

PRELIMINARY REVIEW DRAFT

Regulatory Impact Review / Initial Regulatory Flexibility Analysis for a Proposed Fishery Management Plan and Regulatory Amendment to

Allow the Reapportionment of Chinook Salmon PSC between the Pollock and Non-Pollock Gulf of Alaska Trawl Fisheries

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National Oceanic and Atmospheric Administration

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Abstract: This preliminary draft of a Regulatory Impact Review/Initial Regulatory Flexibility Analysis analyzes proposed management measures that would allow inseason reapportionments of the Chinook salmon PSC limits designated for use in either the GOA pollock or non-pollock trawl fisheries for use in the other fishery. This action could provide greater flexibility to reapportion the overall GOA trawl Chinook salmon PSC limit during years of high or unusual Chinook salmon PSC without revisiting the limits that are currently set in regulation. For example, Chinook salmon could be made available for use by the non-pollock/non-Rockfish Program catcher vessel sector after NMFS has determined that the pollock fishery's PSC limit exceeds the projected amount necessary to harvest the remaining pollock TAC. This program also allows the inseason reapportionment of Chinook salmon PSC from the non-pollock to the pollock fishery, when excess Chinook salmon PSC is available. Reapportioning Chinook salmon PSC could benefit GOA trawl communities, vessel operators, crew members, processors, and support industries that are dependent on those fisheries, without modifying the overall PSC limits that were established to protect the resource.

List of Acronyms and Abbreviations

'	feet
AAC	Alaska Administrative Code
ABC	acceptable biological catch
ADF&G	Alaska Department of Fish and Game
AEQ	adult equivalent
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
AGDB	Alaska Groundfish Data Bank
AKFIN	Alaska Fisheries Information Network
ANILCA	Alaska National Interest Lands Conservation Act
BASIS	Bering Sea-Aleutian Salmon International Survey
BEG	biological escapement goal
BOF	Board of Fish
BSAI	Bering Sea and Aleutian Islands
CAS	Catch Accounting System
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COAR	Commercial Operators Annual Report
Council	North Pacific Fishery Management Council
CP or C/P	catcher/processor
CV	catcher vessel
E	East
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
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
GHL	guideline harvest level
GOA	Gulf of Alaska
ID	Identification
IRFA	Initial Regulatory Flexibility Analysis
JAM	jeopardy or adverse modification
LAPP	limited access privilege program
lb.(s)	pound(s)
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
MMPA	Marine Mammal Protection 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 Oceanographic and Atmospheric Administration
NPAFC	North Pacific Anadromous Fish Commission
NPFMC	North Pacific Fishery Management Council
NPPSD	North Pacific Pelagic Seabird Database
Observer Program	North Pacific Groundfish Observer Program
OEG	optimal escapement goal
OMB	Office of Management and Budget
PBR	potential biological removal
PSC	prohibited species catch
PPA	Preliminary preferred alternative
PRA	Paperwork Reduction Act
PSEIS	Programmatic Supplemental Environmental Impact Statement
PWS	Prince William Sound
RFA	Regulatory Flexibility Act
RFFA	reasonably foreseeable future action
RIR	Regulatory Impact Review
RPA	reasonable and prudent alternative
SAFE	Stock Assessment and Fishery Evaluation
SAR	stock assessment report
SBA	Small Business Act
Secretary	Secretary of Commerce
SRKW	Southern Resident killer whales
SSFP	Sustainable Salmon Fisheries Policy
SW	southwest
TAC	total allowable catch
U.S.	United States
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
VMS	vessel monitoring system
W	West

Table of Contents

EXECUTIVE SUMMARY	5
1 INTRODUCTION	11
1.1 History of this Action	12
1.2 Purpose and Need	14
1.3 Description of Action Area	14
2 DESCRIPTION OF ALTERNATIVES	16
2.1 Alternative 1 (No Action)	16
2.2 Alternative 2	17
2.3 Comparison of Alternatives	18
3 REGULATORY IMPACT REVIEW	21
3.1 Statutory Authority	21
3.2 Purpose and Need for Action	22
3.3 Alternatives	22
3.4 Methodology for Analysis of Impacts	23
3.5 Background	24
3.5.1 Chinook PSC	24
3.5.1.1 Biological Opinion on GOA Chinook Salmon PSC	24
3.5.1.2 Chinook PSC Monitoring and Estimation Procedures	25
3.5.1.3 Chinook PSC Levels	28
3.5.1.4 NMFS Inseason Reapportionment Process	36
3.5.1.5 2015 Emergency Rule	38
3.5.1.6 Future Use of Emergency Rules	40
3.5.2 GOA Groundfish Fleet and Harvest	40
3.5.2.1 Active Vessels and Participation	40
3.5.2.2 Groundfish Harvest	43
3.5.3 Primary GOA Trawl Groundfish Communities	47
3.6 Impacts of Alternative 1 – No Action	48
3.7 Impacts of Alternative 2 – Allow Inseason Reapportionment	50
3.8 Summation of the Alternatives with Respect to Net Benefit to the Nation	58
4 INITIAL REGULATORY FLEXIBILITY ANALYSIS	59
4.1 Introduction	59
4.2 IRFA Requirements	59
4.3 Definition of a Small Entity	60
4.4 Reason for Considering the Proposed Action	62
4.5 Objectives of Proposed Action and its Legal Basis	63
4.6 Number and Description of Directly Regulated Small Entities	63
4.7 Recordkeeping and Reporting Requirements	64
4.8 Federal Rules that may Duplicate, Overlap, or Conflict with Proposed Action	64
4.9 Description of Significant Alternatives to the Proposed Action that Minimize Economic Impacts on Small Entities	64
5 MAGNUSON-STEVENS ACT AND FMP CONSIDERATIONS	65
5.1 Magnuson-Stevens Act National Standards	65
5.2 Section 303(a)(9) Fisheries Impact Statement	67
5.3 Executive Order 12866	67
6 PREPARERS AND PERSONS CONSULTED	68
7 REFERENCES	69

