i> crab (animals) Zone 2	2,970,000	1,241,500	49,999	4,700	45,299	2,265	27,972	15,062



PROPOSED 2022 CRAB PSC LIMITS UNDER ALTERNATIVE 3 (PPA)

PSC species and area and zone ¹	Total crab PSC (animals)	BSAI crab TLAS apportionment (animals)	BSAI crab TLAS Pacific cod ² apportionment (animals)	AFA CP crab PSC apportionment (9.4% of Pacific cod TLAS) (animals)	Trawl CV crab PSC apportionment (90.6% of Pacific cod TLAS)(animals)	C season trawl CV limited access apportionment (PPA - 5% of Trawl CV crab apportionment) (animals)	Trawl CV allocation for cooperatives after PSC reduction (PPA -35% reduction of trawl CV apportionment after C season removals) (animals)	Crab PSC limit not apportioned due to 35% reduction to trawl CV apportionment (animals)	Percent difference of proposed 2022 crab PSC limits for trawl CV sector under the PPA relative to 2019 crab PSC limits for the trawl CV sector under the PPA
Red king crab (animals) Zone 1	32,000	8,739	975	92	883	44	545	294	67.0%
<i>C. opilio</i> (animals) COBLZ	4,350,000	1,248,494	50,281	4,726	45,555	2,278	28,130	15,147	49.2%
<i>C. bairdi</i> crab (animals) Zone 1	830,000	348,285	50,816	4,777	46,039	2,302	28,429	15,308	15.3%
<i>C. bairdi</i> crab (animals) Zone 2	2,520,000	1,053,394	42,424	3,988	38,436	1,922	23,734	12,780	15.2%

¹ Calculated based on preliminary results from the September 2021 Plan Team Meeting

² Uses 2021 TLAS fishery apportionment percentages

