

**FINAL**

**Environmental Assessment/Regulatory Impact Review  
for Proposed Amendment 113  
to the Fishery Management Plan for Groundfish of the Gulf of Alaska**

**MODIFY THE CENTRAL GULF OF ALASKA  
ROCKFISH PROGRAM SEASON START DATE AND  
HARVESTING, PROCESSING AND COOPERATIVE  
CAPS**

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National Oceanic and Atmospheric Administration

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Abstract: This Regulatory Impact Review and Environmental Assessment analyzes proposed management measures that would apply exclusively to the Central Gulf of Alaska (GOA) Program. The measures under consideration include changing the season start date from May 1 to April 1; eliminating the catcher vessel (CV) cooperative holding cap of 30 percent; increasing the processing cap to 35 percent – 40 percent of the CV quota share pool for sablefish, Pacific cod, and/or primary rockfish; and revising the CV aggregated primary rockfish (Pacific Ocean perch (POP), northern rockfish, and dusky rockfish) harvesting cap by capping only POP harvest at 8 percent of the CV POP share pool. The purpose of this action is to respond to changes in the fishery with measures that would increase flexibility and efficiency, improve functionality, and better ensure the total allowable catch (TAC) for the primary rockfish species is fully harvested and landed in Kodiak as intended.

## List of Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
AAC	Alaska Administrative Code
ABC	acceptable biological catch
ADF&G	Alaska Department of Fish and Game
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
AKFIN	Alaska Fisheries Information Network
AKR	NMFS Alaska Region
AP	Advisory Panel
BSAI	Bering Sea and Aleutian Islands
CAS	Catch Accounting System
CDQ	Community Development Quota
CEQ	Council on Environmental Quality
CFEC	Commercial Fisheries Entry Commission
CFR	Code of Federal Regulations
CFID	Commercial Fishing Incident Database
CGOA	Central Gulf of Alaska
COAR	Commercial Operators Annual Report
Council	North Pacific Fishery Management Council
CP	catcher/processor
CPUE	catch per unit of effort
CQ	cooperative quota
CV	catcher vessel
E.O.	Executive Order
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	essential fish habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	endangered species unit
FE	fisheries effect
FMA	Fisheries Monitoring and Analysis
FMP	fishery management plan
FONSI	Finding of No Significant Impact
FR	<i>Federal Register</i>
FRFA	Final Regulatory Flexibility Analysis
ft	foot or feet
FY	Fiscal year
H.S. codes	Harmonized System codes
GHL	Guide Line Harvest
GOA	Gulf of Alaska
ICA	Incidental catch allowance
IRFA	Initial Regulatory Flexibility Analysis
IPA	Incentive Plan Agreement
IPHC	International Pacific Halibut Commission
JAM	jeopardy or adverse modification
lb(s)	pound(s)
ISD	NMFS Information Systems Division
LEI	long-term effect index
LLP	license limitation program
LOA	length overall
m	meter or meters
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act

Acronym or Abbreviation	Meaning
MRA	maximum retainable allowance
MSA	Magnuson-Stevens Act
MSST	minimum stock size threshold
mt	metric ton
NAO	NOAA Administrative Order
NEPA	National Environmental Policy Act
NMFS	National Marine Fishery Service
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
NPPSD	North Pacific Pelagic Seabird Database
Observer Program	North Pacific Groundfish and Halibut Observer Program
OFL	overfishing level
OMB	Office of Management and Budget
OMD	NMFS Operations and Management Division
PBR	potential biological removal
POP	Pacific ocean perch
PSC	prohibited species catch
PPA	Preliminary preferred alternative
PRA	Paperwork Reduction Act
PSEIS	Programmatic Supplemental Environmental Impact Statement
PSFMC	Pacific States Marine Fisheries Commission
QS	quota share
RAM	NMFS Restricted Access Management Division
RFA	Regulatory Flexibility Act
RFFA	reasonably foreseeable future action
RIR	Regulatory Impact Review
RP	Rockfish Program
RPP	Rockfish Pilot Program
RPA	reasonable and prudent alternative
RPN	relative population number
SAFE	Stock Assessment and Fishery Evaluation
SAR	stock assessment report
SBA	Small Business Act
SFD	NMFS Sustainable Fisheries Division
SIA	Social Impact Assessment
SIR	Supplemental Information Report
Secretary	Secretary of Commerce
SPLASH	Structure of Populations, Levels of Abundance, and Status of Humpbacks
SRKW	Southern Resident killer whales
SSC	Science and Statistical Committee
TAC	total allowable catch
U.S.	United States
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
VMS	vessel monitoring system
YOY	young of year

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# Executive Summary

This Regulatory Impact Review and Environmental Assessment analyzes proposed management measures that would apply exclusively to the Central Gulf of Alaska (GOA) Program. The measures under consideration include changing the season start date from May 1 to April 1; eliminating the catcher vessel (CV) cooperative holding cap of 30 percent; increasing the processing cap to 35 percent – 40 percent of the CV quota share pool for sablefish, Pacific cod, and/or primary rockfish; and revising the CV aggregated primary rockfish (Pacific Ocean perch (POP), northern rockfish, and dusky rockfish) harvesting cap by capping only POP harvest at 8 percent of the CV POP share pool. The purpose of this action is to respond to changes in the fishery with measures that would increase flexibility and efficiency, improve functionality, and better ensure the total allowable catch for the primary rockfish species are fully harvested and landed in Kodiak as intended.

## Purpose and Need

The purpose of this action is to address changes in the fishery since the Rockfish Program (RP) was effective on January 1, 2012 and reauthorized on March 31, 2021. Unforeseen changes in the Central GOA rockfish fishery in recent years, including the continuing Coronavirus disease (COVID-19) pandemic conditions, impacts to the GOA flatfish market due to the continuing foreign trade tariffs, and the loss of several shorebased processing facilities in Kodiak, have resulted in difficulties in harvesting and processing all of the trawl CV Rockfish Program quota, especially later in the season as processors approach the limit of their current processing caps or close for seasonal maintenance. In addition, dusky rockfish and northern rockfish quota are not fully harvested, so modifying the aggregate harvest cap for the primary rockfish species to apply only to POP could facilitate a greater percentage of dusky rockfish and northern rockfish quota being harvested.

As such, the Council has focused this amendment package specifically on adjusting management measures for the RP. The Council has purposely identified an alternative with options that would provide increased flexibility and efficiency, improve functionality, and add protection against unforeseen circumstances for the fishery by allowing more time to harvest and land Central GOA rockfish TACs in Kodiak as intended, while still maintaining the intent of the RP.

The Council adopted the following problem statement to originate this action on February 10, 2022.

Since 2007, the Central Gulf of Alaska Rockfish Pilot Program and final Rockfish Program have improved conservation, fish quality, and stability for participants. Program reviews have shown increased vessel accountability, controlled fleet capacity, improved safety, and reduced bycatch. Given changes in the fishery since implementation, several changes to the program regulations would increase flexibility and efficiency, improve functionality, and better ensure the rockfish TACs are fully harvested and landed in Kodiak as intended.

## Alternatives

The following alternatives and options were adopted by the Council in February 2022. The Council's preferred alternative (PA), selected by the Council in June 2022, is shown in **bold**.

Alternative 1: Status Quo

**Alternative 2: Change the season start date and modify the harvesting, processing, and cooperative holding caps (options are not mutually exclusive).**

**Option 1: Change the Rockfish Program season start date from May 1 to April 1.**

**Option 2: Eliminate the CV cooperative holding cap (30% QS assigned to CV sector).**

**Option 3: Increase the processing cap to 35 – 40% of the CV quota share pool for sablefish, Pacific cod, and/or primary rockfish.**

**Option 4: Revise the vessel aggregated rockfish (POP, northern rockfish and dusky rockfish) harvesting cap by capping only POP harvests at 8% of the CV POP quota share pool.**

## **Regulatory Impact Review**

### **Option 1: April 1 Start Date**

Under the status quo alternative, the season start date for the RP would remain unchanged as May 1. As a result, losses of the shoreside flatfish market due to the recent trade tariffs will likely continue to result in RP vessel operators and processing plants reducing operations in April, since there is currently limited fishery harvest during this period. For several decades, the flatfish markets have been essential to harvesters and processors operating out of Kodiak during the month of April. The lack of these economically viable markets has created unforeseen lack of harvesting and deliveries to Kodiak processors in April. In addition, continued concern about the potential for future COVID-19 outbreaks could have economic and operational impacts in the Port of Kodiak. If future COVID-19 outbreaks occur, processing capacity is expected to be reduced, which increases the risk that the RP fishery, which currently starts on May 1, gets delayed to later in the year which would conflict with the summer salmon fisheries. These overlapping fishery conflicts result in processors, which have normally focused on rockfish in May and June and salmon in July, having to address both rockfish and salmon deliveries simultaneously. The loss of these unique processing periods for the rockfish and salmon fisheries results in a loss of product quality and could cause seafood businesses to choose between RP revenue sources and salmon revenue sources.

Alternative 2 would provide enhanced flexibility to vessel operators and processing plants participating in the RP. This option is designed to mitigate the impacts from the recent and unforeseen loss of arrowtooth flounder markets and the threat of loss of processing capacity and/or potential conflict with summer high volume salmon related to COVID-19 plant closures. This option would provide an additional flexibility for trawl vessels to participate in the RP during April, thereby mitigating some impacts on shoreside processors due to the loss of arrowtooth flounder markets. RP deliveries during April could keep fish flowing into processing plants and keep plants fully operational, mitigating the economic and operational impacts of future COVID-19 outbreaks and current market conditions.

There is limited data on prohibited species catch (PSC) rates in RP fisheries for the month of April. Provided in Table 2-4 is the halibut PSC for those CVs that utilized the emergency April 1 start date, which was 2 mt of halibut PSC and a PSC rate of 0.37 kilograms of halibut per ton of groundfish while checked into the RP. By comparison, the average halibut PSC rate for the month of May from 2012 through 2021 while checked into the RP was 1.71 kilograms of halibut per ton of groundfish. Table 2-5 provides Chinook salmon PSC for those CVs that utilized the emergency April 1 start date, which was 66 Chinook salmon with a PSC rate of 0.02 Chinook salmon per ton of groundfish while checked into the RP. In comparison, the average Chinook PSC rate for the month of May from 2012 through 2021 was 0.04 Chinook salmon per ton of groundfish.

As for CPs, much of the PSC data for the sector while checked into the RP fishery is confidential given there is generally only one or two CPs participating in the RP monthly. Nevertheless, the sector's PSC rates should not change with an April 1 start date since the sector will continue to start fishing in the RP fishery in the month of May or later. As noted in Section 2.7.3, the sector, since 2012, has usually started fishing in the RP in June. Only since the COVID-19 outbreaks and the unexpected loss of the flatfish

markets starting in 2020 has the CP sector fished in the RP in May. In 2021, despite the emergency April 1 start date, the earliest the CP sector participated in the RP was May.

If participants attempt to extend fishing over a longer season, it is possible that higher PSC rates could constrain their rockfish harvests. If high PSC rates are encountered in April and that is perceived as a concern, it is likely that vessels will choose to concentrate their fishing under the program closer to the traditional season beginning May 1, and potentially encounter the same risks of delay and conflict with the salmon fishery that has occurred under the status quo. The combination, however, of the PSC limits, robust PSC avoidance measures currently implemented by cooperative managers, and the enhanced flexibility provided by this option, would likely mitigate any increases in PSC rates during April.

### **Option 2: Eliminate CV Cooperative Holding Cap**

Selecting the status quo alternative (Alternative 1) would maintain the existing CV cooperative holding cap of 30 percent. The cooperative holding cap was intended to provide greater opportunity for shore-based processors to receive RP quota. The existing 30 percent CV cooperative holding cap was intended to limit cooperative consolidation. In contrast, Alternative 2, Option 2 would remove the cooperative holding cap for the CV harvest share pool of the primary species. Under this proposed action, CV cooperatives would no longer be limited on the amount of cooperative quota (CQ) a cooperative may hold or use during a calendar year and would likely see a small reduction in the minimal administrative and management costs associated with cooperative management. Finally, given that a processing cap for CQ assigned to the CV section is also included in the RP and therefore the Council's original intent would still be safeguarded by the processing cap, there appears to be no reason for the 30 percent CQ cooperative holding cap.

### **Option 3: Increase the CV Quota Share Pool Processor Caps**

Under status quo, the shore-based processing caps would remain at 30 percent of the CQ for Pacific cod, sablefish, and aggregated primary rockfish species assigned to the CV sector. The processing caps were intended to maintain a distribution of processing activity in the fishery among several processors and stabilize the processing sector. The 30 percent processor caps ensures that a minimum of four Kodiak processors are necessary to process all the RP CQ. However, in recent years the number of active Kodiak processors has diminished from a high of seven during the time the Council was developing the RP, and in the first few years of the RP, to only four in 2020 and 2021. With only four active shorebased processors, a temporary loss of one processor during the fishing year increases the difficulty in processing the CV quota without exceeding the 30 percent processing caps, and, in some instances, may result in some portion of the RP quota remaining unharvested. This is especially true for Pacific cod and sablefish, since these two species are generally fully utilized, but even aggregate rockfish for some processors are increasingly constraining at the 30 percent processor cap. If the Council also eliminates the eight percent harvest cap for northern rockfish and dusky rockfish in this proposed action (Option 4), there is the potential that a 30 percent processor cap for the aggregated primary rockfish species could be constraining if harvest of the northern rockfish and dusky rockfish increases. Overall, under status quo, the 30 percent processor cap will likely continue to be constraining and could prevent some portion of the CV rockfish, Pacific cod, and sablefish quotas from being fully harvested.

Under Alternative 2, Option 3, processor caps of 35 percent to 40 percent will ensure that a minimum of three Kodiak processors will be required to process all the RP CQ. This would likely provide some additional flexibility to ensure all the CV quota share pool is harvested and processed for the primary aggregated rockfish species, Pacific cod and sablefish. Specific to Pacific cod and sablefish, these species are generally fully harvested and the 30 percent processor cap for these species has become increasingly constraining. For aggregate rockfish, which is also constrained for some processors at the 30 percent cap, increasing the processor cap to 35 to 40 percent for the primary rockfish species will also likely provide

some additional flexibility for processors even if the harvest of northern rockfish and dusky rockfish CV quota increases over time under Option 4.

The 40 percent cap (PPA) would likely provide a marginal amount of flexibility for the processors when compared to a 35 percent cap. A 40 percent cap would still ensure a minimum of three Kodiak processors will be necessary to process all the RP CQ, recognizing that consolidation of Kodiak processors could continue in the future thereby resulting in the 40 percent processing cap being constraining.

Finally, increasing the processor caps could improve economic efficiencies for those processors constrained by the current 30 percent processing caps. The higher processing caps could allow those processors constrained by the current 30 percent cap to operate at a more efficient capacity, which may reduce costs per unit of production. The higher processing caps may also allow processors currently constrained by the caps to efficiently develop markets by increasing the amount of product they can supply and may increase their ability to develop new product forms. Overall, the proposed processor caps will ensure that a minimum of three Kodiak processors will be required to process all the CV rockfish quota while also providing some additional flexibility for the current Kodiak processors.

#### **Option 4: Revise CV Aggregated Rockfish Harvesting Cap**

Selecting the status quo for Option 4 would leave in place the existing CV aggregate rockfish (POP, northern rockfish, and dusky rockfish) harvesting vessel use cap of 8 percent and would likely continue a pattern of low quota harvests of northern rockfish and dusky rockfish relative to POP. In contrast, Alternative 2, Option 4 could provide an incentive for those few CVs that have routinely harvested a larger proportion of northern rockfish and dusky rockfish relative to their POP, compared with other CVs, by removing the constraint of the aggregate harvest vessel use cap. In general, one to three CVs have in the past approached the harvest vessel use cap, but never exceeded the vessel use cap. CVs that approach the harvest vessel use cap limit primarily catch POP, so maintaining the eight percent harvest vessel use cap for POP will continue to restrict the catch of POP quota by these CVs while simultaneously allowing RP CVs to harvest a greater proportion of the northern rockfish and dusky rockfish quota. Finally, given that the number of active CVs in the RP has consistently ranged from 25 to 29 vessels since implementation of the RP in 2012, and that the CV harvest use cap revision will likely only provide an incentive to harvest a greater amount northern and dusky rockfish, revising the CV vessel use cap is likely not going to contribute to CV consolidation in the RP.

#### **Environmental Analysis**

A comprehensive Environmental Analysis of the CGOA RP was undertaken with the development of Amendment 88 to the GOA FMP, implemented in 2012. The findings in that EA describe the status quo of the RP and are included by reference. Of the options considered in this action, Options 2, 3, and 4 would have no adverse environmental effect. The selection of Alternative 2, Option 1 would amend the RP start day to April 1<sup>st</sup>. Under this option, there is a potential that RP harvest may extend to begin earlier than the current period of May through mid-November, with most of the harvest occurring in May and June before the start of the pink salmon fishery. It was shown in the 2021 season, under the emergency rule, that some CVs utilized the flexibility of an April 1 start date. Two vessels participated in the first and second week of April, followed by nine vessels and 10 vessels respectively during the third and fourth week of April (Figure 3-4).

Alternative 2, Option 1 would make possible an extended fishing season, allowing for increased distribution over a longer season and for impacts to be dispersed temporally across a longer time scale. Overall harvest levels would not exceed established biological harvest limits for primary and secondary rockfish stocks, CGOA sablefish stocks, and CGOA Pacific cod stocks. As discussed in the EA, a change in the start date is unlikely to have impacts to the process of spawning/parturition and or larval dispersal

for RP species. However, NMFS will continue to conservatively manage the fishery to help ensure that the ABC is not exceeded for any of the target species. Data to estimate whether PSC encounter rates would change as a result of April fishing are not available, however this action would not change existing PSC limits for the fishery, and observer coverage is high in the RP, which allows for monitoring and which has reduced uncertainty in bycatch estimates. Finally, habitat impacts are unlikely to be significantly different under this action, as the relatively low effort level of the rockfish fisheries along slope areas is likely to continue, and CVs would continue to keep short trip lengths to maintain quality, which concentrates fishing in areas proximate to Kodiak harbor. Selection of alternative 2, option 1 is unlikely to affect the distribution of harvest either spatially or temporally such that it would have a substantial negative impact on target species, PSC species, or EFH.

# 1 Introduction

This Regulatory Impact Review (RIR) and Environmental Assessment (EA) analyzes proposed management measures that would apply exclusively to the Central Gulf of Alaska (CGOA) Rockfish Program (RP). The measures under consideration include changing the season start date from May 1 to April 1; eliminating the catcher vessel (CV) cooperative holding cap of 30 percent; increasing the processing cap to 35 percent – 40 percent of the CV quota share pool for sablefish, Pacific cod, and/or primary rockfish; and revising the CV aggregated primary rockfish (Pacific Ocean perch (POP), northern rockfish, and dusky rockfish) harvesting cap by capping only POP harvest at 8 percent of the CV POP share pool. The purpose of this action is to address changes in the fishery which would increase flexibility and efficiency, improve functionality, and better ensure the total allowable catch (TAC) for the primary rockfish species is fully harvested and landed in Kodiak as intended.

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

## 2 Regulatory Impact Review

This RIR examines the benefits and costs of a proposed regulatory amendment that authorizes the owners/operators of trawl CVs targeting the primary rockfish species and secondary species allocated under the RP. This RIR also integrates an analysis of the social impacts and fishing community impacts of the proposed action. The purpose of this action is to increase flexibility and efficiency, improve functionality, and better ensure the TAC for rockfish are fully harvested and landed in Kodiak as intended.

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

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

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

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

### 2.1 Statutory Authority

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

The groundfish fisheries in the EEZ off Alaska is managed under the Fishery Management Plan for Groundfish of the Gulf of Alaska (GOA). The proposed action under consideration would amend this FMP and Federal regulations at 50 CFR §679. Actions taken to amend FMPs or implement regulations

governing these fisheries must meet the requirements of applicable Federal laws, regulations, and Executive Orders.

## **2.2 Purpose and Need for Action**

The purpose of this action is to address changes in the fishery since the RP was effective on January 1, 2012 and reauthorized on March 31, 2021. Unforeseen changes in the CGOA rockfish fishery in recent years including the continuing Coronavirus disease (COVID-19) pandemic conditions, impacts to the GOA flatfish market due to the continuing foreign trade tariffs, and the loss of several shorebased processing facilities in Kodiak have resulted in difficulties in processing all of the trawl CV rockfish quota, especially later in the season as processors approach the limit of their current processing caps or close for seasonal maintenance. In addition, dusky rockfish and northern rockfish quota are not fully harvested, so modifying the aggregate harvest cap for the primary rockfish species to apply only to POP could facilitate a greater percentage of dusky rockfish and northern rockfish quota being harvested.

As such, the Council has focused this amendment package specifically on adjusting management measures for the RP. The Council has purposely identified an alternative with options that would provide increased flexibility and efficiency, improve functionality, and add protection against unforeseen circumstances for the fishery by allowing more time to harvest and land CGOA rockfish TACs in Kodiak as intended.

The Council adopted the following problem statement to originate this action on February 10, 2022.

Since 2007, the Central Gulf of Alaska Rockfish Pilot Program and final Rockfish Program have improved conservation, fish quality, and stability for participants. Program reviews have shown increased vessel accountability, controlled fleet capacity, improved safety, and reduced bycatch. Given changes in the fishery since implementation, several changes to the program regulations would increase flexibility and efficiency, improve functionality, and better ensure the rockfish TACs are fully harvested and landed in Kodiak while still maintain the intent of the RP.

## **2.3 History of this Action**

In April 2022, the Council initially reviewed an analysis for adjusting the CGOA RP. After reviewing the analysis, Scientific and Statistical Committee (SSC) recommendations, and Advisory Panel (AP) recommendations, and listening to public testimony, the Council recommended releasing the analysis for final action. The Council selected a preliminary preferred alternative (PPA). The PPA includes the following Alternative 2 options:

- 1) changing the season start date from May 1 to April 1
- 2) eliminate the catcher vessel (CV) cooperative holding cap of 30 percent
- 3) increasing the processing cap to 40 percent of the CV quota share pool for sablefish, Pacific cod, and primary rockfish, and
- 4) revise the vessel aggregated rockfish harvesting cap by capping only Pacific ocean perch at 8 percent of the CV quota share pool for this species.

The Council during its June 2022 meeting selected a preferred alternative to revise the Central Gulf Alaska Rockfish Program after reviewing the public review draft, recommendations from the SSC and AP, and taking into consideration public testimony. The preferred alternative includes the following Alternative 2 options:

- 1) change the season start date from May 1 to April 1
- 2) eliminate the catcher vessel (CV) cooperative holding cap of 30 percent
- 3) increase the processing cap to 40 percent of the CV quota share pool for sablefish, Pacific cod, and primary rockfish, and
- 4) revise the vessel aggregated rockfish harvesting cap by capping only Pacific ocean perch at 8 percent of the CV quota share pool for this species.

## 2.4 Alternatives

The following alternatives and options were adopted by the Council in February 2022. The Council's PPA, selected by the Council in April 2022, is shown in **bold**.

Alternative 1: Status Quo

**Alternative 2: Change the season start date and modify the harvesting, processing, and cooperative holding caps (options are not mutually exclusive).**

**Option 1: Change the Rockfish Program season start date from May 1 to April 1.**

**Option 2: Eliminate the CV cooperative holding cap (30% CQ assigned to CV sector).**

**Option 3: Increase the processing cap to 35 – 40% of the CV quota share pool for sablefish, Pacific cod, and/or primary rockfish.**

**Option 4: Revise the vessel aggregated rockfish (POP, northern rockfish and dusky rockfish) harvesting cap by capping only POP harvests at 8% of the CV POP quota share pool.**

## 2.5 Rationale for Council's Preferred Alternative

The Council's preferred alternative will increase net benefits to the nation in comparison to the status quo. The preferred alternative exists without negative environmental effects or allocative effects as shown in the analyses. Adjustments to the current CGOA Rockfish program under the preferred alternative would allow additional flexibility to adapt to changing market and environmental conditions, both on the water and in processing capacity within the community. The preferred alternative is intended to meet the overall goal of prosecuting this fishery in a sustainable and functional manner, and to better ensure that the TACs for the primary rockfish and other allocated species are fully harvested and landed in Kodiak, as indicated by the Council's purpose and need statement. The Council noted that the preferred alternative includes relatively small changes to the regulations but could have a meaningful impact to the fishery and community.

Allowing vessels to prosecute this fishery in April (option 1) provides additional flexibility to allow the fishery to adapt to unforeseen challenges within the fishery. The April 1 start date will also help maintain processing capacity for other non-trawl fisheries. It was also noted in the analysis that the flexibility gained by April 1 start date will help with vessel planning, crew planning, and processing workforce stability, which was observed during the 2021 season under emergency rule.

The EA indicates a change in the start date is unlikely to have impacts on the process of spawning or larval dispersal for rockfish program species. The Science and Statistical Committee (SSC) concurred with the conclusion of the EA in that the alternatives being considered are likely to have minimal effects on the groundfish species caught, unallocated species, PSC and EFH, in part because the fishery has been distributed across the season, and the fishery continues to be limited by TACs. It was also noted by the SSC, that changes in fishing patterns are naturally expected to occur over time and the SSC recommended harvest patterns for primary rockfish species continue to be monitored and, if important changes occur, that they be considered in future assessments and in the Council's review of the Rockfish Program.

The preferred alternative also removes the CV cooperative holding cap under Option 2. The CV cooperative holding cap has proven to have zero function except to force fishermen to have separate cooperatives, even when cooperative vessels deliver to the same processor under the program. In the CGOA Rockfish Program, a vessel is free to join any cooperative and each cooperative can associate with any processor and a processor can associate with more than one cooperative. As a result, the cooperative cap does not limit consolidation in the processing sector, it only prohibits vessels from joining together in a cooperative and creates an unnecessary administrative burden. Thus, removing the CV cooperative holding cap alleviates the administrative burden and allows more flexibility within the fishery for CVs.

Option 3, under the preferred alternative, retains a processing cap and revises it to 40 percent, thus accommodating fewer shoreside processors processing rockfish in Kodiak. The analysis is clear that the use cap is or has recently been constraining for primary rockfish species, sablefish and Pacific cod. Leaving the processing cap at the current 30 percent (status quo alternative) serves to leave rockfish CQ unharvested as there is not currently enough Kodiak processors to manage the entirety of the CV rockfish program harvest. Changing the processing cap to 40 percent will continue to limit processor consolidation, while simultaneously accommodate for a lack of Kodiak rockfish processors, if necessary. The preferred option of 40 percent would require at least 3 Kodiak shoreside processors to fully prosecute the fishery. The Council's preferred 40 percent processor cap benefits the fishermen and the community of Kodiak to ensure the CV rockfish CQ is harvested and delivered to the processors. The preferred processor cap also promotes competition for those deliveries when the cap is not constraining markets.

Option 4 would revise the vessel aggregated rockfish (POP, northern rockfish and dusky rockfish) harvesting cap by capping only POP harvests at 8 percent of the CV POP quota share pool. Option 4 is intended to increase harvest under the program and more fully prosecute the northern rockfish and dusky rockfish TACs, which are continuously underharvested. This would provide an increased opportunity to harvest a larger portion of the northern rockfish and dusky rockfish CQ.

The preferred alternative is consistent with all the MSA National Standards but improves the Council's ability to meet National Standards 1, 5, 6, and 8, as evidenced by the analysis. Overall, the preferred alternative does not change the stock assessment for CGOA rockfish, the TACs, the PSC limits, or the 100 percent observer coverage required for the CGOA Rockfish Program vessels, while maintaining the primary structure of the CGOA Rockfish Program. The Council will have regular opportunities to track the effects of the preferred alternative such as: 1) an annual report from the rockfish cooperatives which includes effort and harvest and changes in the fishery, 2) information from NMFS on the operation of the fishery every fall in the GOA Inseason Management Report, 3) the stock assessments of the CGOA Rockfish Program primary and secondary species done every two years, 4) the comprehensive review of the CGOA Rockfish Program as required under the MSA, and 5) the Essential Fish Habitat (EFH) analyses.

## 2.6 Methods and Reference Documents Used for the Impact Analysis

The impact analysis in this document is designed to meet the requirements of E.O. 12866, which requires an RIR evaluate the costs and benefits of the alternatives, including both quantifiable and qualitative considerations. Additionally, the analysis should provide information for decision makers “to maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.”

The costs and benefits of this action are described in the sections that follow, comparing the no action Alternative 1 with the action alternatives.<sup>1</sup> The analysis then provides a qualitative assessment of the net benefit to the Nation of each alternative, with “no action” as a baseline.

This analysis was prepared using data from the Alaska Fisheries Information Network (AKFIN). AKFIN has access to the Catch Accounting System (CAS), Commercial Fisheries Entry Commission (CFEC) Fish Ticket data, and Alaska Department of Fish and Game (ADFG) Commercial Operators Annual Report (COAR) data from which it can supply catch and discard records, as well as estimates of gross ex-vessel and first wholesale revenues.