List of Tables

Table 1	Status quo GOA trawl Chinook salmon PSC limits	17
Table 2	Summary of alternatives and major impacts	19
Table 3	Chinook salmon PSC in the non-pollock Non-Rockfish Program, by sector, area, month, and year (2010 through August 2015)	29
Table 4	Cumulative percentage of sector's GOA non-pollock/non-Rockfish Program Chinook salmon PSC, by month and year	30
Table 5	Cumulative percentage of the sector's current annual GOA non-pollock Non-Rockfish Program PSC limit, by month and year	31
Table 6	Chinook PSC in the directed pollock fisheries by area, month, and year (2010 through August 2015)	32
Table 7	Cumulative percentage of sector's GOA pollock fishery Chinook salmon PSC, by month and year	33
Table 8	Cumulative percentage of the sector's current annual GOA pollock fishery Chinook Salmon PSC limit, by month and year	34
Table 9	Chinook salmon PSC in the Rockfish Program by area, month, and year (2010 through August 2015)	35
Table 10	Cumulative percentage of Rockfish Program Chinook salmon PSC, by month and year	35
Table 11	Cumulative percentage of the current annual Rockfish Program Chinook Salmon PSC limit (1,200 Chinook salmon), by month and year	36
Table 12	CV and CP participation across target fisheries and seasons, 2014	41
Table 13	Active GOA trawl vessels by year, designation, area, and fishery	42
Table 14	Number of GOA trawl vessels targeting pollock, 2004 through 2014	42
Table 15	Number of GOA trawl CVs targeting Pacific cod, 2004 through 2014	43
Table 16	All gear types ABC, TAC, and catch for GOA pollock, Pacific cod, and flatfish fisheries, 2012 through 2014	44
Table 17	GOA trawl CV catch by species, 2013 and 2014	45
Table 18	Average percent of GOA CV fishery ex-vessel gross value generated by month and fishery, 2008 through 2014 (excludes Rockfish Program value)	46
Table 19	Running total percent of GOA CV fishery ex-vessel gross value generated by month and fishery, 2008 through 2014 (excludes Rockfish Program value)	46
Table 20	Percentage of CVs gross GOA ex-vessel revenue by fishery, area, month, and annually from 2008 through 2014	47
Table 21	Reapportionment limits of 10%, 20%, or 30% of the Inshore pollock fishery Chinook salmon PSC limit	56
Table 22	Reapportionment limits of 10%, 20%, or 30% of the non-pollock Non-Rockfish Program CV Sector Chinook salmon PSC limit	56

List of Figures

Figure 1	Regulatory and reporting areas in the Gulf of Alaska management area	15
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Executive Summary

This document is a preliminary Regulatory Impact Review/Initial Regulatory Flexibility Analysis (RIR/IRFA). Section 1 provides an introduction to the issue. Section 2 is a description of the alternatives and options the Council is considering. Section 3 of the RIR examines potential economic impacts on stakeholders in the Central and Western Gulf of Alaska (GOA) trawl fisheries and stakeholders in the Chinook salmon fisheries. The IRFA is included in Section 4. An RIR/IRFA 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.

Purpose and Need

The Council adopted the following purpose and need statement at its June 2015 meeting:

Regulations establish a Chinook salmon prohibited species catch (PSC) limits of 32,500 Chinook in the Central and Western Gulf of Alaska (GOA) trawl fisheries. Chinook salmon PSC limits are managed under two separate programs; one that allocates 25,000 Chinook to the catcher vessels in the pollock trawl fishery (Amendment 93 to the GOA FMP), and another that allocates 7,500 Chinook to three sectors in the non-pollock trawl fisheries: the catcher/processor (3,600), Rockfish Program catcher vessel (1,200), and the non-Rockfish Program catcher vessel (2,700) sectors (Amendment 97 to the GOA FMP). Closures could occur under the existing Chinook salmon PSC limits.

The 2,700 Chinook salmon PSC limit on the non-pollock/non-rockfish catcher vessel sector has resulted in a closure in that fishery. Currently, there is no ability for managers to reallocate unused Chinook salmon PSC between the pollock or non-pollock fisheries. Fishery closures could be avoided, or limited, by providing NMFS the authority to use inseason management to reallocate unused Chinook salmon PSC between the GOA pollock and non-pollock fisheries would provide increased management flexibility without exceeding the overall 32,500 Chinook salmon PSC limit, increase the likelihood that groundfish resources are more fully harvested, and minimize the adverse socioeconomic impacts of the fishery closures on harvesters, processors, and communities.

Alternatives

The Council established these alternatives and options for analysis at its June 2015 meeting. If the Council selects Alternative 2 it can modify the main Alternative with one or a combination of the options.

Alternative 1. No action alternative (status quo)

Alternative 2. Allow NMFS to reallocate unused Chinook salmon PSC between the GOA pollock and non-pollock sectors based on criteria established for inseason reallocations (examples in regulations at §679.20). Existing reallocation procedures from the Rockfish Program catcher vessel to the non-Rockfish Program catcher vessel sector would not be modified.

- Option 1.** Only allow reallocations between the GOA pollock and the non-Rockfish Program catcher vessel sectors (no reallocation to Rockfish Program catcher vessels).
- Option 2.** Only allow reallocations that do not exceed (**Suboptions:** 10%, 20%, or 30%) of any initial allocation of a Chinook salmon PSC limit during a calendar year.
- Option 3.** Prohibit the reallocation of Chinook salmon PSC from catcher vessel sectors to the non-pollock catcher/processor sector.

Environmental Assessment

This action would not affect the human environment beyond what was examined in the Environmental Assessment (EA) prepared for the analysis of GOA Groundfish Amendments 93 and 97.¹ As a result, the analysts have preliminarily determined that this action could qualify for a Categorical Exclusion from further review under the National Environmental Policy Act (NEPA). When a Categorical Exclusion is granted, the preparation of an EA is not required.

Regulatory Impact Review

This proposed action will directly regulate the approximately 69 catcher vessels and 4 catcher/processors that use trawl gear to harvest groundfish from the Federal and parallel fisheries in the Gulf of Alaska in the non-Rockfish Program Sectors. The purpose of the proposed action is to provide the Regional Administrator of NOAA Fisheries with the authority to reapportion Chinook salmon PSC limits that were established under Amendment 93 (catcher vessel and catcher/processor Chinook salmon apportionments in the non-pollock non-Rockfish Program) and Amendment 97 (Western and Central GOA inshore pollock fishery Chinook salmon PSC apportionments) of Gulf of Alaska Groundfish Fishery Management Plan. This action will not change the overall Chinook salmon PSC limit of 32,500 Chinook salmon established for the Western and Central management areas of the GOA.

The authority to reapportion the existing Chinook salmon trawl PSC limits is expected to provide the Regional Administrator greater flexibility to address trawl groundfish closures that result from reaching a Chinook salmon PSC limit. Currently the Regional Administrator only has the authority to reapportion Chinook salmon PSC from the Rockfish Program catcher vessels to the non-pollock fishery catcher vessels on October 1 or November 15 of each year. During 2015, a variety of factors resulted in the non-pollock/non-Rockfish Program CV sector reaching its Chinook salmon PSC limit in On May 3, 2015. All groundfish fisheries for the Non-Rockfish Program/non-pollock CV Sector were then closed for the remainder of 2015. The North Pacific Fishery Management Council requested that NOAA Fisheries implement an emergency rule to provide an additional 1,600 Chinook salmon PSC allowance because the early closure of the Non-Rockfish Program CV Sector's groundfish fisheries was causing significant economic detriment to harvesters, processors and the community of Kodiak. The emergency rule was effective August 10, 2015 and remained in place until December 31, 2015, or until the new PSC limit of 1,600 Chinook salmon is reached by the Non-Rockfish Program CV Sector. Because the potential for

¹ The final rule for GOA Groundfish FMP Amendment 93 was published in the Federal Register on July 20, 2012 (77 FR 42629). The final rule for GOA Groundfish FMP Amendment 97 was published in the Federal Register on December 2, 2014(79 FR 71350). Amended regulations were implemented in 2012 and 2015, respectively.

closures in the non-pollock/non-Rockfish Program sectors would not be unanticipated in the future, the use of an Emergency Rule to increase the amount of PSC available to the non-Rockfish Program/non-Pollock catcher vessel sector will not be an option.