The costs and benefits, as well as the economic impacts of this action, are described in Section 2.6 of this RIR, which compares the No Action Alternative 1 to the Action Alternative 2. Secondary data include detailed information on the dynamics of the CGOA rockfish fishery, market, and communities that are associated with the impacted sectors by way of harvesting or processing. In particular, the description of fisheries (Section 2.5) and the Analysis of Impacts (Section 2.6) draw on:

### **Environmental Assessment/Regulatory Impact Review for Proposed Amendment 111 to the Fishery Management Plan for the Gulf of Alaska, Central Gulf of Alaska Rockfish Program Reauthorization (Secretarial Review Draft 2020).**

The purpose of Amendment 111 was to reauthorize the RP to retain the management, economic, safety, and conservation gains realized under the RP. The amendment can be found here:

[https://www.npfmc.org/wp-content/PDFdocuments/catch\\_shares/Rockfish/A111\\_RockfishReauthorization.pdf](https://www.npfmc.org/wp-content/PDFdocuments/catch_shares/Rockfish/A111_RockfishReauthorization.pdf)

### **Central GOA Rockfish Program Review – Including a Fishery Allocation Review, (NPFMC 2017).**

The RP review focused on the goals and objectives of the program defined by the Council, MSA, and NOAA Fisheries guidance for program reviews. The review included quantitative measures of the effectiveness of the program meeting the goals and objectives when data allows. A qualitative discussion of the impacts was provided when sufficient data were unavailable. The program review can be found here:

[https://www.npfmc.org/wp-content/PDFdocuments/catch\\_shares/Rockfish/RockfishProgramReview1017.pdf](https://www.npfmc.org/wp-content/PDFdocuments/catch_shares/Rockfish/RockfishProgramReview1017.pdf)

### **Final Regulatory Impact Review for a Temporary Rule (Emergency Action) to Modify Season Start Date to the Central Gulf of Alaska Rockfish Program in 2021 (February 2021).**

This RIR evaluated the costs and benefits of an emergency rule to modify the season start date of the 2021 RP fishery from May 1, 2021, to April 1, 2021, to address economic, social, and public health

<sup>1</sup> The evaluation of impacts in this analysis is designed to meet the requirement of E.O. 12866, which dictates that an RIR evaluate the costs and benefits of the alternatives, to include both quantifiable and qualitative considerations. Additionally, the analysis should provide information for decision makers “to maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.”

situations present in the rockfish fishery. The temporary rule can be found here: <https://www.federalregister.gov/documents/2021/03/19/2021-05685/fisheries-of-the-exclusive-economic-zone-off-alaska-central-gulf-of-alaska-rockfish-program-modify>

### **Stock Assessment and Fishery Evaluation (SAFE) Report for the Groundfish Fisheries of the Gulf of Alaska and Bering Sea/Aleutian Islands Area (NMFS 2020).**

The Economic SAFE report contains economic data and information about the Federal groundfish fisheries in the Gulf of Alaska and the BSAI. This report is published annually as an appendix to the Stock Assessment and Fishery Evaluation reports to provide data on catch, discards, prohibited species catch, ex-vessel and first-wholesale production and value. The 2020 Economic SAFE is available here: <https://www.fisheries.noaa.gov/resource/data/2020-economic-status-groundfish-fisheries-alaska>

## **2.7 Description of Fisheries**

In 2003, the U.S. Congress directed the Secretary of Commerce to establish, in consultation with the Council, a Rockfish Pilot Program (RPP) for management of the POP, northern rockfish, and pelagic shelf rockfish fisheries (the primary rockfish fisheries) in the CGOA. Following this directive, the Council adopted a share-based management program that was implemented in 2007 for two years (2007-2008), under which the TAC of rockfish primary species is apportioned as exclusive shares to cooperatives, based on the catch history of the members of those cooperatives. The MSA extended the term of the RPP for three more years (2009-2011). In 2011, the Council proposed, the Secretary of Commerce approved, and NMFS implemented the CGOA Rockfish Program (RP), which became effective for the 2012 fishing year. The RP was scheduled to sunset on December 31, 2021, but the Council recommended reauthorization of the RP in February 2020 with minor modifications and no sunset date. The SOC approved the reauthorization of the RP which was implemented on March 31, 2021 (86 FR 11895). A more detailed history of the fishery is provided in the Amendment 111 Central Gulf of Alaska Rockfish Program Reauthorization (NMFS, 2020).

The RP was developed to slow the race for fish, minimize bycatch and associated mortalities, provide for improved conservation of habitat, and address the social and economic concerns that had arisen under the original management system. Under the slower fishery, RP participants could focus on improving the quality of their landings, increasing fishery value and reducing overall prohibited species catch (PSC) use.

Under the RP, primary species TACs are divided into four parts for the management of the CGOA fishery. The four parts are the CV cooperative quota, CP cooperative quota, longline entry level fishery, and an incidental catch allowance (ICA) for use as bycatch in other directed fisheries. In addition, secondary species TACs are divided between the cooperatives and the non-RP fisheries (i.e., sablefish, Pacific cod, shortraker rockfish, roughey rockfish, and shortspine thornyhead rockfish). Exceptions are that Pacific cod is not allocated to CP cooperatives, and shortraker rockfish and roughey rockfish are not allocated to CV cooperatives but are instead managed using the maximum retainable allowance (MRA). These species are not allocated to the sectors, because those sectors have limited catches of the species, which could lead to allocations inadequate to support catch of rockfish primary species. MRAs are set low, relative to their historical levels, to discourage harvests in excess of historical catch amounts. Each sector is also apportioned Pacific halibut PSC, based on historic halibut mortality in the target rockfish fisheries.

Under the RP, participants in each sector can only fish as part of a cooperative. Each cooperative receives allocations of rockfish primary and secondary species, and an allowance of halibut PSC, from the sector's allocations, based on the rockfish primary species catch histories of its members. For the CV sector, harvesters must join a cooperative to participate in the target fisheries. For the CP sector, participants can participate in cooperative or opt out of the RP for that year. Rockfish secondary species catch is limited

by an MRA, which is reduced from the historical level to maintain total catch at a level comparable to a corresponding cooperative allocation and to reduce the economic incentive to fish in the limited access fishery.

Cooperatives manage and coordinate fishing of their allocations. Rockfish primary and secondary species are subject to a full retention requirement to prevent discards. Cooperatives cannot begin a fishing trip for any RP species with any vessel assigned to a rockfish cooperative if the total amount of unharvested cooperative quota (CQ) that is currently held by that rockfish cooperative is zero or less for any species which CQ is assigned. Cooperatives cannot exceed their allocations, so a cooperative must manage and monitor members' catch of rockfish primary species, allocated rockfish secondary species, and halibut PSC allowance to ensure that it is able to fully harvest (but not exceed) its allocations and PSC allowances.

To protect processors, each catcher vessel in the program is eligible for membership in a single cooperative, which must form an annual association with a shoreside processor. The exact terms of the association are subject to negotiation and are confidential to the parties, but since the cooperative agreement requires the approval of the associated processor, it is likely that these agreements contain terms defining cooperative landing requirements.

The RP includes a requirement that all primary and secondary RP species CQ harvested by the CV sector must be delivered to a shore-based processor within the City of Kodiak.

The RP also has the following ownership and use caps.

- A person may not hold or use more than:
  - 4% of the quota share (QS) assigned to the catcher vessel sector.
  - 40% of the QS assigned to the catcher/processor sector.
- CV cooperative may not hold or use more CQ than 30% QS assigned to the catcher vessel sector.
- A vessel may not be used to harvest more than:
  - 8% CQ issued to the catcher vessel sector.
  - 60% CQ issued to the catcher/processor sector.
- Processors may not receive or process more than 30% CQ issued to the catcher vessel sector (rockfish primary species, Pacific cod, and sablefish).

A person may be grandfathered in above the caps based on their catch/processing during the qualifying period.

See Section 2.7.6 for further details on the ownership and use caps.

Finally, the RP includes a series of CV and CP sideboard restrictions to limit spillover impacts on other fisheries. Sideboard limits were established for certain West Yakutat District and the Western GOA fisheries. RP sideboards apply to federally permitted vessels fishing in federal waters and waters adjacent to the CGOA when the harvest of rockfish primary species by that vessel is deducted from the federal TAC. Sideboards limit both the LLP license with rockfish QS assigned to it, and the vessel used to make legal landings of rockfish QS. RP sideboards are in effect from July 1 through July 31. Sideboard measures are in effect only during the month of July when the rockfish fisheries were traditionally open and vessel operators had to choose between fishing in the CGOA rockfish fisheries and other fisheries that were open to directed fishing.

### 2.7.1 Harvests

Participation in the RP is provided in Table 2-1. The CGOA RP CQ is harvested by trawl vessels. The longline entry level fishery is not issued CQ. Trawl RP vessels are classified as either CVs or CPs based on their mode of operation. CVs may harvest CP CQ if acquired from the CP cooperative(s). CPs may not harvest CV CQ.

The number of vessels participating in the fishery has been relatively stable since implementation of the RP in 2012. There were four CPs participating in each of the four most recent years. Catch varied from nearly 8,000 mt in 2013 to over 15,000 mt in 2021. The first wholesale value of the CP rockfish fishery ranged from nearly \$10 million in 2019 to a high of over \$16 million in 2012 and 2017. In 2020, the first wholesale value of the fishery was over \$10 million. Values for 2021 were not yet available.

For the CVs, the number of vessels participating each year has ranged from 25 to 29 vessels, with 26 participating in 2021. Catch varied from over 10,000 mt in 2017, to over 17,000 mt in 2021. The number of processing plants varied from a low of four in 2020 and 2021 to a high of seven in 2012 – 2016. The ex-vessel value of the CV rockfish fishery ranged from over \$4 million in 2020 to a high of over \$10 million in 2012. First whole value ranged from a low of over \$16 million in 2020 to a high of over \$26 million in 2012.

**Table 2-1 Reported catch (mt) and real value (millions of 2020 \$) of all species harvested by trawl gear in the CGOA RP fishery, 2012 through 2021**

	CP													Total
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
Vessels	5	5	5	4	5	4	4	4	4	8	4	4	8	
Licenses	5	5	5	4	5	4	4	4	4	7	4	4	7	
Processing Plants	5	5	5	4	5	4	4	4	4	8	4	4	8	
Reported Catch (mt)	9,191	7,967	10,415	10,903	10,908	10,854	10,891	8,846	11,415	15,338	16,908	16,515	140,150	
Ex-vessel Value	\$7.19	\$4.99	\$6.37	\$5.93	\$5.80	\$6.57	\$6.13	\$4.86	\$4.39	\$5.76	\$6.95	*	\$64.94	
First Wholesale Value	\$16.43	\$11.35	\$15.25	\$14.96	\$14.59	\$16.08	\$15.50	\$9.71	\$10.34	\$14.02	\$18.25	*	\$156.48	
<b>CV</b>														
Vessels	28	29	28	28	27	25	26	29	27	26	23	22	40	
Licenses	30	31	30	30	29	28	28	32	31	29	26	26	40	
Processing Plants	7	7	7	7	7	6	5	5	4	4	4	4	11	
Reported Catch (mt)	11,997	10,483	12,625	12,616	14,400	10,378	13,188	13,806	14,665	17,580	14,688	15,106	161,532	
Ex-vessel Value	\$10.48	\$7.06	\$7.73	\$7.23	\$7.99	\$6.48	\$7.22	\$6.80	\$4.66	\$6.65	\$6.12	*	\$78.42	
First Wholesale Value	\$26.58	\$18.68	\$20.08	\$19.82	\$24.44	\$19.50	\$23.70	\$18.12	\$16.86	\$22.64	\$21.91	*	\$232.33	
<b>Total</b>														
Vessels	33	34	33	32	32	29	30	33	31	30	27	26	48	
Licenses	35	36	35	34	34	32	32	36	35	33	30	30	47	
Processing Plants	12	12	12	11	12	10	9	9	8	8	8	8	19	
Reported Catch (mt)	21,188	18,450	23,040	23,519	25,321	21,232	24,079	22,651	26,079	32,918	31,596	31,621	301,682	
Ex-vessel Value	\$17.67	\$12.04	\$14.10	\$13.16	\$13.79	\$13.05	\$13.35	\$11.66	\$9.05	\$12.41	\$13.07	*	\$143.35	
First Wholesale Value	\$43.01	\$30.02	\$35.33	\$34.78	\$39.03	\$35.58	\$39.19	\$27.83	\$27.20	\$36.66	\$40.16	*	\$388.79	

Source: AKFIN summary of CAS data; file name - Tables 2-1 thru 2-3 RP Adjustment (2-16-22)

\* Price data is not yet available

Data for 2021-2023 was run on November 16, 2023 to update the Analysis

### 2.7.2 RP Trawl Primary and Secondary Species

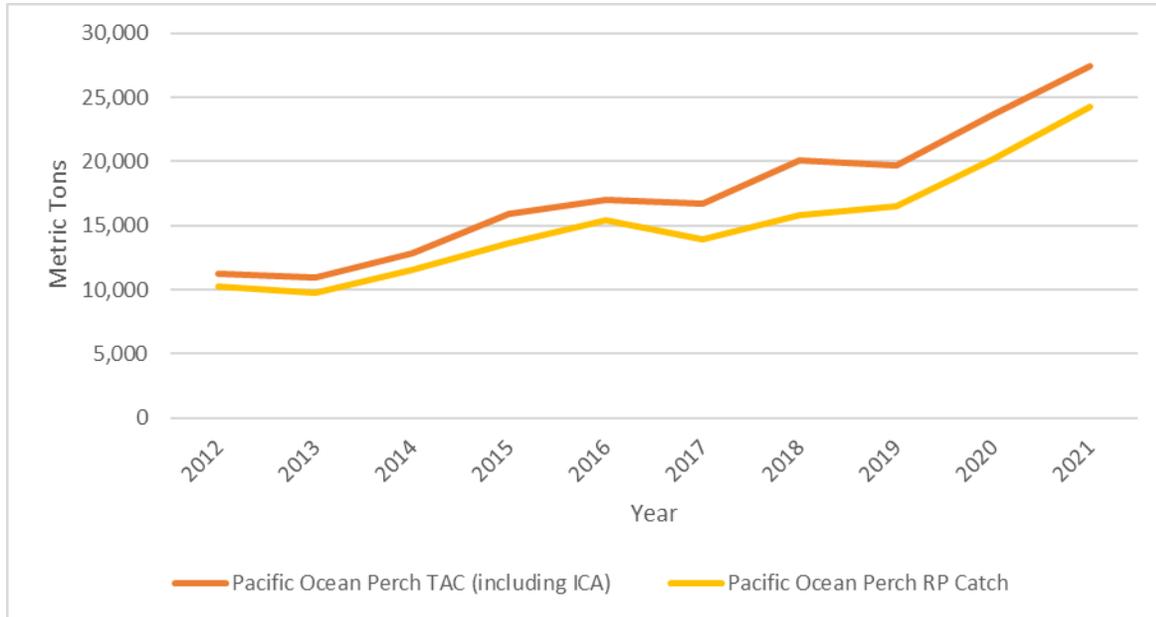
The RP primary species are POP, northern rockfish, and dusky rockfish. The RP primary species stocks are assessed biennially as three distinct species in Federal waters. The RP primary species are not overfished and are not approaching overfished levels.

CGOA TAC are established for the three primary RP species POP, northern rockfish, and dusky rockfish. The RP sector allocation of these species is equal to the CGOA TAC minus the ICA established for incidental catch needs in other target fisheries and the allocation to the longline entry level fishery.

CGOA POP TACs has been trending upwards since 2013 and has increased to 27,429 mt in 2021 (**Error! Reference source not found.**). The trawl gear catch of CGOA POP in the RP has increased along with

the increasing TAC with almost all of the trawl catch being taken in the RP fishery. RP cooperatives were able to harvest almost all of their annual allocations without exceeding their sector allocation. Catch of POP during the RP ranged from a low of 9,768 mt in 2013 to high of 24,277 mt in 2021.

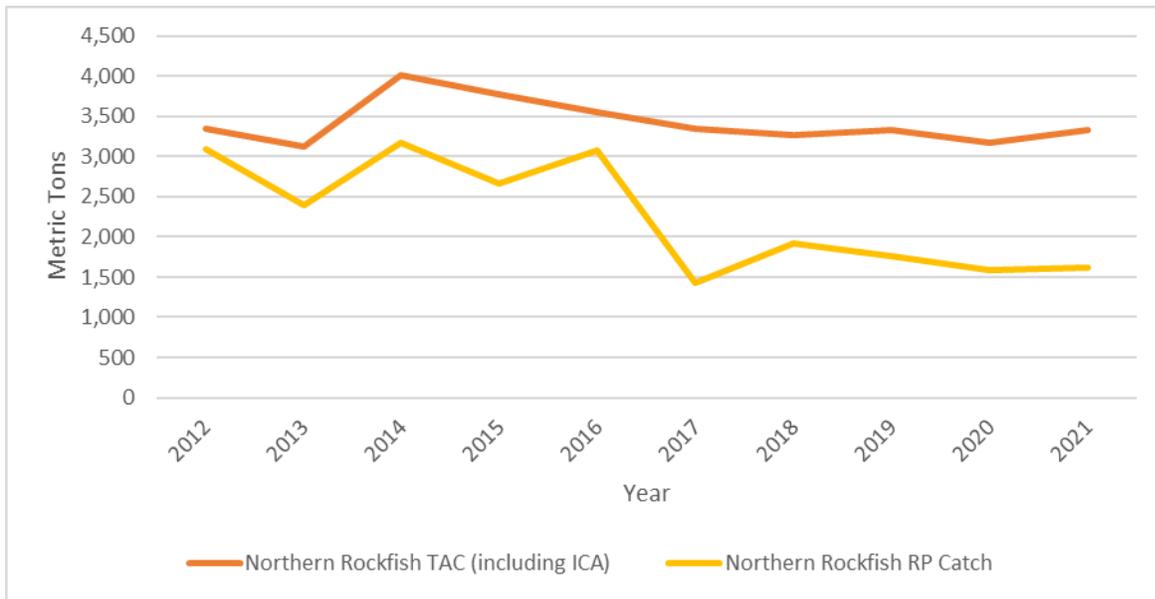
**Figure 2-1 CGOA POP TAC (including ICA) and RP catch (mt)**



Source: AKFIN, February 2022; file name - Figures 2-1 through 2-4 RP Adjustment (2-16-22)

The northern rockfish CGOA TACs ranged from a low of 1,430 mt in 2017 to a high of 3,169 mt in 2014 (Figure 2-2). The 2021 TAC was 3,334 mt. Like POP, almost all the CGOA northern rockfish trawl catch is taken in the RP fishery. The RP program cooperatives harvested a smaller percentage of their allocation in 2017 than other years. That year less than 50 percent of the TAC was taken. The percentage taken in 2018 increased to over 60 percent but is still less than had been taken in previous years. In 2021, catch of northern rockfish was 1,624 mt which is 49 percent of the TAC for that year. The reason the percentage declined is likely due to increased harvester and processor demand for POP and factors impacting both available harvesting and processing capacity. POP tends to be easier to catch and CVs have a limited window to catch their rockfish quota. Harvesting vessels try to harvest the rockfish species after the early pollock and Pacific cod seasons end but before the June 10th opening for pollock in the Bering Sea, the West Coast whiting fishery, and tendering for pink salmon starts. On the processing side, the large pink salmon fishery took much of the summer capacity of the processing plants in Kodiak. With so much capacity directed towards salmon deliveries, some vessels were limited in their ability to make rockfish deliveries, so they tend to focus on their POP quota.

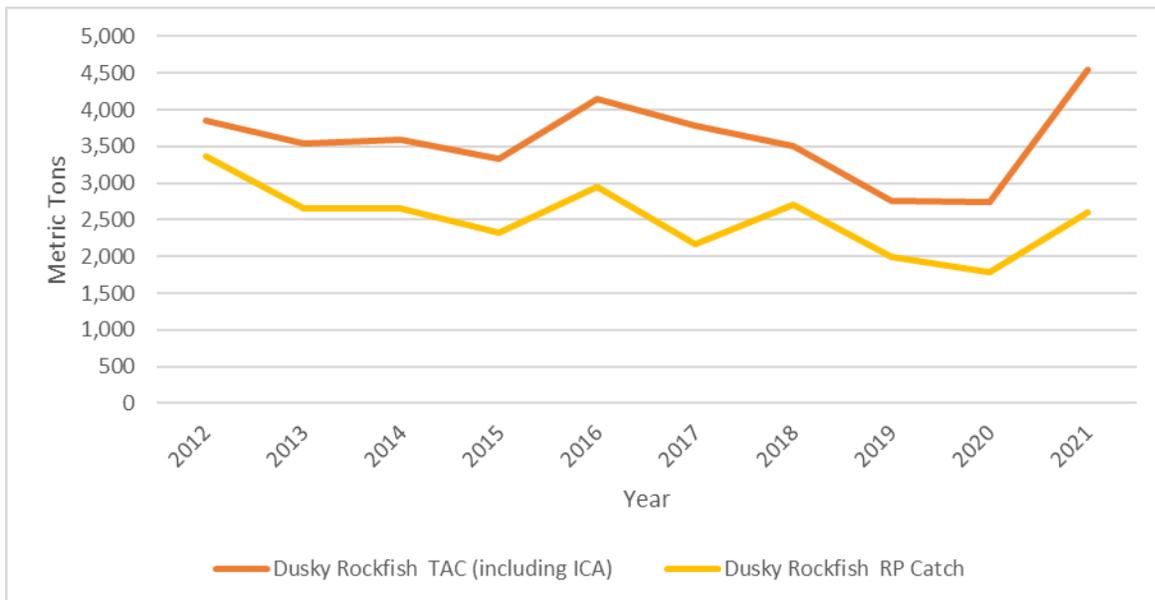
**Figure 2-2 CGOA Northern rockfish TAC (including ICA) and RP catch (mt)**



Source: AKFIN, February 2022; file name Figures 2-1 through 2-4 RP Adjustment (2-16-22)

Dusky rockfish TACs has remained fairly steady during 2012 to 2020, but then increased in 2021 (Figure 2-3). TACs ranged from 2,764 mt in 2019 to a high of 4,548 mt in 2021. The dusky rockfish TAC is about the same size as the northern rockfish TAC, but only about 15 percent of the POP TAC. Like the CGOA POP, almost all of the CGOA dusky rockfish catch is taken in the RP. Trawl gear counts for a vast majority of the primary rockfish species catch.

**Figure 2-3 CGOA dusky rockfish TAC (including ICA) and RP catch (mt)**



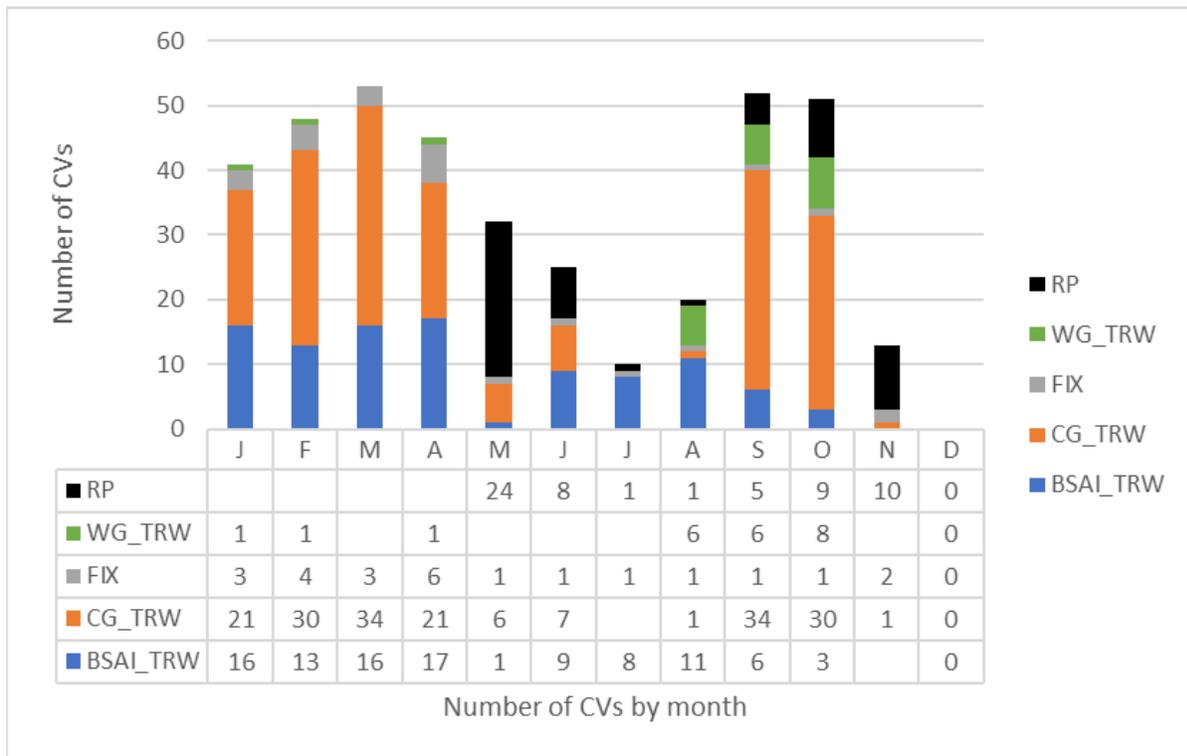
Source: AKFIN, February 2022; file name Figures 2-1 through 2-4 RP Adjustment (2-16-22)

Secondary species allocated under the RP include three rockfish species, Pacific cod, and sablefish (50 CFR 679.81(c)). The three secondary rockfish species are thornyhead rockfish, shortraker rockfish, and roughey rockfish. Trawl CVs participating in RP cooperatives receive 3.81 percent of the annual CGOA

Pacific cod TAC which is deducted from the Trawl CV B season allowance. The remaining Pacific cod is available to the non-RP participants. After the RP fisheries close on November 15, the Regional Administrator may reallocate any unused amount of Pacific cod from the RP CV cooperatives to other sectors through notification in the Federal Register. A portion of the shortraker and rougheye TACs are allocated to CP cooperatives with the remainder available to the non-RP fisheries. Portions of the sablefish allocated to trawl gear and thornyhead rockfish TACs are allocated to the CV and CP cooperatives, with the remainder being allocated to the non-RP fishery. Vessels that are checked out of the RP and fishing in a limited access fishery may utilize the available non-RP portion of the TACs. A summary of the secondary species allocations to CV and CP sectors is presented in Table 3-7 from Amendment 111 to the Fishery Management Plan for the Gulf of Alaska (NMFS, 2020).