Approximately 275 additional Chinook salmon are projected to be reapportioned to the non-pollock/Non-Rockfish Program CV sector from the Rockfish Program CV apportionment on October 1. These fish will be in addition to the 1,600 salmon apportioned under the Emergency Rule.

The Emergency Rule estimated that the early trawl groundfish closure in the non-pollock/non-Rockfish Program fisheries would have resulted in the lost revenue from this forgone harvest is estimated to be approximately \$4.6 million in ex-vessel value and \$11.3 million in first wholesale value. Harvesters and crew members that fish on trawl vessels operating the Central GOA, Kodiak shoreside processors, and the community of Kodiak were disproportionately affected by this closure because after May, GOA groundfish harvested by the Non-Rockfish CV Sector is almost exclusively delivered to shoreside processors operating in Kodiak.

It is anticipated that the fleet will learn from conditions that existed during the early 2015 fishing year that resulted in the Chinook salmon PSC limit being taken. These conditions include the magnitude of Chinook salmon use by the sector in the Western GOA when compared with the average use of Chinook salmon by the sector, the impact of the restructured observer program on estimated Chinook salmon catch, and the importance of implementing measures to avoid PSC to the extent practicable.

This action will not create conservation issues with regard to Chinook salmon. The Council and NMFS' goal is to avoid exceeding Chinook salmon PSC use of 40,000 Chinook salmon in the GOA trawl groundfish fisheries and to minimize bycatch of Chinook salmon to the extent practicable.

A summary of the alternatives, options, and the major impacts of those program elements are presented in Table ES-1. The information presented assumes that magnitude of forgone revenue could again approach the amount estimated in the Emergency Rule, but the members of the fleet may adjust their behavior and reduce the likelihood of closures of this magnitude on an annual basis. The ability to reapportion Chinook salmon between sectors will also be beneficial to stakeholders by providing the Regional Administrator the flexibility to address reapportionment needs inseason. The ability to reapportion Chinook salmon PSC limits should not negatively impact other GOA trawl groundfish sectors, because Chinook salmon will only be reapportioned when the Regional Administrator determines a sector is projected not to need those fish. The Regional Administrator will also have the authority to reapportion Chinook salmon PSC back to the sector it was apportioned from later in the year if it was unused by the sector that initially received the reapportionment.

Comparison of Alternatives for Decision-making

Table ES-1 Summary of alternatives and major impacts

	Differences in Alternatives	Foreseeable Impacts
Alternative 1 (no action)	Chinook salmon may only be reapportioned from the Rockfish Program CV sector to the non-pollock Non-Rockfish Program sector; those reapportionments may only occur on October 1 and November 15.	The non-pollock Non-Rockfish Program CV sector will remain most vulnerable to early closures. It is not anticipated that NMFS will have the option of using an Emergency Rule to reopen the fishery by increasing its Chinook salmon limit.
Alternative 2	Increase NMFS's flexibility to make inseason reapportionments of Chinook salmon PSC between the pollock and non-pollock fisheries in the GOA. The Regional Administrator would determine the appropriate amount to be reapportioned, and the timing of any reapportionment.	<ul style="list-style-type: none"> • In most recent years, the Inshore pollock sector would have had sufficient Chinook salmon PSC to keep the non-pollock sector(s) open in the case of a closure similar to the one experienced in 2015, had reapportionments been permitted. • Unused Chinook salmon PSC is less likely to be available in the non-pollock CV and CP sectors. Data from recent years show that both sectors are likely to approach their limit during years of high Chinook salmon PSC. • Providing NMFS the authority to reapportion Chinook salmon PSC may increase the total number of Chinook salmon taken in the groundfish trawl fisheries relative to the status quo. Based on limited information, less than 20% of those fish originate from Alaska river systems. The impact on directed Alaska salmon fisheries is expected to be small. Greater impacts would be realized on the West Coast of the U.S. and Canada. These impacts, while important to the various user groups and the stocks, are expected to be small. • Allowing reapportionments of Chinook salmon PSC will allow GOA trawl sectors to better achieve OY, benefiting stakeholders who rely on GOA trawl-caught groundfish. • Will slightly increase the workload on NMFS Inseason management staff to calculate and implement reapportionments. In some years, it may be necessary to make several small reapportionments between sectors.
Alternative 2: Option 1	Would not allow Chinook salmon to be reapportioned from the pollock and non-pollock Non-Rockfish Program sectors to the Rockfish Program CV sector.	The Rockfish Program CVs operate under a LAPP that enables cooperatives to better manage their PSC usage through information sharing and a slower paced fishery. Based on the time series of data available for that program, RP CVs appear less likely to reach their PSC limit than do the GOA limited access trawl sectors.