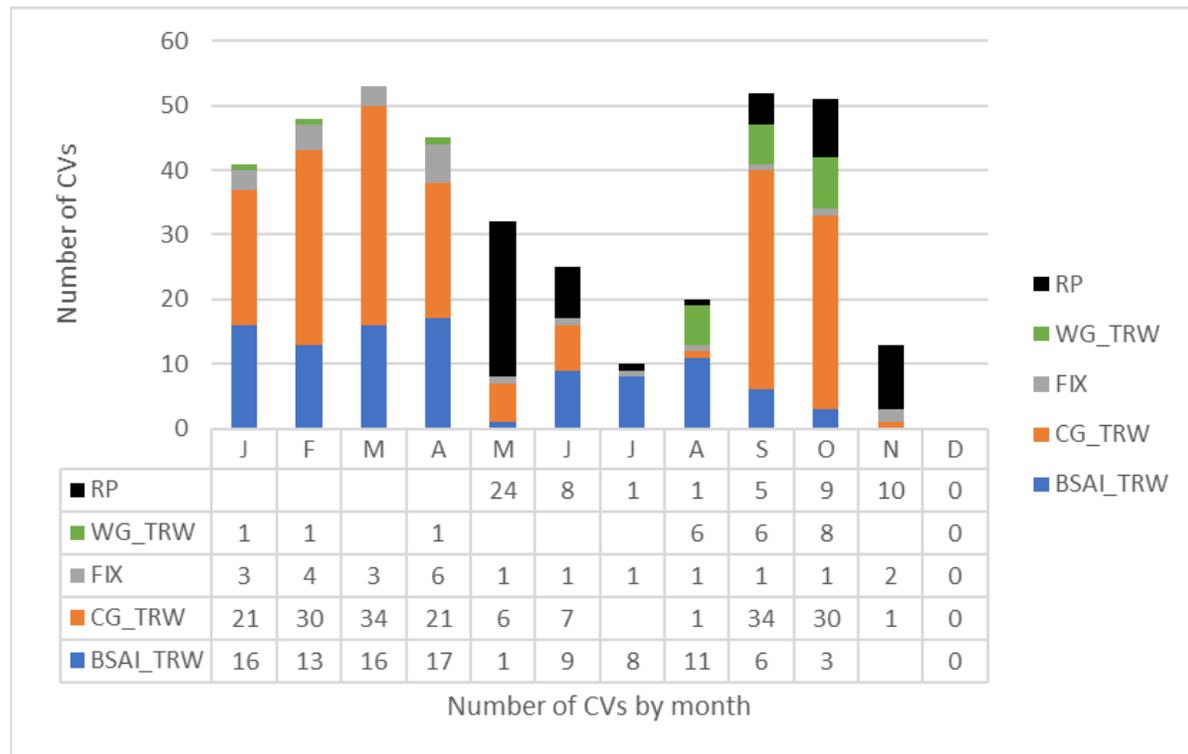
### 2.7.3 Seasonal fishing activity

As noted in Figure 2-4 Number of RP CVs by fishery and month, 2019



Source: AKFIN, April 2022; source file - RPP\_Week\_ACT(4-12-22)

Figure 2-5 and Figure 2-5, which shows the number of RP CVs by fishery by month for 2019 and 2021, CVs begin fishing in the BSAI trawl fishery or the CGOA trawl fishery on January 20. During the period mid-April to May, fishing activity is reduced in the CGOA. Normally, the RP opens May 1 and the vessels tend to focus on the CGOA rockfish fisheries or other GOA target fisheries through early June. The one exception was 2021. In 2021, NMFS issued an emergency rule to modify the fishing season start date to April 1 for the 2021 RP to provide flexibility to RP participants due to the continuing COVID-19 pandemic and impacts to the GOA flatfish market due to the continuing foreign trade tariffs. As seen in Figure 2-4



Source: AKFIN, April 2022; source file - RPP\_Week\_ACT(4-12-22)

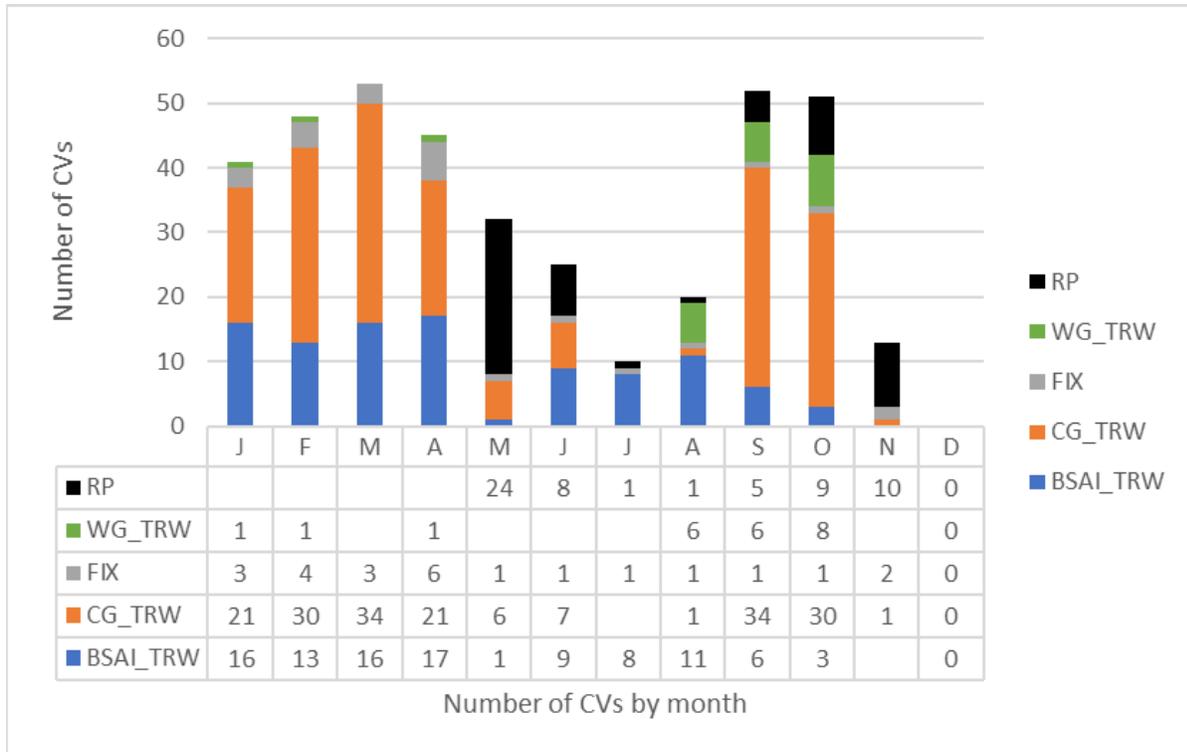
Figure 2-5, CVs utilized the flexibility of an April 1 start date in 2021 with two vessels participating in the first and second week of April followed by nine vessels and 10 vessels during the third and fourth week of April for a total of 12 vessels in April.

By early June, CVs begin moving back into the BSAI for the start of the BSAI trawl fisheries on June 10. After the BSAI trawl fisheries slow, vessels fish either the CGOA rockfish and other trawl fisheries or the WGOA. Limited effort continues in the BSAI and picks up again when the fall fisheries open. After those fisheries slow at the end of September, most vessels fish the remainder of the year in the CGOA trawl fisheries, with very limited participation in the BSAI trawl fisheries.

For CPs, they tend to fish in the BSAI trawl fisheries exclusively until May and June (Figure 2-6 and Figure 2-7) before fishing in the RP usually in June. For example, in 2019, the earliest the CP sector checked into the RP was in June. The remaining CPs during that period 2019 period focused on the BSAI trawl fishery. In 2021, one CP fished in the RP in May while eight CPs fished in the BSAI trawl fishery. The reported vessels then fished either CGOA, WGOA, or the BSAI until the end of October when all the effort returned to the BSAI. As noted in Figure 2-7, the CPs did not utilize the April 1 emergency rule start date for the CGOA rockfish fishery and instead remained in the BSAI.

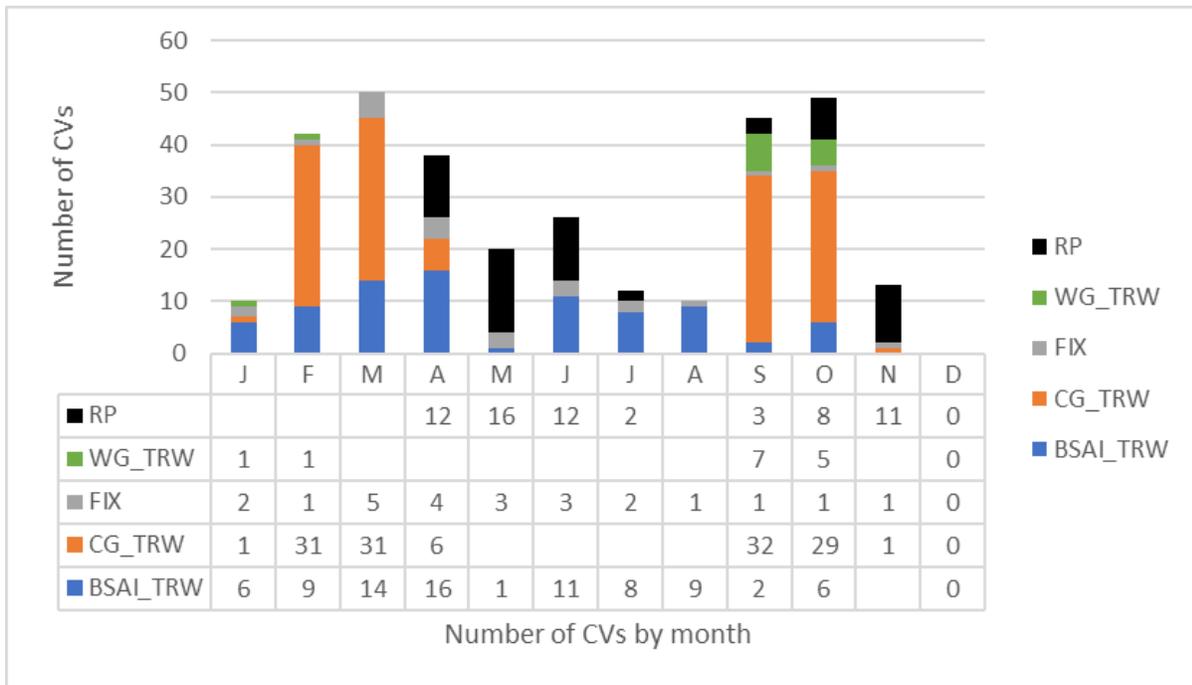
Table 2-2 demonstrates monthly CGOA POP catch from CV vessels participating in the RP from 2015-2022. CGOA POP is a fully harvested species within the RP. During 2021, CGOA POP harvested in April was comparable to other months. It appears the change in season start date for 2021 allowed vessel participation during a month that is traditionally slow for the CV sector by spreading CQ harvested in May between April and May. However, it is possible that market conditions and fishing behavior may alter from the data collected in 2021 for both CV and CP vessels.

**Figure 2-4 Number of RP CVs by fishery and month, 2019**



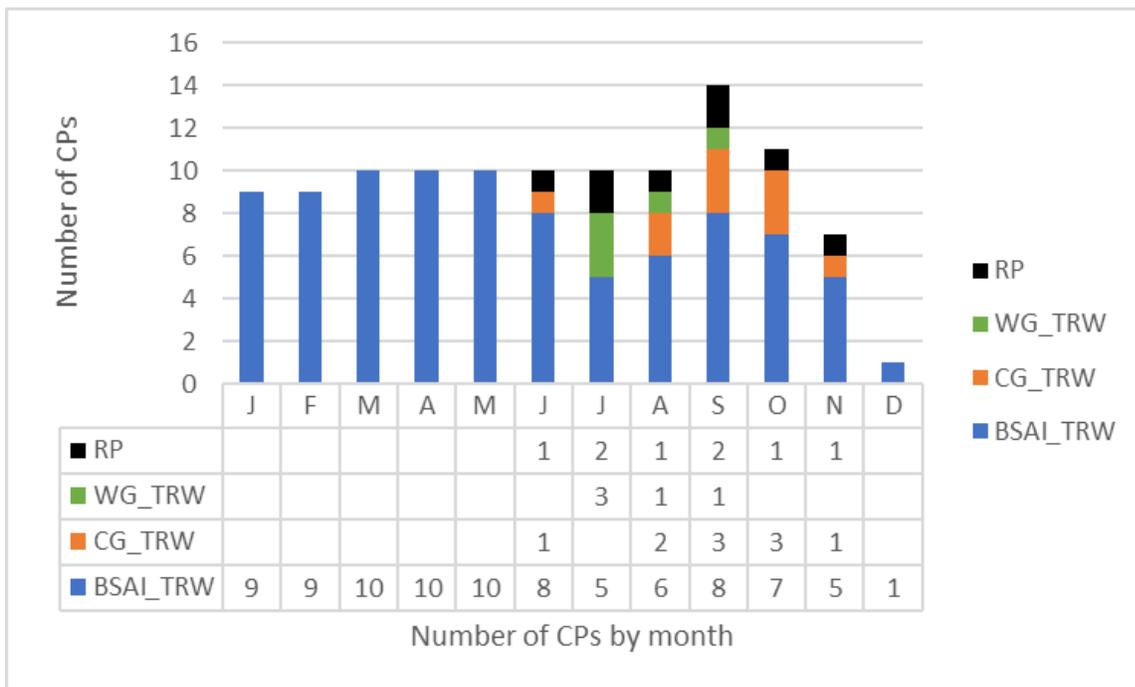
Source: AKFIN, April 2022; source file - RPP\_Week\_ACT(4-12-22)

**Figure 2-5 Number of RP CVs by fishery and month, 2021**



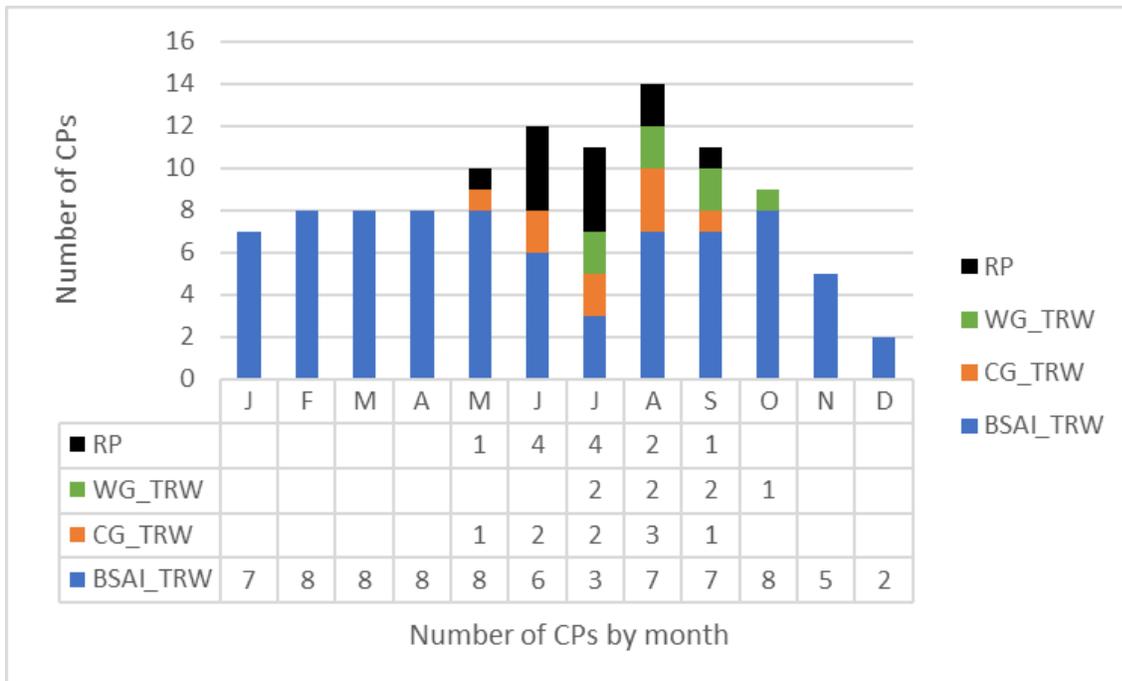
Source: AKFIN, April 2022; source file - RPP\_Week\_ACT(4-12-22)

**Figure 2-6 Number of RP CPs by fishery and month, 2019**



Source: AKFIN, April 2022; source file - RPP\_Week\_ACT(4-12-22)

**Figure 2-7 Number of RP CPs by fishery and month, 2021**



Source: AKFIN, April 2022; source file - RPP\_Week\_ACT(4-12-22)

**Table 2-2 Monthly CGOA POP harvest by the trawl CV RP vessels, 2015-2022**

Month	2015			2016			2017			2018		
	OA	RP	Total									
January	1		1	3		3	2		2	0		0
February	12		12	2		2	61		61	44		44
March	20		20	5		5	558		558	119		119
April	145		145	225		225	725		725	395		395
May	155	4,012	4,167	132	6,165	6,297	262	3,554	3,815	61	5,759	5,820
June	*	2,315	*		2,980	2,980	240	2,408	2,648	257	2,730	2,987
July	3,792	2,144	5,936	5,398	4,982	10,380	4,578	3,739	8,318	4,969	3,173	8,142
August	366	3,007	3,372	205	665	871	1,311	721	2,032	1,309	1,609	2,918
September	272	494	765	891	566	1,456	891	788	1,679	987	1,094	2,081
October	78	405	482	550	*	*	1,020	950	1,970	718	859	1,577
November	29	1,402	1,431	*	*	*	*	1,817	*	*	604	*
December	*		*	*		*	*		*	*		*
<b>Total</b>	<b>4,954</b>	<b>13,778</b>	<b>18,732</b>	<b>7,541</b>	<b>15,484</b>	<b>23,025</b>	<b>9,882</b>	<b>13,976</b>	<b>23,858</b>	<b>8,909</b>	<b>15,828</b>	<b>24,737</b>

Month	2019			2020			2021			2022 thru May 26		
	OA	RP	Total	OA	RP	Total	OA	RP	Total	OA	RP	Total
January	4		4	10		10	0		0	55		55
February	342		342	34		34	31		31	71		71
March	119		119	24		24	13		13	109		109
April	377		377	274		274	12	4,301	4,313	*		*
May	193	6,671	6,864	246	7,709	7,954	*	4,767	*	*	2,423	*
June	206	2,985	3,191	263	5,590	5,854	*	5,356	*			
July	4,318	1,916	6,234	2,046	3,532	5,577	2,335	5,817	8,152			
August	1,769	1,100	2,869	842	*	*	808	375	1,184			
September	708	1,407	2,115	523	*	*	663	660	1,323			
October	654	1,252	1,906	587	1,844	2,431	463	1,033	1,496			
November	*	1,196	*		1,184	1,184	*	2,031	*			
December	*		*	0	0	0	0	0	0			
<b>Total</b>	<b>8,941</b>	<b>16,528</b>	<b>25,469</b>	<b>4,848</b>	<b>20,343</b>	<b>25,191</b>	<b>4,559</b>	<b>24,341</b>	<b>28,900</b>	<b>493</b>	<b>2,423</b>	<b>2,917</b>

Source: AKFIN. File name GOAPOP(5-26-22)

\* Denotes confidential data

OA = Open access and RP = Rockfish Program

## 2.7.4 PSC Species

In prosecuting the RP fisheries in the CGOA, participating CPs and CVs in the fisheries also catch prohibited species. With the exception of salmon PSC, retention of prohibited species is not allowed in the GOA groundfish fisheries, including the trawl rockfish fishery.<sup>2</sup> In the GOA trawl groundfish fisheries, salmon PSC is required by regulation to be retained including the CGOA rockfish fishery. Retention of salmon in the GOA trawl groundfish fisheries is to provide a better accounting of salmon caught, to enable the collection of biological samples of salmon caught, and all salmon as caught as bycatch are dead (100 percent mortality). Detailed information on PSC by CVs and CPs can be found in the Amendment 111 CGOA Rockfish Program EA/RIR Reauthorization (NMFS, 2020). Table 2-3 is presented to show halibut and Chinook salmon PSC in the CGOA trawl rockfish fishery from 2012 through 2021 for the CP and CV sectors. Table 2-4 provides monthly halibut PSC and bycatch rate for

<sup>2</sup> The one exception is the Prohibited Species Donation Program.

CVs while checked into the RP, while Table 2-5 provides monthly Chinook salmon PSC and bycatch rate for the CVs while checked into the RP.

**Table 2-3 PSC by species in the CGOA trawl rockfish fisheries from 2012 through 2021**

Sector	Year	Halibut (mt)	Chinook Salmon (Count)
CP	2012	25.3	439
	2013	29.6	1,003
	2014	34.2	146
	2015	52.9	53
	2016	39.2	235
	2017	48.3	104
	2018	26.0	1
	2019	34.1	0
	2020	12.2	560
	2021	42.3	197
CV	2012	61.1	800
	2013	29.2	1,261
	2014	38.8	503
	2015	38.4	1,802
	2016	32.9	159
	2017	32.3	387
	2018	54.2	304
	2019	16.0	297
	2020	44.9	53
	2021	57.1	1,294

Source: AKFIN March 2022; Source file is RP PSC(3-3-22)

#### 2.7.4.1 Halibut

The rockfish fishery generally accounts for between 2 percent and 16 percent of the halibut PSC of these vessels in the GOA. Flatfish and Pacific cod target fisheries generally have more halibut PSC. The decline in the Pacific cod TAC in recent years has played a role in the halibut PSC in the CGOA rockfish fishery surpassing the CGOA Pacific cod fishery. Halibut PSC declined after implementation of the RPP and has remained relatively low.

The drastic reduction in halibut PSC (particularly in the CV sector) likely arises from several factors. First, vessels have exclusive allocations, allowing them to move from areas of high halibut catch without risking loss of catch of the rockfish primary species. Second, exclusive allocations also increase the incentive for participants to communicate with each other concerning catch rates, improving information concerning areas of high halibut incidental catch in the fleet, and preventing repeated high halibut PSC among vessels exploring fishing grounds. Third, several vessels have begun employing new pelagic gear that limits bottom contact and halibut incidental catch.

Table 28d to 50 CFR part 679 specifies the amount of the trawl halibut PSC limit that is assigned to the CV and CP sectors that are participating in the RP. This includes 117.3 mt of halibut PSC limit to the CV sector and 74.1 mt of halibut PSC limit to the CP sector. These amounts are allocated from the trawl deep-water species fishery's halibut PSC third seasonal apportionment. After the combined CV and CP halibut PSC limit allocation of 191.4 mt to the RP, 150 mt remains for the trawl deep-water species fishery's halibut PSC third seasonal apportionment.

Each year NMFS assigns a portion of the CV halibut PSC to shore-based RP cooperatives. The amount assigned to each cooperative is based on the primary species CQ associated with the cooperative member's LLP licenses.

The fishing plan established by shore-based cooperatives also included a system to discourage high halibut PSC rates. An incentive for these internal PSC controls is to ensure that the sector’s PSC limit is not reached, because it would result in the closure of all RP fisheries. The PSC controls include standards that are set and enforced by the cooperative members. Halibut PSC standards adopted by shore-based cooperatives include the inter-cooperative red light, yellow light, green light system. The light system is based on the percentage of halibut PSC per ton of groundfish used in RP target fisheries. The ratio of halibut to groundfish indicates whether the vessel may continue fishing, fish with caution, or stop fishing to avoid high halibut bycatch (Alaska Groundfish Data Bank, Inc, 2018).

As noted in the Table 2-3 and Table 2-4, the CV fleet had never taken more than 52 percent of its 117.3 mt halibut PSC limit (61 mt) since the RP was implemented in 2012 and most years less than 33 percent (39 mt) of the limit was taken. Also provided in Table 2-4 is the halibut PSC for those CVs that utilized the emergency April 1 start date, which was 2 mt of halibut PSC and a PSC rate of 0.37 kilograms of halibut per ton of groundfish while checked into the RP.

For CPs, the sector has never taken their RP halibut PSC limit (74.1 mt) since implementation of the RP in 2012. The closest the sector came to reaching its PSC limit was in 2015, which was 52.9 mt (Table 2-3). That year they still had 21 mt of halibut PSC limit remaining after the cooperative members finished fishing for the year. Since the CP sector did not participate in the April 2021 emergency opener, and much of the monthly halibut PSC data since 2012 is confidential due to the limited number of CPs, monthly halibut PSC data since 2012 was not included in the analysis.

**Table 2-4 CV monthly halibut PSC (while checked into the RP) and halibut PSC rate (kilograms of PSC per ton of groundfish while checked into the RP) from 2012 through 2021**

Month	Halibut PSC (mt) for CVs while checked into the RP									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
April	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1
May	8	10	17	19	17	11	5	4	15	2
June	4	2	8	6	9	4	5	4	0	4
July	1	2	0	1	2	1	0	0	0	0
August	0	0	12	1	1	0	1	0	0	0
September	31	3	0	2	1	3	1	0	1	3
October	0	4	0	2	0	1	10	2	24	5
November	17	8	1	7	2	13	32	5	5	44
<b>Total annual PSC</b>	<b>61</b>	<b>29</b>	<b>39</b>	<b>38</b>	<b>33</b>	<b>32</b>	<b>54</b>	<b>16</b>	<b>45</b>	<b>59</b>

Month	Halibut PSC rate (kg of PSC/per ton of groundfish) for CVs while checked into the RP										Total monthly PSC rate
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
April	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.37	0.37
May	1.57	2.96	2.61	3.19	2.06	2.53	0.71	0.52	1.77	0.33	1.71
June	1.21	0.86	3.61	1.80	1.95	2.03	1.57	1.18	0.22	1.30	1.60
July	0.40	1.21	0.25	1.70	5.59	1.44	2.30	0.51	0.13	0.00	0.99
August	0.94	0.67	6.41	5.10	3.46	n/a	5.62	1.88	16.63	n/a	5.12
September	22.05	2.37	0.49	5.47	1.93	4.58	1.00	0.70	2.02	4.66	5.67
October	2.77	4.57	0.32	2.44	4.98	1.47	9.93	2.29	11.10	3.52	5.84
November	28.78	6.08	1.18	4.04	3.97	4.99	21.44	3.60	2.68	14.00	8.80
<b>Total annual PSC rate</b>	<b>4.94</b>	<b>2.64</b>	<b>2.99</b>	<b>2.93</b>	<b>2.24</b>	<b>3.02</b>	<b>3.86</b>	<b>1.14</b>	<b>2.97</b>	<b>3.23</b>	<b>2.98</b>

Source: AKFIN April 2022, Source file RPP\_MNTH\_PSC(4-18-22)

#### 2.7.4.2 Chinook Salmon

In the GOA, the primary species of concern for salmon bycatch is Chinook salmon (*Oncorhynchus tshawytscha*), which is caught almost exclusively by trawl gear. North Pacific Chinook salmon are the subject of commercial, subsistence, personal use, and sport/recreational (used interchangeably) fisheries.

Chinook salmon are the least abundant of the five salmon species found on both sides of the Pacific Ocean and the least numerous in the Alaska commercial salmon harvest.

Rockfish target fisheries accounted for between 2 percent and 19 percent of the Chinook salmon taken in the CGOA groundfish fisheries. The variability highlights the difficulty fishermen have in avoiding Chinook salmon PSC in the rockfish fisheries in particular and in all trawl fisheries in general.

Starting in 2015, the RP trawl CVs are limited to 1,200 Chinook salmon each year while checked into the RP (Amendment 97 to the GOA FMP). If the RP trawl CVs reach the Chinook salmon limit, directed fishing by all CVs in the RP will be prohibited for the remainder of the year. On October 1, if it is determined that more than 150 Chinook salmon from the RP CV limit will not be caught, the available Chinook salmon limit minus 150 fish may be reallocated for use by CVs in other GOA fisheries.

In general, Chinook salmon PSC tends to be difficult to consistently avoid. Improvements in gear and communication on the fishing grounds have provided some benefits. However, there are still instances where a vessel is reported to encounter relatively high PSC rates when other vessels in the area had not previously realized high rates. Members of the fleet often describe these events as “lighting strikes” since they tend to be difficult to predict and, therefore, avoid.

In an attempt to reduce Chinook salmon PSC, all shoreside cooperatives agreed to the Salmon Bycatch Avoidance Plan adopted in 2014. The plan included various reporting requirements, bycatch standards and a “slow start” to fishing to test the fishing grounds which have been proven to be effective in reducing Chinook salmon PSC. As noted in Table 2-3 and Table 2-5, since the Chinook salmon PSC limit was implemented for the RP in 2015, the CV sector has been under their 1,200 fish limit except for 2015 and 2021. During 2015 and 2021, CVs exceeded their limit of 1,200 fish, but were well under their limit until November. Also provided in Table 2-5 is the Chinook salmon PSC for those CVs that utilized the emergency April 1 start date, which was 66 Chinook salmon with a PSC rate of 0.02 Chinook salmon per ton of groundfish while checked into the RP.

**Table 2-5 CV monthly Chinook salmon (count while checked into the RP) and Chinook bycatch rate (Chinook/total groundfish while checked into the RP) from 2012 through 2021**

Month	Chinook salmon (count) for CVs while checked into the RP										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
April	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	66	
May	287	851	300	684	57	34	153	180	0	165	
June	369	69	37	91	0	0	0	49	24	0	
July	0	86	0	0	0	0	0	0	0	0	
August	0	0	0	0	22	0	0	0	0		
September	143	254	34	0	0	0	92	0	0	0	
October	0	0	0	0	0	125	24	68	2	66	
November	0	0	131	1,028	79	228	37	0	28	993	
<b>Total Chinook salmon</b>	<b>800</b>	<b>1,261</b>	<b>503</b>	<b>1,802</b>	<b>159</b>	<b>387</b>	<b>304</b>	<b>297</b>	<b>53</b>	<b>1,290</b>	
Month	Chinook bycatch rate for CVs while checked into the RP										Total monthly bycatch rate
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
April	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.02	0.02
May	0.06	0.26	0.05	0.12	0.01	0.01	0.02	0.03	0.00	0.02	0.04
June	0.11	0.03	0.02	0.03	0.00	0.00	0.00	0.02	0.01	0.00	0.02
July	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
August	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.01
September	0.10	0.19	0.05	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.06
October	0.00	0.00	0.00	0.00	0.00	0.17	0.02	0.07	0.00	0.05	0.03
November	0.00	0.00	0.24	0.57	0.13	0.09	0.02	0.00	0.02	0.31	0.16
<b>Total annual bycatch rate</b>	<b>0.06</b>	<b>0.11</b>	<b>0.04</b>	<b>0.14</b>	<b>0.01</b>	<b>0.04</b>	<b>0.02</b>	<b>0.02</b>	<b>0.00</b>	<b>0.07</b>	<b>0.05</b>

Source: AKFN April 2022, Source file RPP\_MNTH\_PSC(4-18-22)

Trawl CP vessels fishing in the Gulf of Alaska are subject to a limit of 3,600 Chinook salmon in the Western and Central Gulf of Alaska, or 4,080 Chinook salmon if the previous year’s catch of Chinook salmon did not exceed 3,120 fish. This limit applies to vessels fishing inside and outside of the RP. Directed fishing by trawl CPs will be closed in the GOA when that limit is projected to be reached. The trawl CP sector has a seasonal limit before June 1 of either 2,376 or 2,693 Chinook salmon, depending on whether they were allocated additional Chinook salmon as a result of being under their defined limit the previous year. Because their catch has been below the 3,120 fish threshold, the limit is currently 4,080 fish.

Chinook salmon PSC used by the trawl CP sector in the CGOA has shown considerable variability. Chinook salmon bycatch before the RPP was implemented ranged from 290 fish to 665 fish. After 2013, the range was from 1 fish to 661 fish. The CGOA bycatch of Chinook salmon during the RP years was considerably less than the long-term average of 1,157 Chinook salmon. Since the CP sector did not participate in the April 2021 emergency opener, and much of the monthly Chinook salmon data since 2012 is confidential due to the limited number of CPs, monthly Chinook salmon data since 2012 was not included in the analysis.

The timing of Chinook salmon bycatch follows a predictable pattern in most years, corresponding primarily with seasonal openings of the pollock fishery. Chinook salmon are caught as bycatch in the rockfish fisheries throughout the time that the fisheries are open. Chinook salmon PSC in April is largely attributable to the arrowtooth flounder or rex sole fishery. Since the implementation of the RPP and RP, more efficient use of halibut PSC has allowed the shallow-water flatfish fishery to remain open longer into the fall, which has also resulted in some increase in Chinook salmon PSC during these months.

### 2.7.5 Cooperatives

CP Cooperatives are formed by members of the Amendment 80 CP sector that hold RP CP QS. From 2012 through 2017 two cooperatives formed annually (Table 2-6). In 2018 only one cooperative was formed, the Gulf of Alaska Rockfish Best Use Cooperative. The Fishing Company of Alaska cooperative did not form because the firm that owned most of the vessels in the cooperative sold its assets to other Amendment 80 CP firms. After the sale of the vessels and associated LLP licenses that were assigned QS was finalized, all of the firms joined the Best Use Cooperative. The number of total vessels, the number of vessels that were active in harvesting and processing CQ, and number of LLP licenses assigned to the CP cooperatives each year of the RP are listed in Table 2-6.

**Table 2-6 Number of LLP licenses, total vessels, and active vessels assigned to CP cooperatives in the RP**

CP	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
<b>FCA COOPERATIVE (NO LONGER A COOPERATIVE AS OF 2018)</b>											
Total Vessels	3	3	3	3	3	4					5
Active Vessels	2	2	2	1	2	2					2
LLP Licenses	3	3	3	3	3	4					4
<b>GULF OF ALASKA ROCKFISH BEST USE COOPERATIVE</b>											
Total Vessels	7	7	7	7	7	6	10	11	11	11	13
Active Vessels	3	3	3	3	3	2	4	4	4	4	3
LLP Licenses	8	8	8	8	8	6	11	11	11	11	11
<b>CP Total Vessels</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>14</b>						
<b>CP Active Vessels</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>
<b>CP LLP Licenses</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>

Source: AKFIN April 2022. Source file: Copy of Rockfish Coop by LLP and Vessels

Table 2-7 shows the total number of CVs, the total number of CVs that were active in harvesting CQ, and the number of CV LLP licenses that were assigned to the RP cooperatives each year during the RP. A total of 7 cooperatives were formed and participated in the fishery from 2012 through 2017. After 2017

the Global Rockfish Cooperative was disbanded and the vessels and LLP licenses that were part of that cooperative joined other CV RP cooperatives. As shown in Table 2-7, not all the vessels that are members of the cooperative actively fish the CQ assigned to the cooperative. The annual cooperative reports provide a detailed description of the catch by vessel. Information in this paper does not provide that level of detail to prevent inadvertently breaking confidentiality rules. The reader is referred to the annual cooperative reports for that level of information. Further, because a vessel is not active in harvesting CV does not imply that the vessel is not active in other fisheries.

**Table 2-7 Number of LLP licenses, total vessels, and active vessels assigned to CV cooperatives in the RP**

CV	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>GLOBAL ROCKFISH COOPERATIVE (NO LONGER A COOPERATIVE AS OF 2018)</b>										
Total Vessels	3	2	3	3	3	3				
Active Vessels	1	2	2	3	2	1				
LLP Licenses	3	2	3	3	3	3				
<b>SBS COOPERATIVE (FORMERLY ISA ROCKFISH COOPERATIVE)</b>										
Total Vessels	6	6	6	5	6	6	8	7	7	8
Active Vessels	4	4	4	2	4	3	5	4	5	5
LLP Licenses	6	6	6	5	6	6	7	7	7	8
<b>NORTH PACIFIC ROCKFISH COOPERATIVE</b>										
Total Vessels	9	10	11	11	11	11	12	12	12	12
Active Vessels	6	6	6	6	6	6	7	9	7	7
LLP Licenses	10	11	12	12	12	12	13	13	13	12
<b>OBSI ROCKFISH COOPERATIVE</b>										
Total Vessels	8	7	6	6	5	5	5	5	5	7
Active Vessels	4	4	3	4	3	3	2	2	3	3
LLP Licenses	9	8	7	7	6	6	6	6	6	7
<b>PACIFIC ROCKFISH COOP</b>										
Total Vessels	2	2	2	2	2	2	2	2	2	2
Active Vessels	1	1	1	1	1	1	1	1	1	1
LLP Licenses	2	2	2	2	2	2	2	2	2	2
<b>STAR OF KODIAK ROCKFISH COOPERATIVE</b>										
Total Vessels	10	10	10	10	10	10	12	12	12	11
Active Vessels	7	6	7	6	6	5	6	8	6	5
LLP Licenses	11	11	11	11	11	11	12	12	12	11
<b>WESTERN ALASKA FISHERIES ROCKFISH COOP</b>										
Total Vessels	5	6	5	6	6	6	6	6	6	6
Active Vessels	5	6	5	6	5	6	5	5	5	5
LLP Licenses	5	6	5	6	6	6	6	6	6	6
<b>CV Total Vessels</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>45</b>	<b>44</b>	<b>44</b>	<b>46</b>
<b>CV Active Vessels</b>	<b>28</b>	<b>29</b>	<b>28</b>	<b>28</b>	<b>27</b>	<b>25</b>	<b>26</b>	<b>29</b>	<b>27</b>	<b>26</b>
<b>CV LLP Licenses</b>	<b>46</b>									

Source: AKFIN April 2022. Source file: Copy of Rockfish Coop by LLP and Vessels

### 2.7.6 Excessive Share Limits

As noted in the NRC study “Sharing the Fish,” use caps are generally favored as a means to prevent excessive shares (or the control of a disproportionate amount of shares by a single person or entity). In fisheries with excess capital, it is likely that issuance of transferrable QS will result in some consolidation, as excess capital leaves the fishery. While this consolidation might be favored for developing economies of scale, concentration of shareholdings in a relatively few individuals or entities can result in excessive market power. The concentration of market power can affect working conditions and wages, and harm smaller participants in a fishery.<sup>3</sup> Although caps on use and holdings of shares are generally viewed as a means to prevent excessive concentration of shares, the level of the cap could vary among fisheries’ depending on the particular maturity of the fishery and the objectives of the cap.

<sup>3</sup> Concentration of shares in a fishery is unlikely to affect final product markets, as most fisheries’ outputs compete in a world market. Concentration of shares, however, could affect the balance of power between the eligible participants in the RP fishery.

Caps on excessive shares can be used to:

1. Prevent consolidation of market power that is used to influence ex-vessel prices. If one or a small group of quota shareholders are able to consolidate interests in the fisheries, it is possible that they would be able to withhold supplies of fish to raise the ex-vessel prices.
2. Influence the availability of quota shares in the market to facilitate entry to the fishery. Consolidation of quota shares in the hands of a few holders could prevent the development of an active market for shares that is necessary for entry to the fishery.
3. Prevent consolidation of market power that is used to influence crew shares and working conditions. The concentration of shares can also facilitate control of the labor market by participants in the market.
4. Limit windfalls granted during the allocation of shares. If allocations in excess of the caps are not permitted by a grandfather clause, use caps can be used to limit the windfall granted to persons receiving allocations in excess of the share.
5. Ensure that the resource supports a reasonable number of participants. Use caps can be used to limit consolidation, which would result in the resource supporting the activities of few participants.

For the RP fisheries, ownership and use caps are imposed to limit consolidation of QS and CQ. When the caps were developed, the Council tried to balance the goals of improving economic efficiency by allowing entities to take advantage of economics of scale relative to protecting other members of the sector, maintaining employment opportunities for vessel crew, and providing financially affordable access opportunities for new participants.

RP caps apply to CVs, cooperatives, processors, and CPs. Use caps apply to CQ issued to cooperatives. Ownership and control caps apply to QS issued to LLP licenses and the owners of LLP licenses. The caps include:

- (1) A rockfish harvester may not hold more than 4 percent of the aggregated rockfish primary species QS assigned to the CV sector. This also indirectly limits the amount of secondary and PSC species a harvester may hold since it is based on the amount of primary species QS assigned to the LLP license.
- (2) A CV may not harvest more than 8 percent of the CQ of rockfish primary species during a calendar year.
- (3) A RP processor may not receive or process more than 30 percent of the aggregate CQ allocated to the CV sector during a calendar year. As a result, rockfish processors would also be prohibited from receiving or processing more than 30 percent of primary rockfish species, Pacific cod, and sablefish harvested with CQ assigned to the CV sector during a calendar year. Roughey and shortraker rockfish are managed under an MRA since CQ for these species is not allocated to the CV cooperatives.
- (4) CV rockfish cooperatives are limited to using not more than 30 percent of the CQ allocated to the CV sector.
- (5) A rockfish program CP may not hold an amount of primary rockfish species CQ that is more than 40 percent of the aggregate rockfish primary species QS assigned to the CP sector. The

program also limits a vessel participating in the CP sector from harvesting more than 60 percent of the CQ of primary rockfish species in the CP sector.

The RP includes a grandfather provision that allowed persons whose initial allocation of QS and resulting CQ that was in excess of the use caps to retain that amount. It was determined that the processor caps apply at the firm level. Consolidation at the firm level does not impact the amount of RP CQ a plant may receive and process.

The Council must determine both the rationale for removing or changing proposed caps and the appropriate level of adjusting those caps necessary to serve those ends. In assessing the caps, the participation patterns of rockfish participants should be kept in mind. Participants in the fishery have historically participated in several different fisheries throughout the year. Consolidation in the fishery could have benefits, allowing greater specialization, improving harvest techniques, and quality of landings.

Gauging the degree to which removing or adjusting caps will serve an intended purpose is complicated by several factors. The fluctuation of stocks (not only rockfish stocks, but also stocks in other fisheries prosecuted by rockfish participants) and unpredictability of prices lead to uncertainty of harvesting and processing revenues. These information shortcomings also limit the ability to predict the threat of market consolidation to competition in both ex-vessel prices and the labor market. The unavailability of ownership data prevents estimation of the current distribution of interests in the fishery and prevents a complete assessment of the number of participants currently supported in the fishery. Combined, these factors make it difficult to provide an accurate estimate of the effects of adjusting or removing caps on various aspects of the fishery.

To monitor the caps, NMFS requires harvesters and processors to submit information through cooperative transfer requests. NMFS uses the information to enforce the use cap provisions, track primary rockfish species and secondary species CQ use, and to discourage rockfish harvesters from entering into cooperative agreements that would be counter to the goal of the use caps.

### **2.7.7 Shore-based Processors**

The RP includes a City of Kodiak landing requirement for trawl vessels delivering cooperative quota. Kodiak based processors that participate in the fishery are associated with the individual cooperatives that form and are listed in the cooperative section. In general, while landings associated with RP catcher vessel quota have exclusively been made to shore-based processors operating in Kodiak since 2012 in more recent years there have been several changes in shore-based processor ownership and the number of processors actively participating in the fishery has declined.

- Seven unique shore-based processors each associated with a unique cooperative actively participated in the fishery during the first three years of the RP (2012 through 2014).
- In 2014, Trident Seafoods acquired Western Alaska Fisheries and since 2015 the Western Alaska Fisheries Rockfish Cooperative has utilized Trident Seafoods/Star of Kodiak complex as the primary purchasing and processing facility for the cooperative, reducing the processor count by one without changing the number of cooperatives. The affiliation of the Trident Seafood/Star of Kodiak shore-based processing facilities with the Star of Kodiak Rockfish Cooperative has remained unchanged throughout this period.
- In 2018, the number of shore-based rockfish cooperatives and affiliated processors decreased by one after Global Seafoods ceased processing operations and the Global Rockfish Cooperative was disbanded.

- In 2020, Ocean Beauty Seafoods LLC and Icicle Seafoods, Inc., merged their wild salmon and GOA groundfish operations with the new merged entity being named OBI Seafoods LLC. The former Ocean Beauty, now OBI, Kodiak shore-based processor has continued its active participation in the RP and its affiliation with the OBSI Rockfish Cooperative.
- In 2020, Silver Bay Seafoods took over operations of the International Seafoods of Alaska, Inc. (ISA) shore-based processing plant and in 2021 purchased the plant. The former ISA, now Silver Bay Seafoods, Kodiak shore-based processor has continued its active participation in the RP and its affiliation the SBS Rockfish Cooperative (which was formerly the ISA Rockfish Cooperative).
- Starting in 2020, Pacific Seafood, Kodiak, the normal primary purchasing and processing facility for the Pacific Rockfish Cooperative, decided not to take any RP deliveries. The one active vessel in the cooperative delivered to the remaining four active RP qualified Kodiak processors which include Trident Seafoods/Star of Kodiak, OBI Seafoods, Silver Bay Seafoods, and North Pacific Seafoods.

In short, among the shore-based processors operating in Kodiak that are currently actively participating in the RP, all but one was involved in the changes listed above. It is important to note, however, that in none of these cases was the RP itself seen as a cause for processor consolidation or the source of adverse financial or operational impacts to shore-based processing entities operating in Kodiak. Rather, the RP has been characterized by industry as a source of stability in the Kodiak shore-based processing sector during what have otherwise been relatively volatile times.

As with the harvesting sector, processing activity in the fishery is not provided at the individual processor level. Delivery and value information are aggregated over all Kodiak processing plants that take deliveries on an annual basis. This is necessary to avoid releasing confidential information. Summary information is presented in Section 2.7.1. Information on the rockfish products produced by Kodiak plants is presented in Section 2.7.9.

One of the primary reasons, from the processors' perspective, for implementing the RP was to allow the fishery to be prosecuted before the start of the pink salmon fishery. Prior to the RPP being implemented in 2007, the rockfish fishery and the pink salmon fishery overlapped during early and mid-July. That overlap caused processing capacity and labor issues. After the RPP was implemented rockfish processing was primarily moved to May and early June, a time of year when excess capacity and labor could be used more efficiently. As noted in Amendment 111 analysis, the RP has achieved the goal of reducing pressure on labor during the peak of the pink salmon fishery.

A primary concern that processors have expressed regarding LAPPs is the change in market power between harvesters and processors. This issue is difficult to provide complete information for since the analysts are not part of the negotiations for price and delivery terms. However, information provided in Section 3.5.1.1 of Amendment 111 compares the real ex-vessel and the real first wholesale prices for the three primary rockfish species during 2003 through 2018. That information does indicate that the ratio of ex-vessel to first whole prices has increased under the RP relative to the open access fishery. That change does indicate that harvesters are able to command a greater portion of the first wholesale price that processors receive. Whether this is completely due to the changes in management or other market forces cannot be stated with certainty.

### **2.7.8 Fishing Communities**

This section utilizes parts of the Executive Summary from the CGOA Rockfish Program Reauthorization (Amendment 111) Social Impact Assessment (SIA) to provide a summary of fishing communities

impacted by the proposed adjustments to the RP. A full copy of the Executive Summary and the SIA is available in Appendix 1 to Amendment 111.

Among communities substantially engaged in and/or substantially dependent on the CGOA rockfish fisheries managed under the RP, Kodiak is the most centrally engaged in and dependent on the fishery as measured by multiple indices across multiple sectors of the fishery. Kodiak has experienced beneficial impacts across harvester, processor, and support services sectors because of the implementation of the RP, relative to the pre-RPP conditions, and has specifically benefitted from several community protection measures built into the program. Although not all individual operations have benefitted equally from the change in qualifying years between the RPP and the RP, no substantial adverse sector-level or community-level impacts resulting from the implementation of the RP have been identified for the community of Kodiak.

During the RP years compared to the RPP years, Kodiak has experienced increases in annual average resident-owned trawl catcher vessel participation; resident ownership of relevant LLP licenses; and resident ownership of CV quota shares for Northern rockfish, POP, and pelagic shelf/dusky rockfish. All three CVs that qualified for an initial allocation of quota under the RP based on their participation in the entry level trawl fishery were either Kodiak resident-owned at the time of that allocation or have become so in more recent years.

Given that the number of Kodiak resident-owned CVs in the CGOA rockfish trawl fishery has increased and the overall ex-vessel value of CGOA rockfish trawl-caught landings of those vessels has also increased under the RP, it is assumed that the number of crew positions and potentially payments to crew have similarly varied during this time. However, publicly available quantitative data do not currently exist to verify this assumption or, if the assumption is correct, quantify these changes. The impacts of quota leasing costs or program-associated vessel operating costs (such as cost recovery fees and co-op fees), if any, on crew compensation is unknown, as are the impacts on crew employment, if any, of the increased number of CGOA rockfish trawl fishing days per season. Similarly, the impacts of the reduction of vessel operating costs that may have been achieved because of changed fishing conditions under the RP (such as owner-reported reductions in fuel consumption and gear repair costs), if any, on crew compensation are unknown.

Kodiak did experience the consolidation (by two) of shore-based processors that regularly accepted trawl-caught deliveries of CGOA rockfish during the RP years. In addition, one Kodiak based shore-based processor opted to not take deliveries of RP quota starting in 2020. However, at the transition from the RPP to the RP, it experienced an increase (by two) of shore-based processors that were affiliated with rockfish cooperatives. While the transition from the limited access fishery to the RPP and then to the RP was generally beneficial for Kodiak shore-based processing plants, specific outcomes varied between processors operating in the community due to different processing histories accrued during the different sets of qualifying years used for initial allocations under the two programs.

No systematically collected data on how the Kodiak fishery supports service businesses in general or those linked to the CGOA rockfish fishery specifically are available. However, the number of locally owned rockfish trawl vessels increased, Kodiak became the exclusive port of landings for all CGOA trawl-caught rockfish CV landings and gross revenues accruing to both harvesting and processing sectors increased under the RP. These increases have likely been accompanied by increased local spending by vessel owners, vessel crews, and processing workers, significant numbers of whom are Kodiak residents, but the level of impact on the local purchase of goods and services is unknown. The percentage of CGOA rockfish fishery landings related-revenues subject to taxes that directly benefit the city of Kodiak (and the Kodiak Island Borough) remain modest compared to several other fisheries. However, the percent attributable to the rockfish fishery has increased under the RP compared to other years. Further, the community protection feature of the RP that ensures CGOA rockfish trawl catcher vessel landings will

occur in Kodiak also builds an additional measure of stability into the public revenue stream compared to previous conditions. Under the RP, attachment of catch history to the LLP license and making the quota non-severable from the LLP license has served to limit license consolidation and ownership and use caps have served to limit vessel and processor consolidation.

In addition to Kodiak, another 25 Alaska communities were directly engaged in the CGOA rockfish federal open access rockfish longline and/or CGOA rockfish trawl fisheries as measured by a variety of indices. These indices include: catcher vessels with local ownership addresses participating in CGOA rockfish longline entry level fishery in the hook-and-line or jig sectors; local operation of at least one shore-based processor that accepted longline-caught deliveries of CGOA rockfish; CGOA rockfish trawl catcher vessel LLP licenses with local ownership addresses; participation of CGOA rockfish trawl catcher processors with local ownership addresses; local operation of at least one shore-based processor that accepted trawl-caught deliveries of CGOA rockfish; and/or residents who served as crew members aboard CGOA rockfish trawl catcher vessels and/or trawl catcher processors. Based on existing/available data, none of these communities would typically be considered to have been substantially engaged in and/or substantially dependent upon the CGOA rockfish fishery at the time of the implementation of the RP, but levels of engagement and dependency varied in earlier years and time series data on crew employment is not available for any years before 2015. No adverse community-level impacts attributable to the RP have been identified for any of these communities but formulating a causal explanation of the discontinuation of direct participation of catcher vessels with ownership addresses in multiple small communities in the CGOA rockfish longline entry level fishery would require additional focused research.

The greater Seattle area (as represented by the Seattle-Tacoma-Bellevue Metropolitan Statistical Area or the “Seattle MSA”) was substantially engaged in the CGOA rockfish trawl fishery in several ways. While changes have occurred in several sectors, no community-level impacts resulting from the implementation of the RP have been identified. Similarly, Lincoln County, Oregon was identified as substantially engaged in the CGOA rockfish trawl fishery through catcher vessel ownership and, while changes have occurred during the RP years, no community-level impacts resulting from the implementation of the RP have been identified.

### **2.7.9 Rockfish Products**

Catcher processors traditionally produce a H&G product from species they harvest, including rockfish. The same general product forms are produced from rockfish harvested in both the GOA and BSAI. That fish is then sold for secondary processing. Secondary processing typically takes place outside the U.S.

Kodiak shore-based processors produce a wider variety of products from rockfish than the CP sector. In broad terms, the product forms can be grouped into H&G, whole fish, fillets, and other. Shore-based processors are more heterogeneous in the types of products they produce than CPs. Some firms focus more heavily on fillet production and others primarily produce H&G or round product forms. Overall, the percentage of fillet production has declined, and H&G production has increased over the years the RPP and RP have been in place relative to the limited access program.

The fillet prices ranged from about \$2.00/lb. before the RPP was implemented. Fillet first wholesale prices increased to about \$4.00/lb. in 2012 but have since declined back to about \$2.00/lb. H&G and whole prices vary over the period with changes less than shown for fillets. Whole fish and H&G prices were close to first wholesale prices prior to implementing the RPP. Rockfish prices are determined by overall supply and demand in the world whitefish markets. However, rockfish producers have been negatively impacted by unfavorable currency valuations and rising secondary processing costs. Both of these factors put downward pressure on raw material pricing for Alaska producers (McDowell Group, 2015). These factors likely played a role in the real price declines after 2012.

### **2.7.9.1 Markets**

Rockfish fisheries have historically been aggregated into a species complex in the Economic SAFE Report. Species within the complex include northern rockfish, POP, rougheye rockfish, shortraker rockfish, dusky rockfish and thornyhead rockfish. The only rockfish species defined in the export data is POP which is used for current first-wholesale prices for the aggregate rockfish complex.

NMFS contracted to develop a paper on wholesale market profiles for Alaska crab and groundfish species (Alaska Fisheries Science Center, 2016). The rockfish portion of that paper was limited to POP. However, the general findings are also applicable to the other primary rockfish species. Information presented in that paper is used in this section.

Alaska POP is exported to China (for reprocessing) and Japan. Japan is the largest final consumer market. The paper noted that increasing Atka mackerel quotas in Alaska could impact prices for POP since Atka mackerel and POP are reported to be competitive species in the dried fish market in Japan

A conservative estimate is that at least 48 percent of Alaska rockfish production was exported to China in 2014. Virtually all POP and other rockfish exported to China is frozen whole or H&G fish. Those products are reprocessed in China, where labor costs are lower, into fillets and re-exported.

Seafood sold in the US is tracked using Harmonized System codes (H.S. codes). Use of those codes outside the United States is uncommon. As a result, it is not possible to track competing supply of POP and rockfish coming into China or the markets where it goes. However, data that are available indicates China's major export markets appear to be Japan, Europe, Russia, and the United States.

Markets are expected to be impacted by a 25 percent tariff on Alaska seafood exports to China (Elnes & Evridge, 2019). The tariff was implemented July 6, 2018 and affects most major Alaska seafood products including frozen finfish (salmon, pollock, cod, sablefish, rockfish, and flatfish), roe, geoduck, sea cucumber, scallops, crab species and fishmeal. Some fresh product is exempt (salmon, herring) and fish oil. The anticipated short-term impacts of the tariffs will likely increase the cost of Alaska seafood products to Chinese consumers. Long-term impacts, if the tariff stays in place, including that it could impact demand and consumer sentiment in China for Alaska seafood/U.S. products. A quantitative estimate of the impacts has not been provide given the uncertainty of the length of time the tariffs will remain in place and the potential changes in demand from buyers in countries that are not subject to the tariff.

### **2.7.9.2 Prices**

Table 2-8 shows the real ex-vessel prices for the three primary rockfish species, Pacific cod, sablefish, arrowtooth flounder, and mid-water pollock. Prices at the first wholesale level are determined by world whitefish markets. However, product quality can influence the prices received. All three primary rockfish species' ex-vessel value increased since implementation of the RPP in 2007 with the exception of 2019, which saw value decline for the primary rockfish species. The pollock ex-vessel values have been trending down, while Pacific cod ex-vessel prices have been trending up in recent years. Sablefish real ex-vessel prices declined in 2018 and 2019. This could in part be due to the increased catches of smaller, lower valued sablefish. Arrowtooth flounder has been trending up with the exception of 2019 and 2020 when prices trended down. Rockfish prices declined in 2013 relatively to 2012 and then remained stable until 2020 when prices declined further. Table 2-9 provides a comparison of the ex-vessel and first wholesale prices for the three primary rockfish species.

**Table 2-8 Annual average real ex-vessel prices (2012 \$) for CGOA rockfish, Pacific cod, sablefish, arrowtooth flounder, and mid-water pollock, 2012 through 2020**

Year	POP	Dusky	Northern	Pacific cod	Sablefish	Arrowtooth	Pollock
2012	\$0.31	\$0.30	\$0.28	\$0.33	\$3.68	\$0.07	\$0.19
2013	\$0.23	\$0.21	\$0.19	\$0.24	\$2.60	\$0.05	\$0.18
2014	\$0.22	\$0.22	\$0.20	\$0.31	\$3.03	\$0.06	\$0.14
2015	\$0.21	\$0.20	\$0.18	\$0.27	\$2.76	\$0.08	\$0.14
2016	\$0.20	\$0.19	\$0.17	\$0.30	\$3.09	\$0.08	\$0.11
2017	\$0.21	\$0.22	\$0.18	\$0.32	\$3.60	\$0.10	\$0.12
2018	\$0.21	\$0.21	\$0.18	\$0.25	\$2.20	\$0.10	\$0.13
2019	\$0.21	\$0.20	\$0.18	\$0.36	\$1.47	\$0.06	\$0.09
2020	\$0.14	\$0.14	\$0.12	\$0.36	\$1.01	\$0.04	\$0.10

Source: AKFIN summary of CAS and COAR data; file name - Tables 2-1 thru 2-3 RP Adjustment (2-16-22)

**Table 2-9 Comparison of ex-vessel and first wholesale prices of primary rockfish species, 2012 through 2020**

Years	Ex-vessel			First Wholesale			Ratio ex-vessel to first wholesale		
	POP	Dusky	Northern	POP	Dusky	Northern	POP	Dusky	Northern
2012	\$0.31	\$0.30	\$0.28	\$0.89	\$0.87	\$0.88	35%	34%	32%
2013	\$0.23	\$0.21	\$0.19	\$0.63	\$0.68	\$0.69	36%	31%	27%
2014	\$0.22	\$0.22	\$0.20	\$0.60	\$0.66	\$0.69	37%	33%	28%
2015	\$0.21	\$0.20	\$0.18	\$0.59	\$0.72	\$0.67	35%	28%	27%
2016	\$0.20	\$0.19	\$0.17	\$0.56	\$0.75	\$0.75	36%	26%	23%
2017	\$0.21	\$0.22	\$0.18	\$0.67	\$0.68	\$0.60	31%	32%	30%
2018	\$0.21	\$0.21	\$0.18	\$0.65	\$0.73	\$0.71	33%	29%	25%
2019	\$0.21	\$0.20	\$0.18	\$0.47	\$0.63	\$0.56	44%	32%	32%
2020	\$0.14	\$0.14	\$0.12	\$0.42	\$0.52	\$0.41	32%	26%	30%
<b>2012-2019 Average</b>	<b>\$0.21</b>	<b>\$0.21</b>	<b>\$0.19</b>	<b>\$0.61</b>	<b>\$0.70</b>	<b>\$0.66</b>	<b>35%</b>	<b>30%</b>	<b>28%</b>

Source: AKFIN summary of CAS and COAR data; file name - Tables 2-1 thru 2-3 RP Adjustment (2-16-22)

### 2.7.10 Safety Considerations

National Standard 10 states that “conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.” In response to National Standard 10, one of the stated goals of the RP is to improve safety at sea. Management of the rockfish fisheries under the RPP and RP extended the fishing season and moved much of the fishing from July to May and June, but also allowed for fishing in late fall when CGOA weather conditions can be less safe. Although a person’s allocation will not be jeopardized by decisions to delay fishing to reduce safety risks, some incentives may exist for persons to fish in inclement weather - including market opportunities and operational cost savings (NPFMC, 2011).

NIOSH manages the Commercial Fishing Incident Database (CFID). The CFID is a national surveillance system that contains information on work-related fatalities and vessel disasters in the U.S. fishing industry. For Alaska, CFID contains fatality data from 2000 through 2020 and vessel disaster data from 2000 through 2020. One limitation is that these data sources do not include other safety measures, including nonfatal injuries, vessel system failures not resulting in abandonment, and search-and-rescue missions. Study of these areas in the future could provide more insight into additional hazards. A second limitation is that do not cover the most recent fishing years.

NIOSH staff was provided a list of vessels that the AKFIN summary of CAS data indicated were active in the CGOA rockfish fishery from 2003 through July 2019. The list of CGOA rockfish vessels was matched with all fishing vessels that had been added to CFID as the result of:

1. one or more crewmember fatalities that occurred on or otherwise involved the vessel; or
2. if the vessel sunk, capsized, or sustained other damage that required the entire crew to abandon the vessel.

The list of vessels was considered in terms of the CGOA management program(s) they fished under:

1. pre-RPP (2003 through 2006),
2. RPP (2007 through 2011), and
3. RP (2012 through April, 2022).

Based on vessel name, casualty date, and casualty location, it was determined that there were no work-related crewmember fatalities or vessel disasters among vessels reported in the CFID system when actively participating in the CGOA rockfish fishery during the pre-RPP, RPP, or the RP. Preliminary surveillance data not yet included in the official CFID database (January 2021 through April 2022), was also reviewed by NIOSH staff and did not reveal any work-related crewmember fatalities or vessel disasters by vessels participating in the CGOA RP fishery. One potential reason for the good record of safety of human life at sea could include the extended fishing season that would reduce any race to fish and allow crews to choose when to operate in the event of inclement weather or crewmember fatigue.