Alternative 2: Option 2	NMFS's reapportionment authority would be limited to no more than 10%, 20%, or 30% of any sector's initial apportionment.	<ul style="list-style-type: none"> • Will reduce NMFS's flexibility to reapportion Chinook salmon. This may be most constraining in sectors that have a relatively small annual apportionment. • The Council could consider whether it is appropriate to select different percentage limits for different fisheries. • PSC limits defined for an FMP area in the pollock fishery would lose that designation when reapportioned to the Non-Pollock Sectors.
Alternative 2: Option 3	NMFS's reapportionment authority would be limited by prohibiting the reapportionment of Chinook salmon PSC to the non-pollock catcher/processor sector.	In years when the non-pollock CP sector's Chinook salmon PSC limit of 3,600 fish is constraining, NMFS would not have the authority to reapportion additional Chinook salmon to that sector. This would most likely impact CPs that remain in the GOA and fish flatfish and rockfish after September.

Management and Enforcement Considerations

Subdividing PSC limits and apportioning smaller amounts to a small subset of participants can sometimes increase the likelihood of a fishery closure, all else equal. Moreover, while one sector's PSC limit is reached, another's might not be fully used. In some cases, NMFS inseason managers are able to provide economic benefits by reapportioning unused PSC to different user groups toward the end of each fishing year. However, existing Federal regulations do not include provisions for reallocating GOA Chinook salmon PSC among the CP and CV trawl gear sectors.

In the GOA, the trawl CP sector may use its Chinook salmon PSC limit for any of its target fisheries. The CP sector does have a seasonal limit prior to June 1; the Council recommended that seasonal limit in order to reserve at least some Chinook salmon PSC to support the CPs' Rockfish Program fisheries, through Amendment 97. The CP PSC limit for the period prior to June 1 is not a seasonal allocation, meaning PSC that is not used during that period is still available to the sector after June 1.

By contrast, the trawl CV sector has four separate Chinook salmon PSC limits: (1) Western GOA pollock directed fishery, (2) Central GOA pollock directed fishery, (3) Rockfish Program CV sector, and (4) non-pollock Non-Rockfish Program CV sector. The only reapportionment currently available for the trawl CV sector is from the Rockfish Program to the non-pollock Non-Rockfish Program CV sector. Allowing reapportionments to and from all trawl CV sectors and from the trawl CP sector to the trawl CV sector would provide management with more flexibility than is currently available, and may prevent a fishery closure or allow a closed fishery to reopen.

When reallocating groundfish TACs or reapportioning PSC limits, NMFS is careful not to negatively impact the sector from which a harvest opportunity was reapportioned. In some cases the decision is easy because there is little to no effort remaining in the sector that is the source of the reapportionment. In most cases NMFS reapportions groundfish and PSC limits near the end of the year, when effort is low. NMFS

goes through several steps when deciding to reallocate a PSC limit from one sector to another; the process takes up to one week to complete:

1. NMFS determines that a sector's PSC limit has been reached or is projected to be reached;
2. If sufficient PSC is not available for reapportionment from another sector, close the sector;
3. If PSC limit is available from another sector, proceed with reapportionment (Step #4);
4. Review current effort (# of vessels, rate of PSC, amount of groundfish in the sector that reached its PSC limit ("limited sector");
5. Project future effort in the limited sector based on and on discussions with the fleet;
6. Review current effort (# of vessels, rate of PSC, amount of groundfish TAC remaining in the sector with projected excess PSC ("reapportion sector");
7. Project future effort in the reapportion sector based on both historical effort and discussions with the fleet;
8. Issue a reapportionment by writing and processing an Inseason Action.

NMFS inseason decision to reapportion GOA Chinook salmon PSC limits may be more difficult than the currently permitted PSC limit reapportionments for the following reasons:

1. Chinook PSC has been highly variable by fisheries and year, so it is difficult to project future PSC rates based on rates in current or prior year;
2. The GOA trawl CV sector participates in various fisheries with many different rates (nine non-pelagic trawl gear target fisheries and six pelagic trawl gear target fisheries);
3. Trawl CVs vary in their dependence upon different target fisheries, and may not uniformly favor reapportionments;
4. TAC levels may increase or decrease from year to year, which can change the amount of PSC that is necessary to harvest the available TAC;
5. The GOA limited access trawl fleet may be limited in its ability to organize to avoid or limit the use of Chinook salmon PSC after a reapportionment has occurred, thus limiting NMFS confidence in PSC rate projections.

NMFS considers its ability to reapportion harvest opportunities and PSC limits to be an important function. The agency works closely with each sector before issuing reapportionments to understand the need for PSC during the period remaining in the year. NMFS anticipates that most reapportionments would be of small amounts, and several sequential reapportionments may be required during a season.