### **2.7.11 Cost Recovery**

Section 304(d)(2) of the Magnuson-Stevens Act authorizes and requires NOAA Fisheries to recover the actual costs directly related to the management, data collection, and enforcement of any LAPP and the Western Alaska Community Development Quota (CDQ) Program. The RP is subject to cost recovery because it is a LAPP. Cost recovery fees are assessed on the ex-vessel value of primary (POP, northern rockfish, and dusky rockfish) and secondary species (Pacific cod, rougheye rockfish, shortraker rockfish, sablefish, and thornyhead rockfish) harvested under CQ in the CGOA and adjacent waters when rockfish primary species caught by vessels in the cooperative are deducted from the Federal allowable catch. The cost recovery fees do not apply to halibut PSC CQ since that halibut cannot be retained for sale and, therefore, does not have an ex-vessel value. The cost recovery fees do not apply to the RP entry level longline fishery and opt-out vessels because those participants do not receive rockfish CQ.

Cost recovery fee regulations require a rockfish processor that receives and purchases landings of RP CQ to annually submit to NMFS a complete Rockfish Ex-vessel Volume and Value Report. The reporting period of the Rockfish Ex-vessel Volume and Value Report extends from May 1 through November 15 of each year. A complete Rockfish Ex-vessel Volume and Value Report must be received by the NMFS not later than December 1 of the year the rockfish processor received the RP CQ species.

NMFS calculates RP direct program costs through an established, systematic accounting system for the Federal fiscal year (FY), which is October 1 through September 30. NMFS tracks internal program costs as well as program costs from the Alaska Fisheries Science Center (AFSC), and the Alaska Department of Fish and Game (ADF&G).

The 2021 RP fee percentage was set at 2.77 percent (87 FR 3509, January 24, 2022). Under cost recovery regulations, CQ permit holders who used their permits to make landings of RP primary and secondary

species during the 2021 RP fishery are obligated to pay 2.77 percent of the total ex-vessel value from the sale of their RP fish. The fee percentage derives from two sources:

- The fishery value of the RP fisheries for 2021; and
- The directed program costs for the RP as measured by actual expenditures during Federal fiscal year 2021.

Fishery value is determined from ex-vessel prices for each RP primary and secondary species throughout the fishing season. NMFS used the 2021 data submitted by rockfish processors on the Rockfish Ex-vessel Volume and Value Report to calculate the standard ex-vessel prices. To account for price variability, standard ex-vessel prices are calculated as weighted averages for each species and month. NMFS multiplied the amount of RP species landed by month by the standard prices to calculate the standard ex-vessel values. The fishery value of the RP fisheries is the sum of standard ex-vessel values for each RP species and month.

In 2021, an emergency rule authorized the fishing season start on April 1, 2021 instead of May 1, 2021 ([86 FR 14851](#), March 19, 2021). Rockfish processors that receive and purchase landings of rockfish CQ groundfish must submit, on an annual basis, a volume and value report for the period May 1 to November 15 ([50 CFR 679.5\(r\)\(10\)\(ii\)](#)). To calculate fees for landings occurring in the month of April 2021, NMFS applied the annual average standard price. However, to implement Alternative 2, Option 1 to revise the annual season start date to April 1, cost recovery regulations would need to be revised to allow NMFS to calculate a standard price for the month of April.

Direct program costs are the costs incurred to manage, collect data from, and conduct enforcement for the Rockfish Program fisheries by NMFS Alaska Region (AKR), the Alaska Department of Fish and Game (ADF&G), and the Pacific States Marine Fisheries Commission (PSFMC). The NMFS management units that incur direct program costs are: the Sustainable Fisheries Division (SFD), the Restricted Access Management Division (RAM), the Operations and Management Division (OMD), the Information Systems Division (ISD), and the AFSC. AFSC costs are broken out into separate cost categories and all other NMFS AKR management unit costs are aggregated. Note that direct program costs are incremental: the costs would not have been incurred except for the RP. Cost recovery fees do not increase agency budgets or expenditures. The fee offsets funds that would otherwise have been appropriated for management of the Rockfish Program. No budgetary advantage is gained by inflating costs.

NMFS calculates Rockfish Program direct program costs through an established, systematic accounting system for the Federal fiscal year (FY), which is October 1 through September 30. NMFS tracks internal program costs as well as program costs from the AFSC and ADF&G.

Examples of the types of tasks that were included under the 2021 RP direct program costs are:

- maintenance of electronic reporting systems, including the catch accounting system (NMFS AKR, ADF&G),
- programming and web design for online applications (NMFS AKR),
- determination of annual cooperative allocations of CQ and PSC (NMFS AKR),
- issuance and transfers of CQ, responding to questions about CQ (NMFS AKR),
- observer debriefing (AFSC),
- catch monitoring control plan specialist (NMFS AKR),
- monitor cooperative fisheries CQ and PSC, answer questions on cooperative activities, respond to data requests (NMFS AKR),
- determination of standard ex-vessel prices using value and volume reports submitted by rockfish processors (NMFS AKR),
- fee determination, collection and reporting (NMFS AKR), and

- analysis and rulemaking activities (NMFS AKR).

## **2.8 Analysis of Alternatives**

### **2.8.1 Alternative 1, No Action**

Under Alternative 1, the existing season start date for the RP would remain unchanged as May 1, and the cooperative holding, processing, and harvesting caps would remain unchanged. Specifically, Alternative 1 would leave in the place: 1) the season start date of May 1, 2) the CV cooperative holding cap of 30 percent of the CQ assigned to the CV sector, 3) the 30 percent processing cap for the CV quota share pool for sablefish, Pacific cod, and the primary rockfish species, and 4) the 8 percent vessel aggregation rockfish harvesting cap.

#### **Option 1: April 1 Start Date**

Under status quo alternative, the season start date for the RP would remain unchanged as May 1. As a result, the continued loss of the shoreside flatfish market due to the recent trade tariffs will likely continue to result in RP vessel operators and processing plants reducing operations in April since there is currently limited other fishery harvest during this period. The sudden and recent increase in herring fishery during the month of April for the 2022 season has provided some processing opportunities for Kodiak processors, but RP harvesters do not participate in the herring fishery. In addition, given that herring GHL can be extremely variable, processing opportunities for Kodiak processors are likely variable in the future.

For several decades, the flatfish markets have been essential to harvesters and processors operating out of Kodiak during the month of April. The lack of these economically viable markets has created unforeseen lack of harvesting and deliveries to processors operating out of Kodiak in the month of April. In addition, continued concern about the potential for future COVID-19 outbreaks could have economic and operational impacts in the Port of Kodiak. If future COVID-19 outbreaks occur, processing capacity is expected to be reduced, which increases the risk that the RP fishery, which currently starts on May 1, could occur later in the year which would conflict with the summer salmon fisheries. These overlapping fishery conflicts result in processors, which have normally focused on rockfish in May and June and salmon in July, having to address both rockfish and salmon deliveries simultaneously. The loss of these unique processing periods for the rockfish and salmon fisheries results in a loss of efficiency of operations and increases the risk of sharper seasonal peaks and valleys of processing labor demand, according to processing management personnel.

#### **Option 2: Eliminate CV Cooperative Holding Cap**

Selecting the status quo alternative would maintain the existing CV cooperative holding cap of 30 percent. The cooperative holding cap was intended to provide greater opportunity for shore-based processors to receive RP quota. The existing 30 percent CV cooperative holding cap was intended to limit cooperative consolidation which could be detrimental to shore-based processors in the RP fishery. At a 30 percent CV cooperative holding cap, the minimum number of CV cooperatives that could form to harvest the CV quota would be four.

Table 2-10 reports the percentage of CV QS assigned to each CV cooperative. In 2012, the first year of the RP, there were seven shore-based cooperatives associated with seven processing firms. In 2021, there were six shore-based cooperatives associated with four shore-based processors. Global Rockfish Cooperative has not been operational since 2017. None of the cooperatives were over the limit at the time RP allocations were initially issued in 2012, 2017, or in 2021. The Star of Kodiak Rockfish Cooperative was closest to the limit.

**Table 2-10 Percent of CV QS assigned to cooperatives**

Catcher Vessel Cooperative	2012	2017	2021
GLOBAL ROCKFISH COOPERATIVE (NO LONGER A COOPERATIVE AS OF 2018)	1.98%	4.53%	n/a
SBS COOPERATIVE (FORMALLY ISA ROCKFISH COOPERATIVE)	13.19%	15.55%	18.90%
NORTH PACIFIC ROCKFISH COOPERATIVE	15.90%	18.30%	17.91%
OBSI ROCKFISH COOPERATIVE	25.29%	15.71%	17.91%
PACIFIC ROCKFISH COOP	4.44%	4.44%	4.38%
STAR OF KODIAK ROCKFISH COOPERATIVE	27.95%	27.50%	27.12%
WESTERN ALASKA FISHERIES ROCKFISH COOP	11.70%	13.96%	13.77%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: 2017 CGOA Rockfish Program Review and 2022 CGOA Rockfish Report to the Council

Selecting the status quo alternative to maintain the existing CV cooperative holding cap of 30 percent would likely in result in higher administrative and management costs for those cooperatives that could consolidate into one cooperative but must maintain two cooperatives due to the 30 percent limit. As noted in a January 28, 2022, letter from the Alaska Groundfish Data Bank to the Council, there are currently two cooperatives associated with the same processor that continue to form separately due to the 30 percent CV cooperative holding cap. The combined CV primary rockfish QS pool for the two cooperatives when combined is slightly greater than 40 percent. As a result, the two cooperatives associated with the same shore-based Kodiak processor cannot consolidate into a signal cooperative to reduce administrative and management costs. Selecting the status quo alternative would continue to constrain consolidation of these two cooperatives.

### **Option 3: Increase the CV Quota Share Pool Processor Caps**

Under status quo, the shore-based processing caps would remain at 30 percent of the CQ for Pacific cod, sablefish, and aggregated primary rockfish species assigned to the CV sector. The processing caps were intended to maintain a distribution of processing activity in the fishery among several Kodiak processors and stabilize these processors. Since implementation of the RP in 2012, the number of shore-based processors in Kodiak active in the RP fishery has declined from seven to four. With the loss of the three RP shore-based processors, the 30 percent shore-based processing caps for the aggregated primary rockfish species, sablefish and Pacific cod have become increasingly constraining in recent years. With only four active shorebased processors, a temporary loss of one processor during the fishing year could increase the difficulty in processing all the CV quota without exceeding the 30 percent processing caps, and, in some instances, may result in some portion of the RP quota to remain unharvested and unprocessed. This is especially true for Pacific cod and sablefish since most of the quota for these species is fully utilized, while for aggregate rockfish, the limited harvest of northern rockfish and dusky rockfish reduces the potential of this processor cap to be constraining. If the Council eliminates the eight percent harvest cap for northern rockfish and dusky rockfish in this proposed action (Option 4), there is the potential that a 30 percent processor cap could be constraining as harvest of the northern rockfish and dusky rockfish quota increases.

Processing competition may also be lower under the status quo alternative to the extent that a processor limited by the cap might not offer the highest price it would be willing pay. For example, if a more efficient processor would be willing to pay a few cents more than other processors, but are limited by the caps, they may be unwilling to compete with each other (bidding to their highest prices), as they would be unable to secure additional landings.

The current processing caps may also be constraining economic efficiencies. The caps could keep certain plants from operating at capacity, which may increase costs per unit of production. Caps may also hinder processors from efficiently developing markets by constraining the amount of product they can supply.

## Option 4: Revise CV Aggregated Rockfish Harvesting Cap

Selecting the status quo for Option 4 would leave in place the existing CV aggregate rockfish (POP, northern rockfish, and dusky rockfish) harvesting cap of 8 percent and would likely continue the pattern of low quota harvests of northern rockfish and dusky rockfish relative to POP. As noted in Table 2-11, of the three primary species, POP is a fully harvested species, while harvest of northern rockfish and dusky rockfish fall far short of fully harvested species. As a percent of the CV allocation, POP catch has ranged from a high of 100 percent in 2014 and 2016 to a low of 96 percent in 2021. The number of CVs active in the POP fishery has ranged from a high of 29 in 2013 and 2019, to a low of 24 in 2017. Northern rockfish harvest of the CV quota ranged from a high of 94 percent in 2012 to a low of 16 percent in 2017 with a range of 27 active CVs in 2012 and 2019 to a low of 21 CVs in 2021. Dusky rockfish harvest has ranged from a high of 87 percent in 2012 to a low of 41 percent in 2017 and 2021, with a high of 28 vessels for several years to a low of 24 vessels 2017. The reason for the lower quota harvest for northern rockfish and dusky rockfish relative to POP is that northern rockfish and dusky rockfish are traditionally more difficult to catch. Additionally, of the 24-29 vessels active in the RP, only one to three vessels approach the aggregated harvesting cap, and of those few vessels that approach the harvesting cap, the primary RP fishery is POP.

**Table 2-11 CV count and CV allocation, catch, and catch as a percent of allocation for POP, northern rockfish, and dusky rockfish, 2012 through 2021**

Year	POP				Northern Rockfish				Dusky Rockfish			
	Vessel count	Allocation	Catch	Catch as a % of allocation	Vessel count	Allocation	Catch	Catch as a % of allocation	Vessel count	Allocation	Catch	Catch as a % of allocation
2012	28	6,298	6,245	0.99	27	1,930	1,812	0.94	28	2,300	2,000	0.87
2013	29	6,093	6,012	0.99	26	1,793	1,314	0.73	28	2,057	1,487	0.72
2014	28	7,084	7,059	1.00	26	2,284	1,651	0.72	28	2,089	1,391	0.67
2015	28	8,432	8,349	0.99	24	2,137	1,239	0.58	28	1,903	1,177	0.62
2016	26	9,441	9,400	1.00	25	1,943	1,812	0.93	26	2,408	1,802	0.75
2017	24	8,917	8,259	0.93	24	1,827	292	0.16	24	2,171	893	0.41
2018	26	9,793	9,619	0.98	24	1,771	794	0.45	26	1,994	1,514	0.76
2019	29	10,954	10,831	0.99	27	1,835	649	0.35	28	1,567	1,145	0.73
2020	27	12,570	12,200	0.97	23	1,722	444	0.26	27	1,523	889	0.58
2021	26	15,154	14,574	0.96	21	1,815	457	0.25	26	2,645	1,079	0.41
Total	40	111,199	108,965	0.98	39	23,283	13,755	0.59	39	20,658	13,377	0.65

Source: AKFIN, March 2022; source file is rpp\_accounts(3-9-22)

## 2.8.2 Alternative 2, Revise the CGOA Rockfish Program

### 2.8.2.1 Option 1: April 1 Start Date

Option 1 would allow fishing in the RP to begin on April 1, 2021. This alternative would provide enhanced flexibility to vessel operators and processing plants participating in the RP. This option is designed to mitigate the impacts from the recent and unforeseen loss of the flatfish markets in April and the threat of loss of processing capacity and/or potential conflict with summer high volume salmon related to COVID-19 plant closures. The following sections provide additional description of the types of impacts that could be expected on harvests, fishing and processing operations, other fisheries, and management considerations.

#### Changes in Harvest

The proposed action would not change management measures implemented to constrain harvest below the TAC. NMFS annually allocates rockfish primary and secondary species to the rockfish cooperatives after taking into account the incidental catch needs of other fisheries and providing a predetermined amount of rockfish primary species to an entry level longline fishery. Cooperatives are prohibited from exceeding the assigned CQ. Section 2.5.1 describes the harvest of primary and secondary species. Additional flexibility provided by the April 1 start date may allow cooperatives to fully harvest available

allocations even when faced with the operational uncertainty related to COVID-19 and existing market conditions.

The additional flexibility of an April 1 season start date could result in slower rates of fishing and dispersed landings of improved quality over the no action alternative. If participants attempt to extend fishing over a longer season, it is possible that unexpected higher incidental catch rates of rockfish secondary species could constrain their rockfish harvests. If high incidental catch in other parts of the year is perceived as limiting, it is likely that participants would choose to concentrate their fishing under the program closer to the traditional season.

### **Timing of Harvest**

The timing of fishing RP allocations would depend on the particular operational needs of members, market opportunities, and fishing success. The lack of available flatfish markets in 2021 presented a challenge for RP vessel operators and processing plants to remain fully operational during the month of April. This alternative would provide additional fishing and processing opportunity during the month of April for RP vessels and processors to remain in operation. As a result, it is likely some rockfish fishing would occur in April to keep processing plants fully operational and potentially mitigating future impacts of operational challenges related to COVID-19. This would likely help with workforce stability by providing greater opportunity for more reliable/steady processing employment, particularly for Kodiak resident processing workers.

### **Prohibited Species Catch**

In prosecuting the RP quota, participating CPs and CVs also catch prohibited species. With the exception of salmon, retention of prohibited species is not allowed in the GOA groundfish fisheries, including the RP fisheries. In the GOA trawl groundfish fisheries, salmon PSC is required by regulation to be retained in all groundfish fisheries including rockfish, pollock Pacific cod, and flatfish. The RP established PSC limits for Chinook salmon and Pacific halibut. While halibut PSC avoidance was one of the many factors in selecting the May 1 start date was based on, the design of the halibut PSC limits for RPP and RP were thought to mitigate the concerns with increased halibut PSC due a longer season, and, in fact, halibut PSC has declined since implementation of the RPP and has remained at the same level since implementation of the RP.

Cooperatives are given exclusive allocations, allowing members flexibility to move from areas of high bycatch without risking loss of catch of the rockfish primary species. Exclusive allocations also increase the incentive for participants to communicate with each other concerning catch rates, thereby improving information concerning areas of high incidental catch in the fleet. Cooperative managers have established PSC avoidance measures and these measures have proven effective in reducing harvest of prohibited species in recent years as discussed in Section 2.5.5.

There is limited data on PSC rates in RP fisheries for the month of April. Provided in Table 2-4 is the halibut PSC for those CVs that utilized the emergency April 1 start date, which was 2 mt of halibut PSC and a PSC rate of 0.37 kilograms of halibut per ton of groundfish while checked into the RP. By comparison, the average halibut PSC rate for the month of May from 2012 through 2021 while checked into the RP was 1.71 kilograms of halibut per ton of groundfish. Table 2-5 provides Chinook salmon PSC for those CVs that utilized the emergency April 1 start date, which was 66 Chinook salmon with a PSC rate of 0.02 Chinook salmon per ton of groundfish while checked into the RP.

As for CPs, much of the PSC data for the sector while checked into the RP fishery is confidential given there is generally only one or two CPs participating in the RP monthly. Nevertheless, the sector's PSC rates should not change with an April 1 start date since the sector will likely continue to start fishing in the RP fishery in the month of May or later. As noted in Section 2.7.3, the sector, since 2012, has usually

started fishing in the RP in June. Only since the COVID-19 outbreaks and the unexpected loss of the flatfish markets starting in 2020 has the CP sector fished in the RP in May. In 2021, despite the emergency April 1 start date, the earliest the CP sector participated in the RP was May.

If participants attempt to extend fishing over a longer season, it is possible that higher PSC rates could constrain their rockfish harvests. If high PSC rates are encountered in April and that is perceived as a concern, it is likely that vessels will choose to concentrate their fishing under the program closer to the traditional season beginning May 1, and potentially encounter the same risks of delay and conflict with the salmon fishery that has occurred under the status quo. The combination, however, of the PSC limits, robust PSC avoidance measures currently implemented by cooperative managers, and the enhanced flexibility provided by this option, would likely mitigate any increases in PSC rates during April.

### **Impacts to Fisheries**

One of the factors that was considered in developing the start date for the original RPP and the RP was the fishery pattern and considerations related to processor activity. The shift in timing of processing activity under the RP has increased processor operational efficiency. CGOA rockfish trawl-caught landings have shifted out of peak salmon processing time during the month of July to what was a period of lower activity for the processors earlier in the year during the months of May and June. This increased efficiency of operations helped reduce some of the sharper seasonal peaks and valleys of processing labor demand. Another factor in the May 1 start date was based on information that there was an arrowtooth flounder market in the month of April. This proposed change to the start date would retain and potentially enhance those operational efficiencies that are currently threatened by unexpected loss of the arrowtooth market and mitigate potential impacts related to future COVID-19 outbreaks.

Trawl vessels typically prosecute arrowtooth fisheries during the month of April. The unexpected loss of the arrowtooth market in 2021 and the continued loss of the market in 2022 severely limits opportunities for CVs and shore-based processors to remain fully operational in the month of April. Given the recent increases in labor costs, shipping costs, and packaging costs in addition to the continued COVID-19 outbreaks in China, any lifting of trade tariffs in the future would likely inhibit reconstituting an arrowtooth market during the month of April. By moving the start date of the RP to April 1, this proposed action would provide the opportunity for CVs and associated shore-based processors to remain in operation during the month of April. Vessel operators that typically participate in arrowtooth fishing during the month of April will likely take advantage of the enhanced flexibility and participate in RP fisheries during April.

Under this alternative, management of the RP fisheries, with exclusive allocations to cooperatives, would continue to reduce the incentive for fishermen to initiate and/or continue fishing trips in inclement weather or when other operational dangers arise. The potential flexibility gained by a longer season enhances these established benefits of the program. The longer season would also likely allow vessels to fish their POP quota earlier thus drawing down on the POP quota and freeing up opportunity for vessels to harvest the more difficult northern rockfish and dusky rockfish later in the year.

Shoreside processors in Kodiak rely on trawl vessels to keep a steady flow of fish throughout the year to remain fully operational, including the month of April. Other fisheries that occur in April are limited to IFQ halibut and sablefish, which are typically low volume and can be somewhat unpredictable. The April 1 start date would provide an additional flexibility for trawl vessels to participate in the RP in April, thereby mitigating some impacts on shoreside processors due to the loss of arrowtooth markets. RP deliveries during April could keep RP product flowing into processing plants and keep plants fully operational, mitigating the economic and operational impacts of future COVID-19 outbreaks and current market conditions. In a discussion with an industry representative, if in the future the trade tariffs are lifted, it will likely take some time for the flatfish market to redevelop due to recent increases in the cost

structure like labor, shipping, and packaging. In addition, impacts from the COVID-19 pandemic in China and the elimination of subsidized reprocessing by the Chinese government are negatively impacting the ability to get low value species like arrowtooth flounder reprocessed affordably.

Finally, an April 1 start date provides a greater opportunity to harvest a larger amount of the northern rockfish and dusky rockfish, two species that are challenging to harvest. The longer season would allow vessels to harvest their POP quota during April freeing up opportunity later in the fishing year to harvest more northern rockfish and dusky rockfish.

### **2.8.2.2 Option 2: Eliminate CV Cooperative Holding Cap**

Option 2 would remove the cooperative holding cap for the CV harvest share pool of the primary species. Under this option, CV cooperatives would no longer be limited on the amount of CQ a cooperative may hold or use during a calendar year.

The intent of the current 30 percent CV cooperative holding cap in the RPP and RP was to prevent harvesters from forming cooperatives beyond the 30 percent cap. This holding cap was thought to prevent consolidation within cooperatives that could be detrimental to marginal processors in the fishery. Table 2-7 and Table 2-10 show a total of seven CV cooperatives upon implementation of the RP in 2012 through 2017. Starting in 2018 and continue through 2022, there are six CV cooperatives. In 2018, Global Rockfish Cooperative was disbanded and the vessels and LLP licenses that were part of that cooperative joined other CV RP cooperatives.

Based on reported delivery data, no cooperative was over 30 percent usage since implementation of the RP in 2012. While some trading of CQ did occur among cooperatives, the delivery patterns are similar to the CQ allocations by cooperative presented in Table 2-10. As noted in Alternative 1, the Star of Kodiak Rockfish Cooperative (Table 2-10) was near the cooperative limit of 30 percent. As noted in the January 28, 2022, letter from the Alaska Groundfish Data Bank to the Council, there are currently two cooperatives associated with the same processor that continue to form separately due to the 30 percent CV cooperative holding cap. The combined CV primary rockfish QS pool for the two cooperatives when combined is slightly greater than 40 percent. As a result, the two cooperatives associated with the same shore-based Kodiak processor cannot consolidate into a single cooperative to reduce the small administrative and management costs associated with managing these two cooperatives. These two cooperatives would likely consolidate into a single cooperative under this action. Finally, given that a processing cap for CQ assigned to the CV section is also included in the RP and therefore the Council's original intent would still be safeguarded by the processing cap, there appears to be no reason for the 30 percent CQ cooperative holding cap.

### **2.8.2.3 Option 3: Increase the CV Quota Share Pool Processor Caps**

Option 3 would increase the processing caps to 35 percent – 40 percent of the CV quota share pool for sablefish, Pacific cod, and/or the primary rockfish. The Council, during its April 2022 meeting, selected as its PPA a processing cap of 40 percent. The revised processing cap for the primary rockfish species would continue to limit a processor to a specific percentage of the primary species landings. That revised cap would continue to be administered as a percentage of the aggregate of the CV allocations of the three primary species. The revised processing cap for Pacific cod and sablefish would continue to apply to the allocation of those species. Currently, processors are limited to not receiving or processing more than 30 percent of the CQ issued to the CV sector for the three primary rockfish species, Pacific cod and sablefish. A grandfather provision was not included in developing the processor caps for the RP.

The cap was intended to maintain a distribution of processing activity in the fishery among several processors, which could benefit employees of those plants through increased processing worker labor demand for some operations during the RP fishing season. By distributing processing activity across more

processors due to a processing cap, more hours would likely be available for interested workers. In addition, the cap was also intended to stabilize the processing sector, since the cap was accompanied by a Kodiak landing requirement. The 30 percent cap ensures that a minimum of four Kodiak processors will be necessary to process all the RP CQ.

In recent years the number of Kodiak processors active in the RP has diminished from a high of seven in the first few years of the RP to four in 2020 and 2021. This reduction in the number of active Kodiak processors has resulted in the 30 percent processor cap becoming increasingly constraining. This reduction in active shorebased Kodiak processors has likely contributed to the recent processor overages. Since implementation of the RP in 2012, there have been two processor overages, one in 2020 for Pacific cod and one in 2021 for sablefish. One processor in 2019 processed 30 percent of the Pacific cod CV quota, but did not exceed the processor cap.

Under the proposed option, processor caps of 35 percent to 40 percent for the primary rockfish species, Pacific cod, and sablefish will ensure that a minimum of three Kodiak processors will be necessary to process all the RP CQ. This would likely provide some additional flexibility to ensure all the CV quota share pool is processed for the primary aggregated rockfish species, Pacific cod, and sablefish. This is especially true for Pacific cod and sablefish since these two species are generally fully utilized, but even aggregate rockfish for some processors are increasingly constrained at the 30 percent processor cap. A 40 percent cap would likely provide a greater amount of flexibility for the processors when compared to a 35 percent cap, recognizing that consolidation of Kodiak processors could continue in the future thereby resulting in the 40 percent processing cap being constraining. Nevertheless, a 40 percent cap would ensure a minimum of three Kodiak processors will be necessary to process all the RP CQ.

If the Council revises the harvester cap to no longer include northern rockfish and dusky rockfish in the aggregate cap (Option 4), there is the potential that over time aggregate rockfish quota could become even more constraining at the 30 percent processor cap. Increasing the processor cap to 35 to 40 percent for the primary rockfish species will likely provide some additional flexibility for processors to process all of the primary rockfish quota even if the harvest of northern rockfish and dusky rockfish CV quota increases over time.

As noted in the original analysis for the RP, a motivation for capping processing may be to protect historic processors. However, as noted in the decline of active RP processors, a processing cap could constrain processors and potentially leave RP quota unharvested. Upon implementation of the RP in 2012, there were seven active processors and none of the seven were constrained by the 30 percent processor caps. Overtime, as processors left the fishery or were purchased by other processors, the 30 percent processing caps are now constraining for some of the remaining four Kodiak active processors. Current processor caps likely constrain some plants from operating at capacity, which could increase costs per unit of production. Caps may also hinder processors from efficiently developing markets by constraining the amount of product they can supply. Limiting the amount of raw product available may also constrain the company's ability to maintain their portfolio of product forms or even hinder developing new product forms. Increasing the processor caps could improve economic efficiencies for those processors constrained by the current 30 percent processing caps.

#### **2.8.2.4 Option 4: Revise the CV Aggregated Harvesting Cap**

Under this option, the CV use cap of eight percent for the aggregated primary rockfish species (POP, northern rockfish, and dusky rockfish) would be revised to only require a CV use cap of eight percent for POP, thereby removing the CV use cap for northern rockfish and dusky rockfish. The original intent of the harvest use cap was to ensure that harvest activity does not exceed the specified threshold and, indirectly, that a certain number of vessels remain active in the fishery. For example, the 8 percent vessel use cap would ensure that at least 13 CVs remain active in the RP to ensure full harvest of the CV

rockfish quota. As noted in Table 2-1 and Table 2-10 the number of CVs active in the RP fishery is about twice that minimum number of CVs need to harvest the RP quota at eight percent. So, while the cap may limit the activity of certain vessels, other economic and political forces have limited concentration of catch by the fleet overall thereby providing greater crew opportunities relative crew opportunities at the 8 percent harvest cap.

CAS data indicates that no CVs have exceeded the eight percent aggregated primary rockfish use cap. Three or fewer CVs have reported primary species catch data that approached the eight percent cap during the year. These vessels, and potentially others, may find the cap constraining and would increase their catch of the primary rockfish quota within the cooperative if the limit were not in place. As shown in Table 2-11, the average number of CVs active in the fishery is about twice that number, so while the cap may limit the activity of certain CVs, other economic forces have limited concentration of catch by the fleet overall.