1 Introduction

This document is a preliminary Regulatory Impact Review/Initial Regulatory Flexibility Analysis (RIR/IRFA). An RIR/IRFA provides assessments of the economic benefits and costs of the action alternatives, as well as their distribution (the RIR), and the impacts of the action on directly regulated small entities (the IRFA). The RIR (Section 3) examines potential economic impacts on stakeholders in the GOA trawl fisheries and stakeholders in directed Chinook salmon fisheries. The IRFA is included in Section 4. This RIR/IRFA addresses the statutory requirements of the Magnuson Stevens Fishery Conservation and Management Act (MSA), the National Environmental Policy Act, Presidential Executive Order 12866², and the Regulatory Flexibility Act. An RIR/IRFA 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.

The document is preliminary in that it was prepared in the format of a full RIR/IRFA, but staff has prioritized certain elements of the analytical work in order to produce a useful document on a shortened timeline. The analysts have prioritized the description of the Council's purpose and need (Section 1.2), the alternatives (Section 2), and a qualitative discussion of potential impacts (Sections 3.6 and 3.7). A full analysis, to be prepared for the next review of this action, will include additional background data that describe the fishery and the fleet, and possibly additional quantitative impact analysis. Those who are interested in general background on the GOA trawl fishery can reference the numerous analyses that have addressed that fishery in recent years.³ Parts of the IRFA are also incomplete in this document. IRFAs are not typically completed until the Council has identified a preferred (or preliminary preferred) alternative.

The proposed action is a minor change to a previously analyzed and approved action. Pursuant changes in regulations would have no effect, individually or cumulatively, on the human environment (as defined in NAO 216-6). The potential effects of this action are economic in nature. In other words, this action would not affect the human environment in any way beyond what was examined in the Environmental Assessment (EA) prepared for the analysis of GOA Groundfish Amendments 93 and 97.⁴ As a result, the analysts have preliminarily determined that this action could qualify for a Categorical Exclusion from further review under the National Environmental Policy Act (NEPA). When a Categorical Exclusion is granted, the preparation of an EA is not required.

² Executive Order 12866 requires the preparation of a Regulatory Impact Review (RIR) to assess the social and economic costs and benefits of available regulatory alternatives, in order to determine whether a proposed regulatory action is economically significant as defined by that order.

³ For example, see the October 2014 Discussion Paper on the GOA Trawl Bycatch Management Program (<http://npfmc.legistar.com/gateway.aspx?M=F&ID=40ad31b4-d26e-495f-bbbc-e5750f9347ae.pdf>), or the EA/RIR/IRFA for GOA Groundfish FMP Amendment 97 (<http://alaskafisheries.noaa.gov/analyses/amd97/goa97finalearirfrfa.pdf>).

⁴ The final rule for GOA Groundfish FMP Amendment 93 was published in the Federal Register on July 20, 2012 (77 FR 42629). The final rule for GOA Groundfish FMP Amendment 97 was published in the Federal Register on December 2, 2014 (79 FR 71350). Amended regulations were implemented in 2012 and 2015, respectively.

1.1 History of this Action

This document analyzes proposed modifications to regulations established under GOA Groundfish FMP Amendment 93 (NPFMC 2012), GOA Groundfish FMP Amendment 97 (NPFMC 2014), and GOA Groundfish FMP Amendment 88 (Central GOA Rockfish Program).

Amendment 93 established annual Chinook salmon PSC limits in the directed pollock trawl fisheries of the Central and Western GOA. Because pollock is closed to directed fishing in the GOA by the offshore component, or catcher/processors (CPs), under §679.20(a)(6)(i), these limits apply to catcher vessels (CV). Trawl vessels fishing for pollock in the Central GOA are limited to 18,316 Chinook salmon per year. Trawl vessels fishing for pollock in the Western GOA are limited to 6,684 Chinook salmon per year. When and if those hard caps are met, NMFS inseason managers close directed trawl fishing in the relevant management area.

MSA National Standards require the Council to balance the objectives of achieving optimum yield, minimizing bycatch, and minimizing adverse impacts to fishery dependent communities. Chinook salmon bycatch taken incidentally in GOA pollock fisheries is a concern to stakeholders, and it has historically accounted for the greatest proportion of Chinook salmon taken in GOA groundfish fisheries. Two principal objectives noted in the Amendment 93 Final Rule are:

- To reduce Chinook salmon PSC in the Central and Western GOA pollock fisheries to the minimal level practicable, consistent with National Standard 9 of the MSA; and
- To enable pollock harvests to contribute to the achievement of optimum yield on a continuing basis in the GOA groundfish fishery, consistent with National Standard 1 of the MSA.

Amendment 97 established separate annual Chinook salmon PSC limits for GOA non-pollock trawl fisheries. The aggregate annual hard cap of 7,500 Chinook salmon is divided among three trawl sectors: CPs (3,600 fish), CVs participating in the Central GOA Rockfish Program (1,200 fish), and CVs participating in all other directed GOA non-pollock groundfish trawl fisheries in the Western and Central GOA Regulatory Areas. The latter of the three sectors is referred to throughout this document as the Non-Rockfish Program CV sector. If a sector reaches its Chinook salmon PSC limit, NMFS prohibits further directed fishing for non-pollock groundfish by vessels in that sector. Note that most of the vessels that fish under the Central GOA Rockfish Program CV limit of 1,200 Chinook salmon also participate in the Non-Rockfish Program CV sector (limited to 2,700 Chinook salmon). Amendment 97 allows the reapportionment of unused Chinook salmon PSC from the Rockfish Program CV Sector to the Non-Rockfish Program CV Sector on October 1 and November 15.