While the existing harvest use cap has ensured no CVs have exceeded the aggregated eight percent cap for the primary rockfish species, catch amongst the three primary species is very different. As noted in Table 2-11 POP is a fully harvested species, while harvest of northern rockfish and dusky rockfish are much lower. Relative to POP, northern rockfish and dusky rockfish are traditionally more difficult to catch which has likely contributed to the lower amounts of quota harvested. By revising the CV use cap for the primary rockfish species to only cap POP and not cap northern rockfish and dusky rockfish, this could provide an incentive for those few CVs, that routinely harvested a larger proportion of northern rockfish and dusky rockfish relative to their POP, to harvest a greater share of northern rockfish and dusky rockfish quota.

Generally, one to three CVs have in the past approached the harvest cap, but never exceeded the cap. Vessels that approach the harvest cap limit primarily catch POP, so maintaining the eight percent harvest cap for POP will continue to restrict the catch of POP quota by these vessels while also simultaneously allowing RP CVs to harvest a greater proportion of the northern rockfish and dusky rockfish quota without being restricted by the harvest use cap. This is more of an economic efficiency than an increasing effort. Finally, given that the number of active CVs in the RP has consistently ranged from 25 to 29 vessels since implementation of the RP in 2012, and that the CV use cap revision will likely only provide an incentive to harvest a greater amount northern and dusky rockfish, revising the CV use cap is likely not going to contribute to CV consolidation in the RP. Given this option would not likely result in CV consolidation, the same level of crew opportunities would be available under Option 4.

## **2.9 Affected Small Entities (Regulatory Flexibility Act Considerations)**

Section 603 of the Regulatory Flexibility Act (RFA) requires that an initial regulatory flexibility analysis (IRFA) be prepared to identify if a proposed action will result in a disproportionate and/ or significant adverse economic impact on the directly regulated small entities, and to consider any alternatives that would lessen this adverse economic impact to those small entities. NMFS Alaska Region will prepare the IRFA in the classification section of the proposed rule for an action and a separate IRFA is not necessary for Council final actions on the issue. This section will provide information that NMFS will use in preparing the IRFA for this action, namely a description and estimate of the number of small, directly regulated entities to which the proposed action will apply.

The proposed action would modify the Rockfish Program. The Council has identified a proposed alternative and this action alternative would impact small entities.

### **Identification of Directly Regulated Entities**

Entities that might be directly regulated by this action include catcher vessels and catcher processors that are eligible to fish in the Rockfish Program.

### **Count of Small, Directly Regulated Entities**

Under the RFA, businesses that are classified as primarily engaged in commercial fishing are considered small entities if they have combined annual gross receipts not in excess of \$11.0 million for all affiliated operations worldwide, regardless of the type of fishing operation (81 FR 4469; January 26, 2016). If a vessel has a known affiliation with other vessels – through a business ownership or through a cooperative – these thresholds are measured against the small entity threshold based on the total gross revenues of all affiliated vessels. As of 2022, there were 57 active vessels that had participated in the Rockfish Program of which 26 CVs are considered small entities because the aggregate ex-vessel value of deliveries of all vessels in the cooperative were less than \$11.0 million. The 57 vessels were comprised of nine CPs and 48 CVs. None of the CPs are classified as small entities because of their affiliation with the Amendment 80 cooperative exceeding the \$11 million first wholesale value threshold. The vessels that were not active in harvesting RP CQ species are able to lease or allow another vessel owned by the same firm to harvest their CQ within their cooperative. In the CP sector there is currently only one cooperative and all of the firms that hold LLP licenses with CQ have at least one vessel that is active the RP. As a result, the firms can increase operational efficiency by harvesting all their CQ on a single vessel. Firms that own CVs that are assigned to cooperatives could fish the CQ themselves or lease the CQ to other cooperative members. Given the number of vessels participating in the CGOA rockfish fishery has not varied much over time, minimal leasing of all an LLP license holder's CQ appears to have taken place.

## **2.10 Summation of the Alternatives with Respect to Net Benefit to the Nation**

The greatest change in net benefits to the Nation is driven by the Council's decision to select Alternative 2 over the no action alternative (Alternative 1). Under the no action alternative, the start date for the RP would remain May 1, which would likely result in higher costs of production due to idle processors and harvesters during the month of April with the loss of the flatfish shoreside market. In contrast, Alternative 2, Option 1, would likely provide additional fishing and processing opportunities during the month of April for RP vessels and processors which could help maintain harvesting and processing operations in April. As a result, it is likely some rockfish fishing would occur in April to keep harvesting vessels and processing plants fully operational and potentially mitigating future impacts of operational challenges related to COVID-19. This would likely help with crew and workforce stability by providing a greater opportunity for more reliable/steady crew and processing employment.

The status quo alternative would also leave in place the existing CV cooperative holding cap of 30 percent which would likely result in a small amount of inefficiency associated with managing multiple cooperatives that are associated with the same processor. Given that a processing cap was also included in the RP, which was intended to provide protection for marginal processors similar to the cooperative cap, removing the 30 percent cooperative holding cap would remove this duplication.

The no action alternative would also leave in place the existing 30 percent processor cap for aggregated primary rockfish species, sablefish and Pacific cod CQ assigned to the CV sector. Although the intent of the existing 30 percent processing cap is to maintain a minimum distribution of processing activity across the Kodiak processors, current processing caps appear to constrain economic inefficiencies by keeping some plants from operating at capacity which increases costs per unit production. These caps may also hinder processors from efficiently developing markets by constraining the amount of product they can supply. Under the proposed option, processor caps of 35 percent to 40 percent for the primary rockfish species, Pacific cod, and sablefish will ensure that a minimum of three Kodiak processors will be necessary to process all the RP CQ. This would likely provide some additional flexibility to ensure all the

CV quota share pool is harvested and processed for the primary aggregated rockfish species, Pacific cod, and sablefish which contributes to increased economic benefits for crew and processing labor.

Finally, the status quo alternative would maintain the existing CV aggregate rockfish harvesting cap at 8 percent, which would likely result in continued lower quota harvest of northern rockfish and dusky rockfish. Alternative 2, Option 4 would likely provide an incentive to harvest a greater amount northern rockfish and dusky rockfish quota. These fisheries are normally very challenging with few participating CVs, so revising the CV use cap will likely contribute to greater utilization of the northern rockfish and dusky rockfish quota but would not likely contribute to CV consolidation or reduce crew opportunities in the RP.

## 3 Environmental Assessment

This chapter evaluates the potentially affected environment and the degree of the impacts of the alternatives and options on the various resource components, together with relevant past, present, and reasonably foreseeable actions. The socio-economic impacts of this action are described in detail in the Regulatory Impact Review (RIR) chapter of this analysis (Chapter 2).

Recent and relevant information, necessary to understand the affected environment for each resource component, is summarized in the relevant section below. For each resource component, the analysis identifies the potential impacts of each alternative, and evaluates these impacts. If significant impacts are likely to occur, preparation of an EIS is required. Although an EA should evaluate economic and socioeconomic impacts that are interrelated with natural and physical environmental effects, economic and social impacts by themselves are not sufficient to require the preparation of an EIS (see 40 CFR 1508.14).

### 3.1 Methods

This analysis was prepared using data from the NMFS catch accounting system. Data were sourced using NMFS Alaska Region Catch Accounting System (CAS) and Alaska Department of Fish and Game (ADFG)/Commercial Fisheries Entry Commission (CFEC) Fish Tickets in Comprehensive\_FT. Alaska Fisheries Information Network (AKFIN) compiles the Comprehensive datasets. CAS was used to show total catch and total retained amounts. For biological and physical ecosystem components (target species stocks, non-target species, marine mammals, seabirds, and EFH), impacts of the alternatives were evaluated in a largely qualitative manner although data are presented to support conclusions.

The analyses presented in the sections below focus primarily on target stocks (Section 3.2), Chinook salmon and Pacific halibut (Section 3.3), and EFH (Section 3.4). Additional information on methods specific to the EA is described in this section.

The Fishing Effects (FE) model is a cumulative effects model that incorporates habitat impacts and recovery at a monthly time step utilizing Vessel Monitoring System (VMS) data. VMS data is available for most GOA vessels starting in 2003. The FE model focuses on reduction in trawl gear contact with the sea floor. This information is summarized in Section 3.4.

#### 3.1.1 Documents Incorporated by Reference in this Analysis

This EA relies heavily on the information and evaluation contained in previous environmental analyses. The documents listed below contain information about the fishery management areas, fisheries, marine resources, ecosystem, social, and economic elements of the groundfish fisheries. They also include a comprehensive analysis of the effects of the fisheries on the human environment and are referenced in the analysis of impacts throughout this chapter.

##### **Alaska Groundfish Harvest Specifications Final Environmental Impact Statement (NMFS 2007).**

This EIS provides decision-makers and the public an evaluation of the environmental, social, and economic effects of alternative harvest strategies for the federally managed groundfish fisheries in the GOA and the Bering Sea and Aleutian Islands management areas and is referenced here for an understanding of the groundfish fishery. The EIS examines alternative harvest strategies that comply with Federal regulations, the FMP for Groundfish of the GOA, the FMP for Groundfish of the BSAI Management Area, and the MSA. These strategies are applied using the best available scientific information to derive the TAC estimates for the groundfish fisheries. The EIS evaluates the effects of different alternatives on target species, non-specified species, forage species, prohibited species, marine

mammals, seabirds, essential fish habitat, ecosystem relationships, and economic aspects of the groundfish fisheries. This document is available from <https://www.fisheries.noaa.gov/resource/document/alaska-groundfish-harvest-specifications-environmental-impact-statement-eis>.

### **Stock Assessment and Fishery Evaluation (SAFE) Report for the Groundfish Resources of the GOA (NPFMC, 2021).**

Annual SAFE reports review recent research and provide estimates of the biomass of each species and other biological parameters. The SAFE report includes the acceptable biological catch (ABC) specifications used by NMFS in the annual harvest specifications. The SAFE report also summarizes available information on the ecosystems and the economic condition of the groundfish fisheries off Alaska. This document is available from <https://www.fisheries.noaa.gov/alaska/population-assessments/2018-north-pacific-groundfish-stock-assessments#gulf-of-alaska-stock-assessments>

### **Final Programmatic Supplemental Environmental Impact Statement (PSEIS) on the Alaska Groundfish Fisheries (NMFS 2004).**

The PSEIS evaluates the Alaska groundfish fisheries management program as a whole and includes analysis of alternative management strategies for the GOA and BSAI groundfish fisheries. The EIS is a comprehensive evaluation of the status of the environmental components and the effects of these components on target species, non-specified species, forage species, prohibited species, marine mammals, seabirds, essential fish habitat, ecosystem relationships, and economic aspects of the groundfish fisheries. A Supplemental Information Report (SIR) (NPFMC and NMFS 2015) was prepared in 2015 which considers new information and affirms that new information does not indicate that there is now a significant impact from the groundfish fisheries where the 2004 PSEIS concluded that the impact was insignificant. The PSEIS document is available from <https://www.fisheries.noaa.gov/resource/document/alaska-groundfish-fisheries-programmatic-supplemental-environmental-impact>, and the SIR from <https://repository.library.noaa.gov/view/noaa/19481/Share>.

### **CGOA RP EA/RIR (NPFMC 2011)**

Amendment 88 to the GOA FMP was developed to implement the RP in 2012. Information in that paper satisfied the regulatory requirements to implement the RP after the RPP expired. Many of the findings in that EA remain consistent with the impacts that would be realized under this action and are included by reference. <https://www.fisheries.noaa.gov/resource/document/secretarial-review-regulatory-impact-review-final-environmental-assessment>.

### **CGOA RP Review (NPFMC 2017)**

A review of the CGOA RP (RP) is required under the Magnuson-Stevens Act and NOAA Fisheries requires an Allocation Review. This paper fulfills those review requirements, focusing on the goals and objectives of the program defined by the North Pacific Fishery Management Council, Magnuson-Stevens Act limited access privilege program requirements, and NOAA Fisheries guidance for program reviews. This review includes quantitative measures of the effectiveness of the program meeting the goals and objectives when data allows. A qualitative discussion of the impacts is provided when sufficient data are unavailable. This document is available from [https://www.npfmc.org/wp-content/PDFdocuments/catch\\_shares/Rockfish/RockfishProgramReview1017.pdf](https://www.npfmc.org/wp-content/PDFdocuments/catch_shares/Rockfish/RockfishProgramReview1017.pdf).

**Environmental Assessment/Regulatory Impact Review for Proposed Amendment 111 to the Fishery Management Plan for the Gulf of Alaska, Central Gulf of Alaska Rockfish Program Reauthorization (Secretarial Review Draft 2020).**

The purpose of Amendment 111 was to reauthorize the RP to retain the management, economic, safety, and conservation gains realized under the RP. The amendment can be found here: [https://www.npfmc.org/wpcontent/PDFdocuments/catch\\_shares/Rockfish/A111\\_RockfishReauthorization.pdf](https://www.npfmc.org/wpcontent/PDFdocuments/catch_shares/Rockfish/A111_RockfishReauthorization.pdf)

**Final Regulatory Impact Review for a Temporary Rule (Emergency Action) to Modify Season Start Date to the Central Gulf of Alaska Rockfish Program in 2021 (February 2021).**

This RIR evaluated the costs and benefits of an emergency rule to modify the season start date of the 2021 RP fishery from May 1, 2021, to April 1, 2021, to address economic, social, and public health situations present in the rockfish fishery. The temporary rule can be found here: <https://www.federalregister.gov/documents/2021/03/19/2021-05685/fisheries-of-the-exclusive-economic-zone-off-alaska-central-gulf-of-alaska-rockfish-program-modify>

**3.1.2 Resource Components Addressed in the Analysis**

Table 3-1 Resources potentially affected by the proposed action and alternatives. Table 3-1 shows the components of the human environment and whether the proposed action and its alternatives have the potential to impact that resource component and thus require further analysis. Extensive environmental analysis on all resource components is not needed in this document because the proposed action is not anticipated to have environmental impacts on all resource components.

The effects of the alternatives on the resource components beyond the existing status quo. **Under Alternative 2, minimal, or beneficial effects are expected on target species, unallocated species (including prohibited species), and EFH. No effects are expected on ecosystem component species, marine mammals, seabirds, or the ecosystem.** No effect is presumed for these components because fishing regulations (e.g., primarily a summer fishing season and gear types), harvest limits or regulations protecting habitat and important breeding areas as described in previous NEPA documents (North Pacific Fishery Management Council, 2011) would not be changed by any of the alternatives. No effects are presumed for marine mammals because neither existing protection measures nor allowable harvest amounts for important prey species would be changed. Moreover, under the existing RP, regulations would define the seasons in which trawl fishing is allowed, methods that may be used, areas in which trawling is allowed, and restrict the maximum amount of trawling to TAC levels. None of the alternatives would change TAC amounts or areas closed to trawling. As a result, detailed analysis is included only for groundfish, prohibited species, habitat, and social and economic components, the only resource components which the proposed action may impact. A brief discussion of the other components for which no effects are expected are described in this section with information indicating why they are not considered to be a potentially affected resource component.

**Table 3-1 Resources potentially affected by the proposed action and alternatives.**

Potentially affected resource component							
Groundfish	Prohibited Species	Ecosystem Component Species	Marine Mammals	Seabirds	Habitat	Ecosystem	Social and economic
Y	Y	N	N	N	Y	N	Y

N = no impact anticipated by each alternative on the component.  
Y = an impact is possible if each alternative is implemented.

### **3.1.3 Effects of Aggregate Past, Present, and Reasonably Foreseeable Future Actions**

This EA analyzes the effects of each alternative and the effects of past, present, and reasonable foreseeable future action (RFFA). Based on the projected impacts of the alternatives, the resources with potentially meaningful effects are primary and secondary RP species, PSC species, habitat, and social and economic resource components. The aggregate effects on the other resources have been analyzed in numerous documents and the impacts of this proposed action and alternatives on those resources is minimal, therefore there is no need to conduct an additional aggregate impacts analysis.

Each section below provides a review of the relevant past, present, and RFFA that may result in aggregate effects on the resource components analyzed in this document. A complete review of the past, present, and RFFAs are described in the prior NEPA documents incorporated by reference and the SIR NMFS prepares to annually review of the latest information since the completion of the Alaska Groundfish Harvest Specifications EIS. SIRs have been developed since 2007 and are available on the NMFS Alaska Region website. Each SIR describes changes to the groundfish fisheries and harvest specifications process, new information about environmental components that may be impacted by the groundfish fisheries, and new circumstances, including present and RFFAs. NMFS reviews the RFFAs described in the Harvest Specifications EIS each year to determine whether they occurred and, if they did occur, whether they would change the analysis in the Harvest Specifications EIS of the impacts of the harvest strategy on the human environment. In addition, NMFS considered whether other actions not anticipated in the Harvest Specifications EIS occurred that have a bearing on the harvest strategy or its impacts. The SIRs provide the latest review of new information regarding Alaska groundfish fisheries management and the marine environment since the development of the Harvest Specifications EIS and provide aggregate effects information applicable to the alternatives analyzed in this EA.

Actions are understood to be human actions (e.g., a designation of northern right whale critical habitat in the Pacific Ocean), as distinguished from natural events (e.g., an ecological regime shift). CEQ regulations require consideration of actions, whether taken by a government or by private persons, which are reasonably foreseeable. This requirement is interpreted to indicate actions that are more than merely possible or speculative. In addition to these actions, the aggregate effects analysis includes the effects of climate change.

Actions are considered reasonably foreseeable if some concrete step has been taken toward implementation, such as a Council recommendation or NMFS's publication of a proposed rule. Actions only "under consideration" have not generally been included, because they may change substantially or may not be adopted, and so cannot be reasonably described, predicted, or foreseen. Identification of actions likely to impact a resource component within this action's area and time frame will allow the public and Council to make a reasoned choice among alternatives.

## **3.2 Target Species**

The RP has maintained the cooperative management structure that provides the fleet with the tools to minimize bycatch to the extent practicable, reduce discards and improve utilization of groundfish species. This section provides an overview of the status of the RP primary and secondary species stocks to provide a basis for evaluating the impact of the proposed amendment 2 to the current RP. Much of the information presented for primary and secondary RP species is taken from the most recent GOA SAFE document (NPFMC, 2021) in addition to the documents referenced in Section 3.1.1.

The RP primary species are northern rockfish, POP, and dusky rockfish. The RP secondary species are Pacific cod, rougheye rockfish, shortraker rockfish, sablefish, and thornyhead rockfish. The RP primary species stocks are assessed biennially as three distinct species in Federal waters. The RP secondary species stocks are assessed either biennially or annually and GOA-wide biomass estimates are available

each year. The RP primary and secondary species are not overfished and are not approaching overfished levels.

An ABC and TAC is specified for each species, which is apportioned to the GOA management areas (Western, Central, and Eastern) based on the distribution of survey biomass. Pertinent information on the biology, ecological relationships, and fishery information on each species is summarized in this section. TAC for each species allocated under the CGOA RP are reported in this section for 2012 through 2021. Catch data are reported for 2012 through 2021. These years represent the longest times series of complete fishing years when consistent catch data are available. Primary RP species TACs are set equal to the ABC. Overfishing levels (OFLs) are set GOA-wide for Northern rockfish and dusky rockfish. OFLs for POP are set for the Southeast Outside area and the combined Western, Central, and West Yakutat areas. Because there is no OFL set for the CGOA it is not reported and the ABCs are not reported since they are equal to the TAC. Changes to the RP under the proposed amendment 2 would not invoke changes to TAC or PSC limits to primary or secondary RP species.

### **3.2.1 Status of Primary RP Species**

The primary rockfish species in the program are POP, northern rockfish, and dusky rockfish and they are assessed biennially as three distinct species. These are the three rockfish species that had traditionally been open to directed fishing in the CGOA.

Adult rockfish range in size from about 12 centimeters (cm) to about 104 cm, but most species are between 38 cm and 51 cm. Reproduction is generally through internal fertilization and live birth. Adult rockfish species have different habitats. Demersal shelf rockfish live in near-shore shallower waters on rocky bottom, pelagic shelf rockfish are often found near the bottom and up in the water column, and other species live in deeper waters. Rockfish are long-lived, slow-growing fish with most species having maximum ages over fifty years old. Shortraker and rougheye rockfish are some of the oldest of the rockfish.

GOA species that are not included as primary or secondary species are not managed under the RP. These species include flatfish, pollock, Atka mackerel, rockfish species not included in the RP, and sculpins. The RP sector allocation of the primary species is equal to the CGOA TAC minus the ICA established for bycatch needs in other target fisheries, and the allocation to the longline entry level fishery. The figures presented later in this section report the CGOA TACs and RP catch of the three primary species. Table 3-2 provides a summary of the three primary species apportionments for 2022. Allocations among vessels belonging to CV or CP cooperatives are not included in these final harvest specifications. Rockfish Program applications for CV cooperatives and CP cooperatives are not due to NMFS until March 1 of each calendar year; therefore, NMFS cannot calculate 2022 and 2023 allocations in conjunction with these final harvest specifications. The fishing season is from May 1 through November 15. Under the current RP most of the catch occurs in May and June when harvesters and processors have fewer opportunities. Under Alternative 2, the fishery is expected to open April 1 to November 15. Alternative 2 would provide enhanced flexibility to vessel operators and processing plants participating in the RP.

**Table 3-2 Primary RP Species Apportionments, 2022. (Values are rounded to the nearest metric ton)**

Rockfish primary species	CGOA annual ABC/TAC	ICA	TAC minus ICA	Allocation to the entry level longline <sup>1</sup> fishery	Allocation to the rockfish cooperatives
POP	30,806	2,500	28,306	5	28,301
Northern rockfish	3,202	300	2,902	5	2,897
Dusky rockfish	4,534	250	4,284	50	4,234
<b>Total</b>	<b>38,542</b>	<b>3,050</b>	<b>35,492</b>	<b>60</b>	<b>35,432</b>

<sup>1</sup> Longline gear includes hook-and-line, jig, troll, and handline gear ([50 CFR 679.2](#)).

<sup>2</sup> Rockfish cooperatives include vessels in CV and CP cooperatives ([50 CFR 679.81](#)).

### Pacific Ocean Perch<sup>4</sup>

POP (*Sebastes alutus*) is a demersal rockfish species with a wide geographic distribution from California to the North Pacific and the Bering Sea to the Kuril Islands (Hanselman et al. 2003). They are a long-lived, slow-growing rockfish species, with maximum age estimated to be in excess of 90 years. CGOA POP TACs ranged between 6,000 mt and 10,000 mt until 2010 and increased to 31,238 mt in 2020 before increasing to 36,177 mt in 2021. A comparison of CGOA POP TAC to GCOA POP catch from 2012-2021 is found in Figure 3-1 **Error! Reference source not found.** Spawning biomass was projected to decrease slightly in 2022 but the stock remains well above B40%<sup>5</sup>. The stock is not being subjected to overfishing and is neither overfished nor approaching an overfished condition.

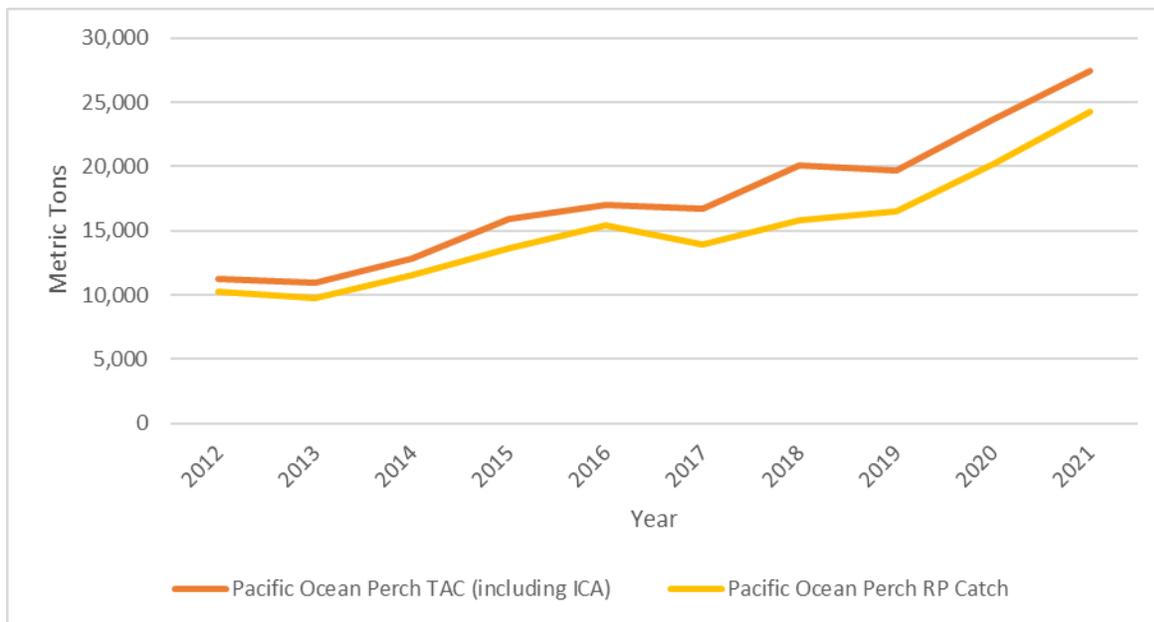
POP abundance is influenced by periodically abundant year classes. Availability of abundant zooplanktonic prey for POP larvae or post-larvae may be an important determining factor in year class strength. However, there is no information on food habits of larval or post-larval rockfish thus it is difficult to draw a relationship between food availability and year class strength. Some juvenile rockfish in inshore habitat have been found to prey on shrimp, amphipods, other crustaceans, mollusks and some fish.

POP are preyed upon by a variety of other fish at all life stages and to some extent marine mammals as well during late juvenile and adult stages. Documented predators include Pacific halibut and sablefish and it is likely that Pacific cod and arrowtooth flounder also prey upon POP (NMFS 2004b). Pelagic juveniles are consumed by salmon and benthic juveniles are consumed by lingcod and other demersal fish (NMFS 1997). The relative population impact of predators is unknown, although it is presumed predation would have a larger impact at the larval, post-larval, and juvenile life stages. Information on these life stages and their related predators however is unknown.

<sup>4</sup> Much of this information is incorporated from the SAFE: <https://www.fisheries.noaa.gov/alaska/population-assessments/2021-north-pacific-groundfish-stock-assessments>

<sup>5</sup> 40% of the unfished stock size.

**Figure 3-1 CGOA POP TAC (including ICA) and RP catch (mt)**



Source: AKFIN, February 2022; file name - Figures 2-1 through 2-4 RP Adjustment (2-16-22)

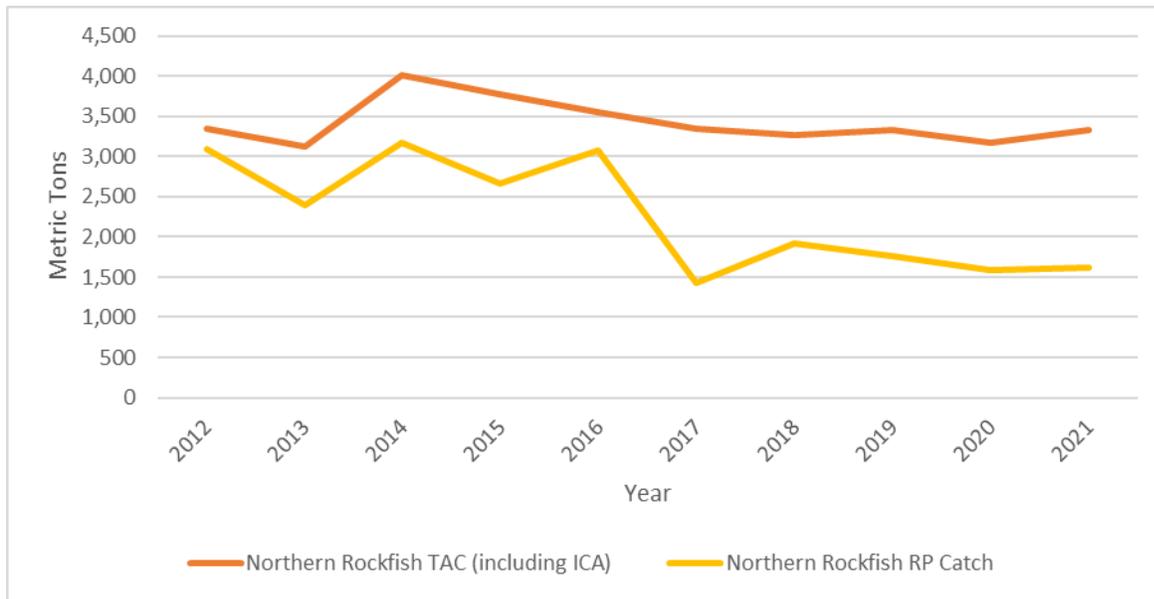
### Northern Rockfish<sup>6</sup>

Northern rockfish, *Sebastes polyspinis*, are a semi demersal long-lived rockfish species. Their distribution ranges from northern British Columbia across the Pacific Rim to eastern Kamchatka and the northern Kurile Islands to the eastern Bering Sea (Allen and Smith 1988). They are most abundant throughout their northerly range in Alaskan waters from the western end of the Aleutian Islands to Portlock Bay in the CGOA. There is little known about the life history of northern rockfish.

While there is limited information on the habitat preference of juvenile northern rockfish, trawl surveys and commercial fishery data have indicated that adult northern rockfish prefer relatively shallow banks on the outer continental shelf at depths between 75 meters and 150 meters. These data also indicate that within this habitat adult northern rockfish have patchy, localized distributions. This may be a result of the prey availability of euphausiids. This distribution of prey may help to explain the observed patchy distribution of northern rockfish.