Amendment 97 also includes a reapportionment mechanism known as an “incentive buffer.” If the Non-Rockfish Program CV Sector uses no more than 2,340 salmon (36 percent of 6,500 Chinook salmon) in a given year, the sector will be granted access to 360 additional Chinook salmon the following year.⁵ That

⁵ Similar incentive targets were established under Amendment 97 for the CP sector and the Rockfish Program CV sector. The Council arrived at the target for each sector by setting an overall incentive target of taking 1,000 fewer Chinook PSC than the overall 7,500 Chinook salmon cap (6,500 fish). The Non-Rockfish Program CV sector was apportioned 2,700 of the 7,500 aggregate limit (36%). 2,340 Chinook salmon would represent “out-performing” the hard cap by 36%. The difference in the incentive target, 2,340, and the base-limit, 2,700, is the amount that would be available to the sector in the year in which the incentive buffer was “earned” (360 fish).

additional PSC allowance is relative to the sector's base-limit of 2,700 Chinook salmon, meaning that when the incentive buffer is in effect the Non-Rockfish Program CV sector will be fishing under a PSC limit of 3,060 Chinook salmon. If the Non-Rockfish Program CV sector exceeds 2,340 Chinook salmon, the incentive buffer would not apply in the following year, meaning that the sector will be fishing under the base-limit of 2,700 Chinook salmon PSC.

During the development of Amendment 97, the Council and NMFS developed three overarching objectives:

- Avoid exceeding the annual Chinook salmon threshold of 40,000 Chinook salmon identified in the incidental take statement of the November 30, 2000, Biological Opinion (see Section 3.5.1.1);
- Minimize Chinook salmon bycatch to the extent practicable, consistent with MSA National Standard 9; and
- Increase the amount of Chinook salmon stock of origin information available to NMFS and the Council.

On May 3, 2015 all GOA non-pollock groundfish trawl fisheries were closed for the remainder of the year as a result of the Non-Rockfish Program CV sector reaching its Chinook salmon PSC limit of 2,700 fish in the Western and Central GOA areas. The causes of the closure are further described in Section 3.5.1.5 of this document; an unexpected PSC increase in Western GOA non-pollock Chinook PSC was a significant factor in the closure.

In June 2015, the Council requested that NMFS implement an Emergency Rule to allocate an additional 1,600 Chinook salmon PSC to the non-pollock Non-Rockfish Program CV sector of the GOA groundfish trawl fishery. NMFS determined that an emergency existed because the early closure of the Non-Rockfish Program CV groundfish fishery caused adverse, significant, and unforeseen impacts on harvesters, processors, and the community of Kodiak (see Section 3.5.1.5 for additional information). Providing 1,600 additional Chinook salmon PSC is expected to allow the sector to harvest its recent average amount of groundfish during the remainder of the 2015 fishing year, while keeping the total Chinook salmon PSC well below the annual threshold for all GOA trawl fisheries. The additional allocation of 1,600 Chinook salmon was determined to be consistent with the overall goals of Chinook salmon PSC management in the GOA trawl fisheries, and would not substantially increase Chinook salmon PSC use relative to the limits established under Amendments 93 and 97, in aggregate. The language of the Emergency Rule noted that the action was a direct response measure intended to mitigate the costs of the 2015 closure while the Council develops an FMP amendment to permanently address the ability of the GOA trawl fleet to operate within the established conservation limits. The Council recognizes that additional allocations of Chinook salmon PSC through Emergency Rule will not be an available measure in the case of any future Chinook salmon PSC closure of the Non-Rockfish Program CV sector.

Should a PSC-limited GOA trawl sector face an imminent closure in the future, the action alternative analyzed in this document would provide a mechanism for NMFS inseason managers to reapportion amounts of the existing Chinook salmon PSC limits that are projected to be unused. These reapportionments are designed to provide the Council and NMFS with additional flexibility to respond to unforeseen or unanticipated changes in Chinook salmon PSC levels. The intent of this action is not to encourage higher levels of Chinook salmon PSC usage. This action entails no guarantee that a sector

would be entitled to a total Chinook salmon PSC limit that exceeds the amount set forth in existing regulations. No sector would experience a reduction in the amount Chinook salmon PSC apportioned for its use if that reapportionment would, in the judgement of NMFS inseason managers, jeopardize the sector's ability to harvest available groundfish. During years in which a sector is not sufficiently under its PSC limit to allow a reapportionment, Chinook salmon reapportionments would not take place. This uncertainty provides an incentive for all GOA trawl sectors to stay within the base PSC limit that is defined for it in regulation.