Northern rockfish CGOA TACs ranged from a low of 2,281 mt in 2011 to a high of 3,169 mt in 2014 (Figure 3-2 **Error! Reference source not found.**). The 2021 TAC is set at 5,357 mt. The 2021 spawning biomass estimate (42,791 mt) is above B<sub>40%</sub> (33,933mt) and is projected to decrease to 40,462 mt in 2022. Total biomass (2+) for 2021 is 102,715 mt and is projected to decrease to 99,957 mt in 2022. Northern rockfish stock is not being subjected to overfishing and is neither overfished nor approaching an overfished condition.

**Figure 3-2 CGOA Northern rockfish TAC (including ICA) and RP catch (mt)**



Source: AKFIN, February 2022; file name Figures 2-1 through 2-4 RP Adjustment (2-16-22)

### Dusky Rockfish<sup>7</sup>

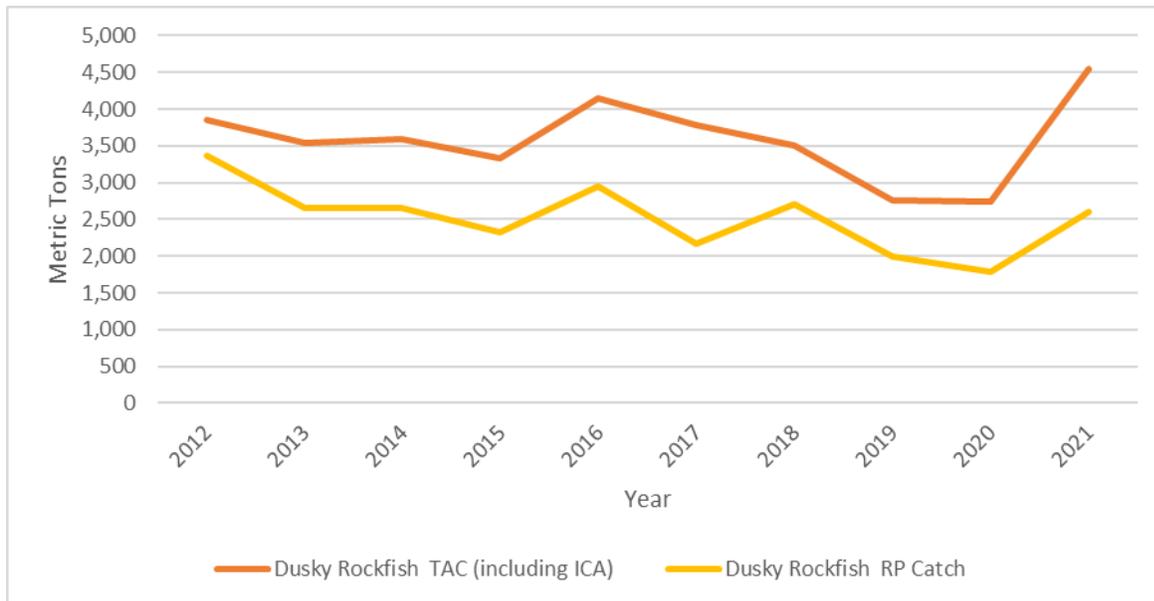
Dusky rockfish (*Sebastes ciliatus*), yellowtail rockfish (*S. flavidus*), and widow rockfish (*S. entomelas*) make up the pelagic shelf rockfish species. Of these three, dusky rockfish is the most important species Gulf-wide in the assemblage while the other two species are minor parts of the assemblage in Alaskan waters. Dusky rockfish has the northernmost distribution of all rockfish species in the Pacific Ocean. While the species range extends from British Columbia north to the Bering Sea and west to Hokkaido Island, Japan, the species appears to be abundant only in the GOA.

There are two distinct species of dusky rockfish in the GOA, a lighter-colored species (light dusky), found in more offshore waters and a darker-colored species found in shallow waters closer inshore (Clausen et al. 2003). The majority of available data on dusky rockfish from trawl surveys and the commercial fishery are on light dusky rockfish.

The stock condition of dusky rockfish is influenced by periodically abundant year classes. As with the other rockfish species, the availability of zooplankton prey may play an important role in year class strength, however there is insufficient information available on food habits to determine this. Dusky rockfish TACs remained fairly steady over the years considered (Figure 3-3). TACs ranged from 2,760 mt in 2019 to 4,548 mt in 2021. The 2021 TAC is 5,389 mt. The dusky rockfish TAC is about the same size as the northern Rockfish TAC (5,357 mt). The stock is not being subjected to overfishing, is not currently overfished, nor is it approaching an overfished condition.

<sup>7</sup> Much of this information is incorporated from the SAFE: <https://www.fisheries.noaa.gov/alaska/population-assessments/2021-north-pacific-groundfish-stock-assessments#gulf-of-alaska%20stock-assessments>

**Figure 3-3 CGOA dusky rockfish TAC (including ICA) and RP catch (mt)**



Source: AKFIN, February 2022; file name Figures 2-1 through 2-4 RP Adjustment (2-16-22)

### 3.2.2 Status of Secondary RP Species

Secondary species allocated under the RP include three rockfish species, Pacific cod, and sablefish. These species may be taken as a directed fishery in the RP, if sufficient CQ is available, or taken as incidental catch when directed fishing for the primary RP species.

#### Shortraker rockfish, rougheye rockfish, and blackspotted rockfish<sup>8</sup>

As with most other rockfish, shortraker rockfish (*Sebastes borealis*) and rougheye rockfish (*Sebastes aleutianus*) are slow growing and long-lived. They inhabit waters of the outer continental shelf and continental slope. Shortraker rockfish are consistently most abundant in the Yakutat area. Rougheye rockfish are typically most abundant in the Southeastern area. Estimates of maximum age of shortraker rockfish is 120 years, while estimates of maximum age of rougheye rockfish range from 90 years to 140 years. As with other slope rockfish, shortraker rockfish and rougheye rockfish appear to be influenced by periodic abundant year classes.

When the RPP was implemented in 2007, the Council elected to use more precise and limiting management to avoid possible overharvest of shortraker rockfish and rougheye rockfish. CP cooperatives are limited by constraining allocations with no discards permitted. CPs in the limited access fishery and all CVs are limited by a 2 percent maximum retainable amount (MRA), applicable to shortraker rockfish and rougheye rockfish in the aggregate. The more species-specific and reduced MRA is intended to limit any potential incentive to “top off” on these two species.

Shortraker rockfish are Tier 3 species for specifications where  $F_{ABC}^9 = 0.75M = 0.0225$ , and  $F_{OFL}^{10} = 0.03$ ; applying this definition to the biomass results in an ABC of 788 t and an OFL 947 t for 2022. This stock was not being subjected to overfishing in 2021.

<sup>8</sup> Much of this information is incorporated from the SAFE: <https://www.fisheries.noaa.gov/alaska/population-assessments/2021-north-pacific-groundfish-stock-assessments#gulf-of-alaska%C2%A0stock-assessments>

<sup>9</sup> The fishing mortality rate used to compute ABC.

<sup>10</sup> The fishing mortality rate used to compute OFL.

Rougheye and blackspotted rockfish are assessed on a biennial stock assessment schedule to coincide with the availability of new survey data. The last full assessment base model was produced in 2021. For GOA rougheye and blackspotted rockfish in alternate (even) years, a partial assessment is provided to recommend harvest levels for the next two years. The estimates of spawning biomass for 2022 and 2023 from the current year projection model are 8,648 t and 8,627 t, respectively. Both estimates are above the  $B_{35\%}$  estimate of 5,172 t and, therefore, the stock is not currently overfished nor approaching an overfished condition.

### **Thornyheads<sup>11</sup>**

Thornyhead rockfish are long-lived, slow-growing high value rockfish species in Alaskan waters. The shortspine thornyhead rockfish, *Sebastolobus alaskanus*, are abundant in the GOA and are of commercial importance as a high value rockfish species. Longspine thornyhead rockfish, *S. altivelis*, as well as another thornyhead rockfish species common off Japan, *S. macrochir*, are infrequently encountered in the GOA, thus annual assessments focus upon the shortspine thornyhead rockfish. Shortspine thornyhead rockfish are a demersal species found in deep waters from 92 meters (m) to 1,460 m with a geographic distribution extending from the Bering Sea and GOA to Baja California. The ABC and TAC for thornyhead rockfish are apportioned by each of the three GOA areas while the OFL is managed Gulf-wide.

Estimates of spawning biomass are unavailable for thornyheads. The thornyhead complex is a Tier 5 stock, and biomass is estimated by applying the random effects method to the trawl and longline survey biomass time series by region and depth in order to compensate for missing data (i.e., thornyheads are found down to 1000 m, but deep survey strata are not sampled in each trawl survey). The biomass estimates from the random effects model show a slightly increasing trend from about 2010-2017 and a projected stable trend after 2017. Biomass estimates for the 2021/2022 season is 86,802 t and OFL was set at 2,604 t and ABC at 1,953 t. The thornyhead complex is not being subjected to overfishing. Information is insufficient to determine stock status relative to overfished criteria as estimates of spawning biomass are unavailable.

### **Pacific cod<sup>12</sup>**

Pacific cod (*Gadus macrocephalus*), also known as grey cod, are moderately fast-growing and short-lived fish. Pacific cod is a transoceanic species, occurring at depths from shoreline to 500 m. A primary ecosystem phenomenon affecting Pacific cod seems to be the periodic occurrence of “regime shifts.” Major trends in predators and prey can be expected to affect Pacific cod dynamics. Small Pacific cod feed mostly on invertebrates, while large Pacific cod are mainly piscivorous. Predators for Pacific cod include halibut, salmon shark, northern fur seals, Steller sea lions, harbor porpoises, various whale species, and tufted puffin. Potentially, fisheries for Pacific cod can have effects on other species in the ecosystem through a variety of means. Pacific cod is important winter prey for Steller sea lions.

The 2017 trawl survey biomass estimate was the lowest in the time series, which began in 1984, and was 58 percent lower than the 2015 estimate. The longline survey relative population number (RPN) for 2018 dropped 40 percent from 2017 to 2018 and was 73 percent lower than the 2015 RPN estimate. The ABC was substantially reduced for 2018 to 18,000 t from 88,342 t in 2017, an 81% reduction. This was a 65% reduction from the realized 2017 catch. In 2018 the total catch was 15,247 t. For 2019 the ABC was set below the maximum ABC at 17,000 t and the combined fishery caught 15,411 t which was 91% of the ABC.

<sup>11</sup> Much of this information is incorporated from the SAFE: <https://www.fisheries.noaa.gov/alaska/population-assessments/2021-north-pacific-groundfish-stock-assessments#gulf-of-alaska%C2%A0stock-assessments>

In 2020 the spawning stock biomass was projected to have dropped below 20% of the unfished spawning biomass (B<sub>20%</sub>) and the federal Pacific cod fishery in the GOA was closed by regulation to directed Pacific cod fishing. B<sub>20%</sub> is a minimum spawning stock size threshold instituted to help ensure adequate forage for the endangered western stock of Steller sea lions. The Alaska State directed Pacific cod fishery remained open and Pacific cod bycatch in other federally managed groundfish fisheries was allowed. The Pacific cod ABC for 2020 was set to 14,621 t, but the combined TAC and Alaska State groundfish harvest level (GHL) was reduced to account for additional uncertainty. The B<sub>40%</sub> estimate was 72,045 mt, with projected 2021 spawning biomass of 39,977 mt.

In 2021 the stock was projected to be above B<sub>20%</sub> and the federal fishery was once again allowed to open. The federal TAC was set at 17,321 t and state GHL set at 5,864 t. As of October 4, 2021 a total of 16,502 t (69% of the ABC) have been harvested. State fisheries have harvested 5,573 t (95% of the GHL) and federal fisheries 10,930 t (63% of the TAC). In 2021 43% of the Pacific cod catch was by pot gear, 32% by trawl, 1 and 8% by longline, while jig and other gear harvested less than 7%.

### Sablefish<sup>13</sup>

Sablefish (*Anoploma fimbria*) are distributed from northern Mexico to the GOA, westward to the Aleutian Islands and into the Bering Sea. Adult sablefish are found along the continental slope, gullies and deep fjords generally at depths greater than 200 m. Sablefish are assessed as a single population in federal waters off Alaska because northern sablefish are highly migratory for at least part of their life. Sablefish are managed by discrete regions to distribute exploitation throughout their wide geographical range. There are four management areas in the GOA (Western, Central, West Yakutat, and East Yakutat/Southeast Outside) and two management areas in the BSAI.

Spawning is pelagic at depths of 300 m to 500 m near the edges of the continental slope. During surveys of the outer continental shelf, most young-of-the-year sablefish are caught in the central and eastern GOA. Near the end of the first summer, pelagic juveniles less than 20 cm drift inshore and spend the winter and following summer in inshore waters, reaching 30 cm to 40 cm by the end of their second summer. After their second summer, they begin moving offshore, typically reaching their adult habitat, the upper continental slope at 4 to 5 years.

The longline survey abundance index (relative population numbers, RPNs) increased by 9% in 2021 following a 32% increase in 2020. The trawl survey biomass index has increased nearly five-fold since 2013, with a 40% increase from 2019 to 2021. The age and length composition data from the various fishery (i.e., fixed gear and trawl) and surveys (i.e., longline and trawl) continue to indicate strong year classes in 2014, 2016, 2017, and 2018. The 2016 year class appears to be the largest on record and estimates of the size of this cohort appear to have stabilized. Additionally, it now appears that the series of recruitment events from 2014 – 2018 reflect those of the late 1970s and early 1980s.

Sablefish are managed under Tier 3 of NPFMC harvest control rules. The updated point estimate of B<sub>40%</sub>, is 118,140 t. Since projected female spawning biomass (combined areas) for 2022 is 128,789 t (equivalent to B<sub>44%</sub>), sablefish is in sub-tier “a” of Tier 3. Spawning biomass is projected to continue to increase rapidly in the near-term, reaching B<sub>44%</sub> in 2022 and B<sub>51%</sub> in 2023. The updated point estimates of F<sub>40%</sub> and F<sub>35%</sub> from this assessment are 0.080 and 0.094, respectively. Thus, the maximum permissible value of FABC under Tier 3a is 0.080, which translates into a 2022 maximum permissible ABC of 34,863 t. The OFL fishing mortality rate is 0.094, which translates into a 2022 OFL of 40,432 t. Thus, current model projections indicate that the Alaskan sablefish stock is not subject to overfishing, not overfished, and not approaching an overfished condition.

<sup>13</sup> Much of this information incorporated from the SAFE: <https://www.fisheries.noaa.gov/alaska/population-assessments/2021-north-pacific-groundfish-stock-assessments#gulf-of-alaska%20stock-assessments>

### 3.2.3 Effects of the Alternatives on Target Species

The effects of the CGOA rockfish fishery on the rockfish stocks are assessed annually in the GOA SAFE report (NPFMC, 2021) and were also evaluated in the Alaska Groundfish Fisheries Harvest Specifications EIS (NMFS, 2007). Table 3-3 describes the criteria used to determine whether the impacts on target fish stocks are likely to be significant. The primary and secondary rockfish stocks, CGOA sablefish stocks, and CGOA Pacific cod stocks are neither overfished nor subject to overfishing. It is estimated that the GOA stocks of those species are sustainable under all of the alternatives considered and the impact is insignificant as defined in Table 3-3.

**Table 3-3 Criteria used to determine significance of effects on target groundfish stocks.**

Effect	Criteria			
	Significantly Negative	Insignificant	Significantly Positive	Unknown
Fishing mortality	Changes in fishing mortality are expected to jeopardize the ability of the stock to sustain itself at or above its MSST (minimum stock size threshold)	Changes in fishing mortality are expected to maintain the stock's ability to sustain itself above MSST	Changes in fishing mortality are expected to enhance the stock's ability to sustain itself at or above its MSST	Magnitude and/or direction of effects are unknown
Stock Biomass: potential for increasing and reducing stock size	Reasonably expected to jeopardize the capacity of the stock to yield sustainable biomass on a continuing basis.	Reasonably expected not to jeopardize the capacity of the stock to yield sustainable biomass on a continuing basis.	Action allows the stock to return to its unfished biomass.	Magnitude and/or direction of effects are unknown
Spatial or temporal distribution	Reasonably expected to adversely affect the distribution of harvested stocks either spatially or temporally such that it jeopardizes the ability of the stock to sustain itself.	Unlikely to affect the distribution of harvested stocks either spatially or temporally such that it has an effect on the ability of the stock to sustain itself.	Reasonably expected to positively affect the harvested stocks through spatial or temporal increases in abundance such that it enhances the ability of the stock to sustain itself.	Magnitude and/or direction of effects are unknown

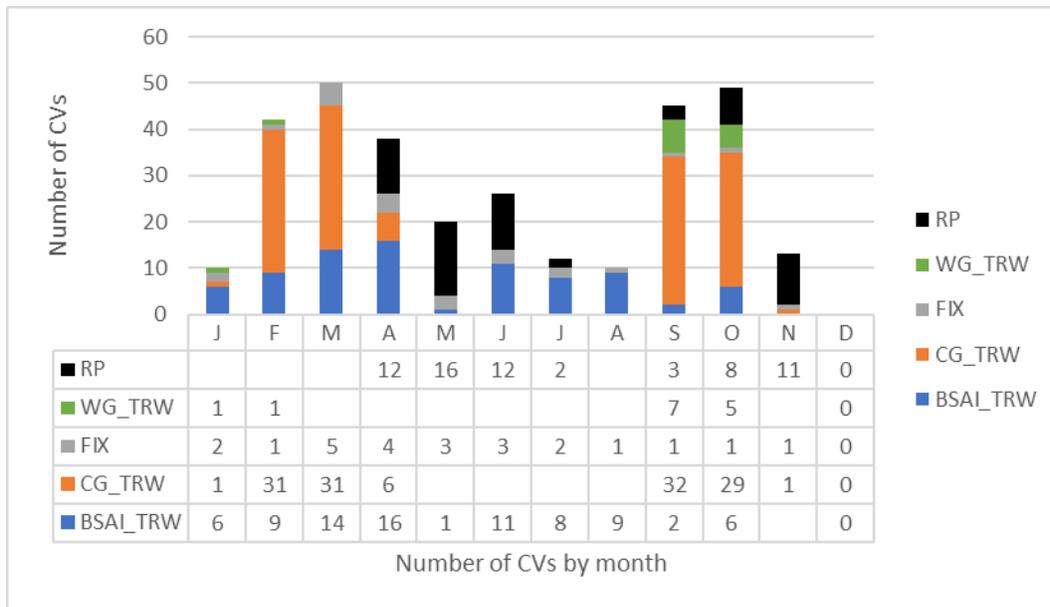
The alternatives considered are reasonably expected not to jeopardize the capacity of the stock to yield sustainable biomass on a continuing basis. Much of the information on the early life history stages for many primary RP species is unknown. Northern and Dusky rockfish have limited data on life history trends, but are expected to exhibit parturition (larval release) during the spring. However, there exists more detailed life history information on POP. It is believed that fertilization of eggs occurs in the fall months, resulting in a parturition during the spring months, occurring in April-May. After parturition, not much is known about dispersal of larvae, but they are thought to be pelagic, with identification of larvae residing in offshore, surface waters of the GOA. It is expected that young of year (YOY) or juvenile POP migrate to deeper, offshore habitats until age 3 (NPFMC, 2021). It is unlikely that the impacts of fishing gear, specifically trawl gear would have impacts on the development of YOY or juvenile POP. Additionally, analyst conferred with stock authors (Pete Hulson and Ben Williams) for primary rockfish program species, and it was stated that the change in season start date is unlikely to have foreseeable impacts to the biology of the stock. Additionally, allowing fishing during April may allow for an increase in knowledge of the reproductive biology of the species that would otherwise be unknown. Alternative 2, Option 1, adjusting the start date of April 1 for the RP, is unlikely to have impacts to the process of spawning/parturition and or larval dispersal for RP species. However, NMFS will continue to conservatively manage the fishery to help ensure that the ABC is not exceeded for any of the target species. The ABC is established for the purpose of ensuring that the stock is able to sustain itself at or above its MSST.

Selection of Alternative 1, to retain the RP structure, will maintain the fishery so that the target rockfish species are harvested during May through mid-November, with most of the harvest occurring in May and

June before the start of the pink salmon fishery. Selection of Alternative 2, option 1 would amend the RP start day to April 1<sup>st</sup>. Under this option, the season would start a month earlier, as it did due to the emergency rule in the 2021 season due to the ongoing Covid-19 pandemic. It was shown in the 2021 season that, CVs utilized the flexibility of an April 1 start date with two vessels participating in the first and second week of April followed by nine vessels and 10 vessels during the third and fourth week of April (Figure 3-4). As noted in Section 2.7.3, the CP sector, since 2012, has usually started fishing in the RP in June. Only since the COVID-19 outbreaks and the unexpected loss of the flatfish markets starting in 2020 has the CP sector fished in the RP in May. In 2021, despite the emergency April 1 start date, the earliest the CP sector participated in the RP was May. It is unlikely that the timing of spawning/parturition for RP species will likely be unaffected by the CP vessels as they will likely not utilize the April 1 start date. Thus, any impacts to RP species by CP vessels given an extended fishing season will likely be negligible.

Table 3-4 demonstrates monthly CGOA POP catch from CV vessels participating in the RP from 2015-2022. POP is a fully harvested species within the RP. During 2021, Table 3-4 exhibits that the number of POP harvested in April was comparable to other months. Adjusting the start date in 2021, did not substantially alter the timing of POP harvest by month throughout the RP. The change in season opening date is unlikely to largely affect POP harvest distribution throughout the duration of the RP. Additionally, the change in season opening date allowed vessel participation during a month that is traditionally slow for CV. However, it is possible that market conditions and fishing behavior may alter from the data collected in 2021 for both CV and CP vessels. Changes in fishing behavior are expected temporally. Both alternatives are unlikely to affect the distribution of harvested stocks either spatially or temporally such that they have an effect on the ability of the stock to sustain itself, but stocks will continue to be monitored.

**Figure 3-4 Number of RP CVs by fishery and month, 2021**



Source: AKFIN, April 2022; source file - RPP\_Week\_ACT (4-12-22)

**Table 3-4 Monthly CGOA POP harvest by the trawl CV RP vessels, 2015-2022**

Month	2015			2016			2017			2018		
	OA	RP	Total									
January	1		1	3		3	2		2	0		0
February	12		12	2		2	61		61	44		44
March	20		20	5		5	558		558	119		119
April	145		145	225		225	725		725	395		395
May	155	4,012	4,167	132	6,165	6,297	262	3,554	3,815	61	5,759	5,820
June	*	2,315	*		2,980	2,980	240	2,408	2,648	257	2,730	2,987
July	3,792	2,144	5,936	5,398	4,982	10,380	4,578	3,739	8,318	4,969	3,173	8,142
August	366	3,007	3,372	205	665	871	1,311	721	2,032	1,309	1,609	2,918
September	272	494	765	891	566	1,456	891	788	1,679	987	1,094	2,081
October	78	405	482	550	*	*	1,020	950	1,970	718	859	1,577
November	29	1,402	1,431	*	*	*	*	1,817	*	*	604	*
December	*		*	*		*	*		*	*		*
<b>Total</b>	<b>4,954</b>	<b>13,778</b>	<b>18,732</b>	<b>7,541</b>	<b>15,484</b>	<b>23,025</b>	<b>9,882</b>	<b>13,976</b>	<b>23,858</b>	<b>8,909</b>	<b>15,828</b>	<b>24,737</b>

Month	2019			2020			2021			2022 thru May 26		
	OA	RP	Total	OA	RP	Total	OA	RP	Total	OA	RP	Total
January	4		4	10		10	0		0	55		55
February	342		342	34		34	31		31	71		71
March	119		119	24		24	13		13	109		109
April	377		377	274		274	12	4,301	4,313	*		*
May	193	6,671	6,864	246	7,709	7,954	*	4,767	*	*	2,423	*
June	206	2,985	3,191	263	5,590	5,854	*	5,356	*			
July	4,318	1,916	6,234	2,046	3,532	5,577	2,335	5,817	8,152			
August	1,769	1,100	2,869	842	*	*	808	375	1,184			
September	708	1,407	2,115	523	*	*	663	660	1,323			
October	654	1,252	1,906	587	1,844	2,431	463	1,033	1,496			
November	*	1,196	*		1,184	1,184	*	2,031	*			
December	*		*	0	0	0	0	0	0			
<b>Total</b>	<b>8,941</b>	<b>16,528</b>	<b>25,469</b>	<b>4,848</b>	<b>20,343</b>	<b>25,191</b>	<b>4,559</b>	<b>24,341</b>	<b>28,900</b>	<b>493</b>	<b>2,423</b>	<b>2,917</b>

Source: AKFIN. File name GOAPOP(5-26-22)

\* Denotes confidential data

OA = Open access and RP = Rockfish Program

### Aggregate Effects on Target Species

The Council is considering an amendment of an existing program that retains the objectives of conservation, management, safety, and economic gains created by the current RP. Other government actions and private actions may increase pressure on the sustainability of target and prohibited fish stocks either through extraction or changes in the habitat, but it is not clear that these would result in significant aggregate effects. Considering the direct and indirect impacts of the proposed action when added to the impacts of past and present actions previously analyzed in other documents that are incorporated by reference and the impacts of the RFFAs listed above, the aggregate impacts of the proposed action are determined to be insignificant. The effects of the RP on the target species stocks are assessed annually in the GOA SAFE report and was also evaluated in the Alaska Groundfish Fisheries Harvest Specifications EIS (NMFS 2007a).

Climate change is the only RFFA identified as likely to have an impact on primary and secondary species allocated within the action area and timeframe. Two indicators presented in the GOA 2017 Ecosystem Status Report concerned the status of GOA northern rockfish (NPFMC, 2021). The GOA SAFE noted that GOA bottom trawl survey data for several species of adult rockfish was used to compare the (catch per unit effort) CPUE along environmental gradients of depth, bottom temperature, and position. No significant trends were observed across any rockfish species, suggesting that rockfish are not responding to temperature fluctuations by adjusting depth or distribution to maintain constant temperature. Young of year (YOY) rockfish abundance was low in 2017 compared to previous years with a potentially northerly distribution shift based on the center of gravity estimates as well as some range expansion.

### 3.3 Unallocated Species and PSC Species

In prosecuting the targeted rockfish fisheries in the CGOA, participating CPs and CVs in the fisheries also catch prohibited species. With the exception of salmon, retention of prohibited species is not allowed in the GOA groundfish fisheries, including the trawl rockfish fishery.<sup>14</sup> Magnuson-Stevens Act prohibition on retention of prohibited species harvests was intended to eliminate any incentive that groundfish fishermen might otherwise have to target these species: Pacific halibut (*Hippoglossus stenolepis*), steelhead trout (*Oncorhynchus mykiss*), Pacific herring (*Clupea pallasii*), red king crab (*Paralithodes camtschaticus*), blue king crab (*P. platypus*), golden or brown king crab (*Lithodes aequispinus*), bairdi Tanner crab (*Chionoecetes bairdi*) and opilio Tanner crab (*C. opilio*). The one exception, salmon PSC, is required by regulation to be retained including the CGOA rockfish fishery. Retention of salmon in the GOA trawl groundfish fisheries is to provide a better accounting of salmon caught, to enable the collection of biological samples of salmon caught, and all salmon as caught as bycatch are dead (100 percent mortality).

#### 3.3.1 Status of Unallocated Species

All non-allocated species harvested in the CGOA rockfish fisheries will be managed by MRA, the same as under current management. These non-allocated species include arrowtooth flounder, deep-water flatfish, shallow-water flatfish, flathead sole, rex sole, pollock, other species, Atka mackerel, and other rockfish.

The information from the most recent GOA Groundfish SAFE document is included by reference (NPFMC, 2021). None of the unallocated species taken in the rockfish fishery are overfished or subject to overfishing. Other species were also taken in the CGOA rockfish fishery, but at very low levels, and catch tended to vary by year.

#### 3.3.2 Status of PSC Species

The information presented in this section focuses on halibut PSC and Chinook salmon PSC from the CGOA trawl fisheries by vessels that participate in the RP.

##### Chinook Salmon<sup>15</sup>

In the GOA, the species of concern for salmon bycatch is Chinook salmon (*Oncorhynchus tshawytscha*). North Pacific Chinook salmon are the subject of commercial, subsistence, personal use, and sport/recreational (used interchangeably) fisheries. Chinook salmon are the least abundant of the five salmon species found on both sides of the Pacific Ocean and the least numerous in the Alaska commercial

<sup>14</sup> The one exception is the Prohibited Species Donation Program.

<sup>15</sup> Overview information on Chinook salmon can be found at:  
<http://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.main#chinook>

harvest. In North America, Chinook salmon range from the Monterey Bay area of California to the Chukchi Sea area of Alaska. In Alaska, they are abundant from the southeastern panhandle to the Yukon River.

During summer, Chinook salmon concentrate around the Aleutian Islands and in the Western GOA. Chinook salmon typically have relatively small spawning populations and the largest river systems tend to have the largest populations. Major populations of Chinook salmon return to the Yukon, Kuskokwim, Nushagak, Susitna, Kenai, Copper, Alsek, Taku, and Stikine rivers with important runs also occurring in many smaller streams.

The majority of the Alaska commercial catch is made in Southeast Alaska, Bristol Bay, and the Arctic-Yukon-Kuskokwim area. The majority of catch is made with troll gear and gillnets. Approximately 90 percent of the subsistence harvest is taken in the Yukon and Kuskokwim rivers. The Chinook salmon is one of the most highly prized sport fish in Alaska and is extensively fished by anglers in the Southeast and Cook Inlet areas. Unlike other Pacific salmon species, Chinook salmon rear in inshore marine waters and are, therefore, available to commercial and sport fishers all year round.

Throughout the West Coast, nine<sup>16</sup> species of Chinook salmon are protected under the Endangered Species Act. Eight of those Chinook salmon species are listed as threatened and one as endangered. The West Coast Region of NMFS works with its partners to protect, conserve, and recover Chinook by addressing the threats these animals face and by restoring the habitat on which they depend. As reported in amendment 111, the majority of Chinook salmon bycatch occurs in the pollock fishery when pelagic trawl gear is used. Flatfish fisheries using non-pelagic gear typically taken the next greatest number of Chinook, followed by Pacific cod or rockfish directed fisheries depending on the year. Rockfish target fisheries accounted for between 2 percent and 19 percent of the Chinook salmon taken in the CGOA groundfish fisheries from 2003-2018.

The timing of Chinook salmon bycatch follows a predictable pattern in most years, corresponding primarily with seasonal openings of the pollock fishery. Chinook salmon are caught as bycatch in the rockfish fisheries throughout the time that the fisheries are open (Table 3-5).

<sup>16</sup>[https://archive.fisheries.noaa.gov/wcr/protected\\_species/salmon\\_steelhead/salmon\\_and\\_steelhead\\_listings/chinook/chinook\\_salmon.html](https://archive.fisheries.noaa.gov/wcr/protected_species/salmon_steelhead/salmon_and_steelhead_listings/chinook/chinook_salmon.html)

**Table 3-5 CV monthly Chinook salmon (count while checked into the RP) and Chinook bycatch rate (Chinook/total groundfish while checked into the RP) from 2012 through 2021**

Month	Chinook salmon (count) for CVs while checked into the RP									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
April	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	66
May	287	851	300	684	57	34	153	180	0	165
June	369	69	37	91	0	0	0	49	24	0
July	0	86	0	0	0	0	0	0	0	0
August	0	0	0	0	22	0	0	0	0	0
September	143	254	34	0	0	0	92	0	0	0
October	0	0	0	0	0	125	24	68	2	66
November	0	0	131	1,028	79	228	37	0	28	993
<b>Total Chinook salmon</b>	<b>800</b>	<b>1,261</b>	<b>503</b>	<b>1,802</b>	<b>159</b>	<b>387</b>	<b>304</b>	<b>297</b>	<b>53</b>	<b>1,290</b>

Month	Chinook bycatch rate for CVs while checked into the RP										Total monthly bycatch rate	
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
April	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.02	0.02
May	0.06	0.26	0.05	0.12	0.01	0.01	0.02	0.03	0.00	0.02	0.02	0.04
June	0.11	0.03	0.02	0.03	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.02
July	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
August	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01
September	0.10	0.19	0.05	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.06
October	0.00	0.00	0.00	0.00	0.00	0.17	0.02	0.07	0.00	0.05	0.03	0.03
November	0.00	0.00	0.24	0.57	0.13	0.09	0.02	0.00	0.02	0.31	0.16	0.16
<b>Total annual bycatch rate</b>	<b>0.06</b>	<b>0.11</b>	<b>0.04</b>	<b>0.14</b>	<b>0.01</b>	<b>0.04</b>	<b>0.02</b>	<b>0.02</b>	<b>0.00</b>	<b>0.07</b>	<b>0.05</b>	<b>0.05</b>

Source: AKFIN April 2022, Source file RPP\_MNTH\_PSC(4-18-22)

## Halibut

The range of Pacific halibut that the IPHC manages covers the continental shelf from northern California to the Aleutian Islands and throughout the Bering Sea. Pacific halibut are also found along the western north Pacific continental shelf of Russia and Japan. The depth range for halibut is up to 250 fathoms (457 m) for most of the year and up to 500 fathoms (914 m) during the winter spawning months. During the winter (November through March), the eggs are released, move up in the water column, and are caught by ocean currents. Halibut also move seasonally between shallow waters and deep waters. Mature fish move to deeper offshore areas in the fall to spawn and return to nearshore feeding areas in early summer. It is not yet clear if fish return to the same areas to spawn or feed, year after year.

The IPHC assesses the coastwide biomass of halibut, including fish that are accessible in the IPHC setline survey and to the directed halibut fisheries (generally fish over 26 inches; O26). The IPHC estimates the distribution of the coastwide stock based on survey catch rate among IPHC management areas using information from its annual setline survey. The results of the 2017 assessment indicate that the stock declined continuously from the late 1990s to around 2010 (IPHC 2018a).

In general, recruitment has decreased substantially since the highs of the 1980s.. The 2018 stock assessment provides additional detail on the potential trends in the halibut stock, uncertainties in the assessment, and additional factors that may impact the overall stock status and harvestable surplus of abundance of halibut (IPHC 2018c).

During the periods of high removal, the majority of the mortality on the halibut stock has been due to commercial catch. In 2017, the two top sources of removals in Area 4 are where commercial harvests (including discard mortality in the commercial fishery, i.e., “wastage”) comprised 65 percent of the removals, and commercial groundfish fishery bycatch (referred to as prohibited species catch, or PSC, in fisheries).

Since 2014, there is no information to suggest that halibut is subject to “overfishing,” as that term is commonly applied to stocks managed under the Magnuson-Stevens Act. The Halibut Act does not define “overfishing” or require that an overfishing limit be defined. However, the halibut stock is currently managed in a manner that is not likely to result in a chronic long-term decline in the halibut resource coastwide due to fishing mortality from all sources of removals.

The rockfish fishery generally accounts for between 2 percent and 16 percent of the halibut bycatch of these vessels in the GOA, reported in Amendment 111 from the 2003-2018. Flatfish and Pacific cod target fisheries generally have more halibut bycatch. The decline in the Pacific cod TAC in recent years has played a role in the halibut bycatch in the CGOA rockfish fishery surpassing the CGOA Pacific cod fishery. Halibut mortality declined after implementation of the RPP and has remained relatively low. Table 3-6 shows the average halibut PSC by RP vessels by month and target fishery. The information is reported by from 2012-2021.

The drastic reduction in halibut mortality (particularly in the CV sector) since the implementation of the RP likely arises from several factors. First, vessels have exclusive allocations, allowing them to move from areas of high halibut catch without risking loss of catch of the rockfish primary species. Second, exclusive allocations also increase the incentive for participants to communicate with each other concerning catch rates, improving information concerning areas of high halibut incidental catch in the fleet, and preventing repeated high halibut mortality among vessels exploring fishing grounds. Third, several vessels have begun employing new pelagic gear that limits bottom contact and halibut incidental catch. In the catcher processor sector, two of the four active vessels used pelagic gear in the first year of the program, in comparison to no pelagic trawl gear prior to implementation of the program. Catch data by gear type cannot be revealed for the catch processor sector because of confidentiality protections. Participants in the program report that a primary motivation for these changes in gear types is constraining halibut allocations, which could jeopardize cooperative catches in the event that halibut bycatch exceeds allocations (NPFMC, 2011).

**Table 3-6 CV monthly halibut PSC (while checked into the RP) and halibut PSC rate (kilograms of PSC per ton of groundfish while checked into the RP) from 2012 through 2021**

Halibut PSC (mt) for CVs while checked into the RP										
Month	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
April	n/a	1								
May	8	10	17	19	17	11	5	4	15	2
June	4	2	8	6	9	4	5	4	0	4
July	1	2	0	1	2	1	0	0	0	0
August	0	0	12	1	1	0	1	0	0	0
September	31	3	0	2	1	3	1	0	1	3
October	0	4	0	2	0	1	10	2	24	5
November	17	8	1	7	2	13	32	5	5	44
<b>Total annual PSC</b>	<b>61</b>	<b>29</b>	<b>39</b>	<b>38</b>	<b>33</b>	<b>32</b>	<b>54</b>	<b>16</b>	<b>45</b>	<b>59</b>

Halibut PSC rate (kg of PSC/per ton of groundfish) for CVs while checked into the RP											Total monthly PSC rate
Month	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
April	n/a	0.37									
May	1.57	2.96	2.61	3.19	2.06	2.53	0.71	0.52	1.77	0.33	1.71
June	1.21	0.86	3.61	1.80	1.95	2.03	1.57	1.18	0.22	1.30	1.60
July	0.40	1.21	0.25	1.70	5.59	1.44	2.30	0.51	0.13	0.00	0.99
August	0.94	0.67	6.41	5.10	3.46	n/a	5.62	1.88	16.63	n/a	5.12
September	22.05	2.37	0.49	5.47	1.93	4.58	1.00	0.70	2.02	4.66	5.67
October	2.77	4.57	0.32	2.44	4.98	1.47	9.93	2.29	11.10	3.52	5.84
November	28.78	6.08	1.18	4.04	3.97	4.99	21.44	3.60	2.68	14.00	8.80
<b>Total annual PSC rate</b>	<b>4.94</b>	<b>2.64</b>	<b>2.99</b>	<b>2.93</b>	<b>2.24</b>	<b>3.02</b>	<b>3.86</b>	<b>1.14</b>	<b>2.97</b>	<b>3.23</b>	<b>2.98</b>

Source: AKFIN April 2022, Source file RPP\_MNTH\_PSC(4-18-22)

### 3.3.3 Effects of the Alternatives on PSC Species

There would be no predicted change to adverse impacts on halibut and chinook salmon under alternative 2, as both are taken as incidental catch in the CGOA rockfish fishery. It is not likely that any changes in alternative 2 options 1, 2, 3, 4 with adjustments to the RP start date, cooperative holding caps, harvesting caps, or processor caps would result in significant changes to the current levels of bycatch of salmon or halibut as PSC limits are not proposed to change in alternative 2. The overall levels of Chinook salmon bycatch in the GOA groundfish trawl fisheries vary considerably from year to year.<sup>17</sup>

Table 3-5 exhibits the total amount of bycatch of chinook salmon by CVs annually from the months of April-November. In the 2021 season, it was shown that the number of bycatch occurring in April (66 salmon) was low in comparison to November (993 salmon), when a majority of bycatch occurs in the RP exhibited annually. The number of bycatch occurring in April is small compared to other monthly sources. It is not likely that under Alternative 2, Option 1, resulting in a longer fishing season, will have a large impact on the total amount of chinook bycatch occurring while CVs are checked into the RP. The RP maintains high observer coverage, which has reduced uncertainty in the estimates of Chinook salmon bycatch in the rockfish fisheries. The CV cooperatives collectively gather a census of chinook salmon caught in the rockfish fisheries for 2013-2020 as shown in Table 3-7. Table 3-7 further emphasizes that a small proportion of total chinook bycatch occurs within the GOA. Bycatch of Chinook salmon under the continuation of the program is not expected to reach a significant threshold that is likely to affect the sustainability of the species but will continue to be monitored.

<sup>17</sup> <https://www.fisheries.noaa.gov/action/amendment-88-fmp-groundfish-gulf-alaska-management-area>

**Table 3-7** Rockfish Genetics results, 2013-2020

<b>Area</b>	<b>2013 Rockfish</b>	<b>2014 Rockfish</b>	<b>2015 Rockfish</b>	<b>2016 Rockfish</b>	<b>2017 Rockfish</b>	<b>2018 Rockfish</b>	<b>2019 Rockfish</b>	<b>2020 Rockfish</b>
<b>No. Samples</b>	<b>2,070</b>	<b>398</b>	<b>635</b>	<b>493</b>	<b>280</b>	<b>499</b>	<b>686</b>	<b>1,106</b>
Russia	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Coast W AK	0.0%	0.3%	0.1%	0.5%	0.1%	0.3%	0.3%	0.1%
Mid Yukon	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Up Yukon	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
N AK Pen	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%
NW GOA	2.2%	3.2%	2.7%	3.7%	2.7%	5.0%	4.2%	2.0%
Copper	0.3%	0.1%	0.8%	0.3%	2.4%	3.3%	2.0%	3.0%
NE GOA	0.0%	0.1%	0.0%	0.3%	0.0%	0.1%	0.1%	0.1%
Coast SE AK	6.4%	7.1%	4.8%	6.9%	10.9%	10.7%	2.2%	4.1%
BC	31.3%	17.4%	18.9%	26.8%	28.1%	28.0%	22.1%	18.3%
West Coast US	59.9%	71.7%	72.8%	61.5%	55.6%	52.5%	69.2%	72.4%
SE, BC, WC comb.	97.6%	96.2%	96.5%	95.1%	94.7%	91.1%	93.4%	94.8%
<b>Total</b>	<b>100.1%</b>	<b>100.0%</b>						

Prior to implementation of the RP, if the halibut mortality limit was reached prior to catch of the rockfish TAC, the rockfish fisheries were closed for the season and reopened when the next apportionment came available in September. Since implementation of the RP, cooperatives receive exclusive allocations of halibut PSC from the third quarter deep-water apportionment that constrain their fishing activity. Participants in the limited access fishery (who elected not to join a cooperative) are subject to the same limitation as participants in the rockfish fisheries prior to the RPP. In other words, if the third season halibut PSC apportionment is fully used prior to harvest of the applicable limited access rockfish TAC, that fishery will be closed until the next season's apportionment comes available in September.

The incentive for halibut mortality reductions is increased by the rollover of saved halibut mortality to other fisheries late in the year, allowing the trawl sector as a whole to benefit from these halibut mortality reductions. (NPFMC, 2011). Halibut PSC rates (Table 3-6) for CVs indicate that a small percentage of halibut PSC is incurred during the month of April for those CV's participating in the RP. A majority of

halibut PSC is incurred during the fall (September-November), which will continue to exist under Alternative 1, status quo. Additionally, in 2021, under the emergency rule for the RP to operate with an extended fishing season (April-November), total PSC rates for halibut remained constant with other years, further exhibiting that alternative 2, option 1 would likely have no effect on overall halibut PSC rates.

### **Aggregate Effects on PSC Species**

The following RFFAs are identified as likely to have an impact on Chinook salmon and halibut within the current RP:

- RP trawl CVs are limited to 1,200 Chinook salmon each year while checked into the RP. If the RP trawl CVs reach the Chinook salmon limit, directed fishing by all CVs in the RP will be prohibited for the remainder of the year.
- Trawl CP vessels fishing in the Gulf of Alaska are subject to a limit of 3,600 Chinook salmon in the Western and Central Gulf of Alaska, or 4,080 Chinook salmon if the previous year's catch of Chinook salmon did not exceed 3,120 fish. If the RP trawl CPs reach the Chinook salmon limit, directed fishing by all CPs will be prohibited for the remainder of the year.
- Halibut PSC in the RP is limited to 117.3 mt for the CV sector and 74.1 mt for the CP sector. The limit is reached directed fishing in the RP by the sector will be prohibited.

The extent to which any salmon stock is impacted by the bycatch of the GOA trawl fisheries is dependent on many factors including 1) the overall size of the bycatch, 2) the age of the salmon caught in the bycatch, 3) the age of the returning salmon, and 4) the total escapement of the affected stocks taking into account lag time for maturity and returning to the river. As such, a higher contribution of a particular stock one year does not necessarily imply greater impact than a smaller estimate the next (Guthrie III, et al., 2018).

Since the RP was implemented in 2012, PSC rates have declined for both Chinook (Table 3-5) and Halibut (Table 3-6). It is not anticipated that selecting alternative 2 will result in any changes in either the chinook or halibut mortality in the CGOA rockfish target. Considering the direct and indirect impacts of the proposed action when added to the impacts of past and present actions previously analyzed in other documents that are incorporated by reference and the impacts of the reasonably foreseeable future actions listed above, the aggregate impacts of the proposed action are determined to be not significant.

## **3.4 Essential Fish Habitat**

### **3.4.1 Status**

Fishing operations may change the abundance or availability of certain habitat features used by managed fish species to spawn, breed, feed, and grow to maturity. These changes may reduce or alter the abundance, distribution, or productivity of species. The effects of fishing on habitat depend on the intensity of fishing, the distribution of fishing with different gears across habitats, and the sensitivity and recovery rates of specific habitat features.

In 2005, NMFS and the Council completed the EIS for EFH Identification and Conservation in Alaska (NMFS 2005b). The EFH EIS evaluates the long-term effects of fishing on benthic habitat features, as well as the likely consequences of those habitat changes for each managed stock, based on the best available scientific information. The EFH EIS also describes the importance of benthic habitat to different groundfish species and the past and present effects of different types of fishing gear on EFH. Based on the best available scientific information, the EIS analysis concludes that despite persistent disturbance to certain habitats, the effects on EFH are minimal because the analysis finds no indication that continued fishing activities at the current rate and intensity would alter the capacity of EFH to support healthy

populations of managed species over the long term. The EIS concludes that no Council-managed fishing activities have more than minimal and temporary adverse effects on EFH for any FMP species, which is the regulatory standard requiring action to minimize adverse effects under the Magnuson-Stevens Act (50 CFR 600.815(a)(2)(ii)). Additionally, the analysis indicates that all fishing activities combined have minimal, but not necessarily temporary, effects on EFH.

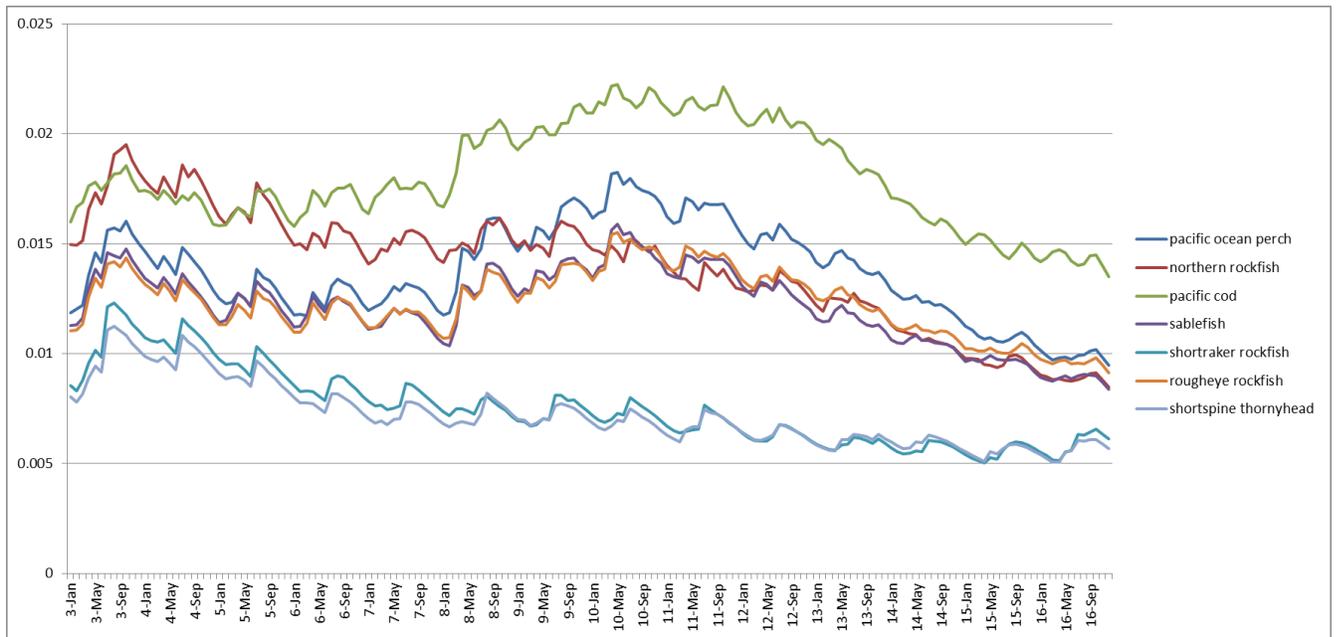
The Council and NMFS have updated available habitat information, and their understanding of the impacts of fishing on habitat, in periodic 5-year reviews of the EFH components in the Council fishery management plans (NPFMC and NMFS 2010) and (NPFMC and NMFS 2016). These 5-year reviews have not indicated findings different from those in the 2005 EFH EIS with respect to fishing effects on habitat, although new and more recent information has led to the refinement of EFH for a subset of Council-managed species. Maps and descriptions of EFH for groundfish species are available in the applicable fishery management plan.

A goal of the RP was to reduce trawl gear impacts on the sea floor and the organisms that live there. This section was prepared by NMFS Habitat Division staff to describe those impacts. For the 2017 Essential Fish Habitat 5-year Review, a Fishing Effects (FE) model was developed by the NMFS Alaska Region Office – HCD and partners at Alaska Pacific University to estimate the effects of commercial fishing activities on marine habitats. The FE model is a cumulative effects model that incorporates habitat impacts and recovery at a monthly time step utilizing Vessel Monitoring System (VMS) data. As seen in Amendment 111, there is very little difference in the cumulative duration of hauls, average tons of catch or total tons of catch for both catcher vessels and catcher/processor vessels over the time series from 2003-2018.

Under the Rockfish Program, participants have the freedom to target species individually. However, there exists two relevant gear configurations that have led to less bottom contact since 2003. First, a move towards semi-pelagic bottom trawl gear (doors off bottom) since about 2008 decreased the bottom contact from the heaviest portion of the gear. In 2014, mandatory sweep modifications for flatfish trawls were implemented that raise the majority of the trawl off the bottom have been used in other fisheries as well, as sweeps are difficult to replace for specific other target trips.

As seen in the most recent 2017 EFH 5-year review, The FE model assumed no bottom contact for GOA slope rockfish pelagic trawl. However, trends in decreasing habitat reduction are likely to continue given fishing practices. Figure 3-5 illustrates that over time, the percentage habitat reduction for each target species' Essential Fish Habitat area of concentration has declined (since 2003). While the FE model has not been re-run for individual species since 2017, the total number of fishing events for both CV and CP has remained relatively constant.

**Figure 3-5 Core EFH habitat reduction by GOA RPP trawl target species, 2003 - 2016**



Source: Fishing Effects Model

### 3.4.2 Effects of the Alternatives on EFH

Under the RP, fishing activity continues to be distributed over a longer season and may disperse spatially, as a result of the removal of time constraints by the cooperative allocations. Alternative 2 would allow for an extended fishing season allowing for increased distribution over a longer season and for impacts to be dispersed temporally across a larger time scale. The relative low effort level of the rockfish fisheries along slope areas is likely to continue. Concentrations of bottom trawl effort in the CGOA rockfish fisheries would likely be reduced as trawl vessels continue to move towards pelagic and semi-pelagic trawls to reduce halibut bycatch. The need for CVs to keep short trip lengths to maintain quality is likely to result in some continued concentration in areas proximate to Kodiak harbor. Overall, the rockfish fisheries are likely to continue to have minimal and temporary effects on the essential fish habitat. No long-term negative impacts to essential fish habitat are likely under the program alternatives.

Considering the direct and indirect impacts of the proposed action when added to the impacts of past and present actions previously analyzed in other documents that are incorporated by reference and the impacts of the reasonably foreseeable future actions listed above, the aggregate impacts of the proposed action are determined to be not significant.

## 4 Magnuson-Stevens Act and FMP Considerations

### 4.1 Magnuson-Stevens Act National Standards

Below are the 10 National Standards as contained in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), and a brief discussion of how each alternative is consistent with the National Standards, where applicable. In recommending a preferred alternative, the Council must consider how to balance the national standards.

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

Nothing in the proposed action alternative (Alternative 2) would undermine the current management system designed to prevent overfishing. While the TACs for the RP fisheries have typically been generally harvested (see Section 2.7.1), the Council’s proposed action may allow scenarios where these TACs may be harvested more fully.

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

Catch and bycatch limits for species allocated under the RP will continue to be set using the information derived from the stock assessment process. This is the best scientific information available. Inseason management staff will continue to utilize the catch accounting system and observer data to ensure that the catch limits are not exceeded. These take a census of all groundfish catch and monitor bycatch through scientifically reviewed sampling procedures.

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

The rockfish, Pacific cod, sablefish, and PSC species allocated under this action will continued to be managed as single stocks throughout their range. This action may change the amount of each species that may be harvested, but not above the TAC.

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

This action will continue to allocate CQ to US citizens or permanent residences based on legal landings of allocated species during the qualifying period. No elements or options considered in this action would discriminate between residents of different states. The proposed alternative will maintain and enforce harvesting, processing, and use caps to ensure that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

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

The RP established CQ allocations that allow stakeholders and groups of stakeholders to more efficiently utilize the CGOA resource relative to the limited access management that would go into place with no

action. Efficiency is enhanced by allowing CQ holders to scale effort spatially and temporally to reduce costs and increase value. The program also allows participants to reduce bycatch and waste in the fishery.

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

Under the proposed RP alternative, changes in the availability of the rockfish fisheries resources each year would be addressed through changes in annual allocations. These changes in allocations will be used to ensure conservation of the resource in the future.

The RP takes into account the unique nature of the CGOA rockfish fishery in terms of its timing during the fishing year and value to the community of Kodiak. The proposed alternative allows the fishery to be prosecuted during a longer period of time and avoid conflicts with the salmon fisheries that take place during July.

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

This action does not increase administrative burden of the RP applications or complicate the annual specifications publication and implementation process compared to the status quo. Therefore, the measure would minimize cost and avoid unnecessary duplication for RP participants.

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

The proposed alternative would not change any of the community protection measures built into the RP. The proposed alternative would change the start date for the RP to April 1 and revise a few excessive share limits for the CV sector. The April 1 start date for the RP and the revision to the excessive limits is likely to have continued beneficial impacts on fishing communities. As a result of the RP, it is generally understood that RP-dependent communities have enjoyed increased efficiency. Quality of rockfish landings and products has improved as participants in both harvesting and processing sectors have maximized production of harvest quota shares. Patterns of community participation in the CGOA rockfish fisheries are unlikely to change with implementation of the proposed alternative. Kodiak has historically been home to processors that have processed almost all of the CGOA rockfish landings and under the proposed alternative, the RP Kodiak landings requirement would be maintained. In addition, revising the processor limit from 30 percent to between 35 percent and 40 percent and revising the CV harvesting cap to only limit POP to 8 percent will help provide continued predictability and stability in employment, income, and economic opportunities as well as in tax revenues accruing to the community due to increased flexibility to harvest and process a greater amount of CV quota shares.

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

This action is not expected to have any substantial influence on bycatch levels or rates in the RP fisheries because the proposed alternative is not expected to change how the fishery is prosecuted relative to the current condition. Halibut discards are expected to remain lower than was realized prior to implementation of the RPP. Salmon bycatch is expected to continue to be variable by year depending on the conditions in the fishery. Bycatch in the CGOA is described in detail in Section 0.

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

Section 2.7.10 describes the expected impacts on safety at sea that may result from the Council's proposed alternative, as the proposed action allows increase operational flexibility to go fishing when crew are rested, and the weather is better. One potential reason for the good record of safety of human life at sea could include the extended fishing season that would reduce any race to fish and allow crews to choose when to operate. As always, increased flexibility should be paired with rational judgement about risks.

## **4.2 Section 303(a)(9) Fisheries Impact Statement**

Section 303(a)(9) of the Magnuson-Stevens Act requires that a fishery impact statement be prepared for each FMP or FMP amendment. A fishery impact statement is required to assess, specify, and analyze the likely effects, if any, including the cumulative conservation, economic, and social impacts, of the conservation and management measures on, and possible mitigation measures for (a) participants in the fisheries and fishing communities affected by the plan amendment; (b) participants in the fisheries conducted in adjacent areas under the authority of another Council; and (c) the safety of human life at sea, including whether and to what extent such measures may affect the safety of participants in the fishery.

The RIR prepared for this plan amendment constitutes the fishery impact statement. The likely effects of the proposed action are analyzed and described throughout the RIR. The effects on participants in the fisheries and fishing communities are analyzed in the RIR chapter of the analysis (Chapters 2.6). The effects of the proposed action on safety of human life at sea are evaluated in Section 2.5.11, and above under National Standard 10, in Section 3.1. Based on the information reported in this section, there is no need to update the Fishery Impact Statement included in the FMP.

The proposed action affects the groundfish fisheries in the EEZ off Alaska, which are under the jurisdiction of the North Pacific Fishery Management Council. Impacts on participants in fisheries conducted in adjacent areas under the jurisdiction of other Councils are not anticipated as a result of this action.

## **4.3 Council's Ecosystem Vision Statement**

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

### **Ecosystem Approach for the North Pacific Fishery Management Council**

#### *Value Statement*

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

#### *Vision Statement*

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

### ***Implementation Strategy***

The Council intends that fishery management explicitly take into account environmental variability and uncertainty, changes and trends in climate and oceanographic conditions, fluctuations in productivity for managed species and associated ecosystem components, such as habitats and non-managed species, and relationships between marine species. Implementation will be responsive to changes in the ecosystem and our understanding of those dynamics, incorporate the best available science (including local and traditional knowledge), and engage scientists, managers, and the public.

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

In considering this action, the Council is being consistent with its ecosystem approach policy. This action would maintain the tools available to foster responsible fishing activities, especially species harvested in the CGOA rockfish trawl fishery. This is directly supportive of the Council's intention to provide best tools that create incentives for the CGOA rockfish trawl vessel operators to fish in a manner that reduces bycatch, retains target species, and reduces habitat impacts associated ecosystem components.

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