1.2 Purpose and Need

The Council adopted the following purpose and need statement at its June 2015 meeting:

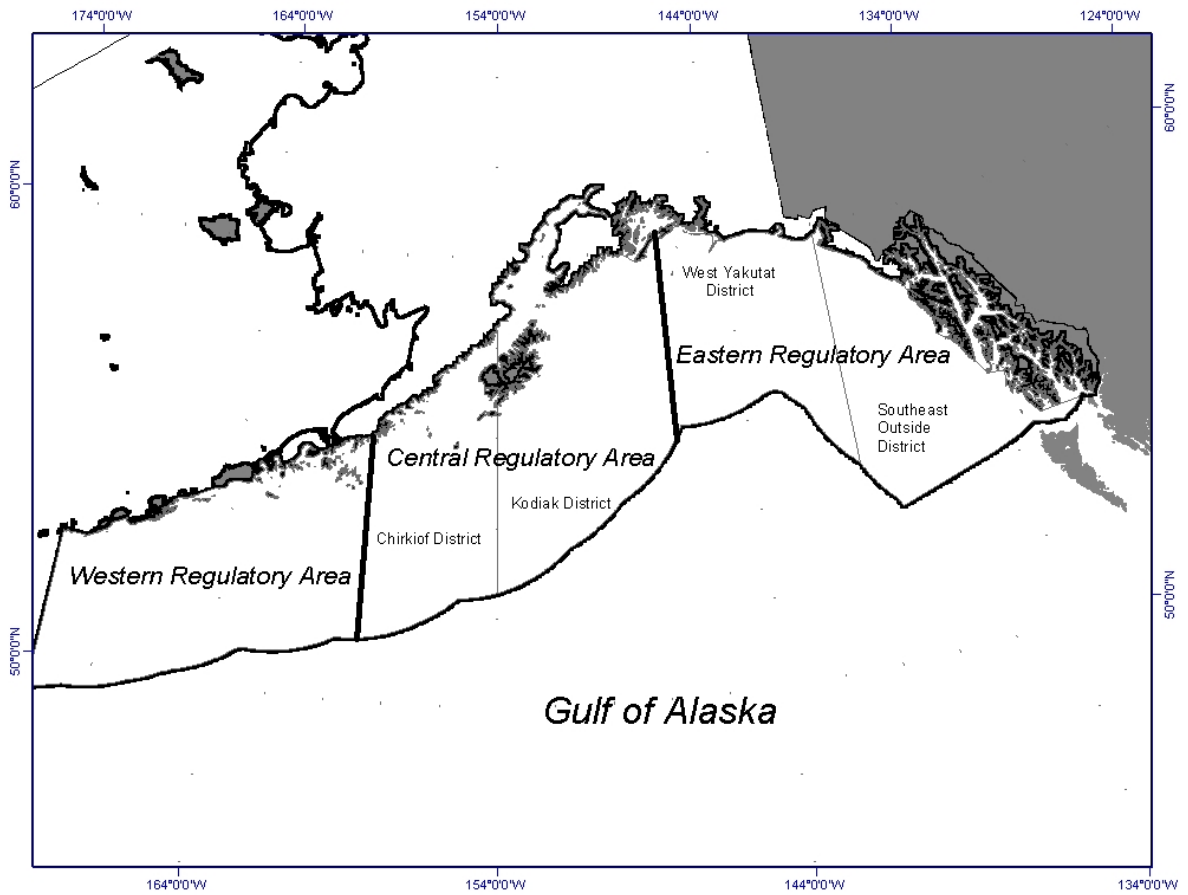
Regulations establish a Chinook salmon prohibited species catch (PSC) limits of 32,500 Chinook in the Central and Western Gulf of Alaska (GOA) trawl fisheries. Chinook salmon PSC limits are managed under two separate programs; one that allocates 25,000 Chinook to the catcher vessels in the pollock trawl fishery (Amendment 93 to the GOA FMP), and another that allocates 7,500 Chinook to three sectors in the non-pollock trawl fisheries: the catcher/processor (3,600), Rockfish Program catcher vessel (1,200), and the non-Rockfish Program catcher vessel (2,700) sectors (Amendment 97 to the GOA FMP). Closures could occur under the existing Chinook salmon PSC limits.

The 2,700 Chinook salmon PSC limit on the non-pollock/non-rockfish catcher vessel sector has resulted in a closure in that fishery. Currently, there is no ability for managers to reallocate unused Chinook salmon PSC between the pollock or non-pollock fisheries. Fishery closures could be avoided, or limited, by providing NMFS the authority to use inseason management to reallocate unused Chinook salmon PSC between the GOA pollock and non-pollock fisheries would provide increased management flexibility without exceeding the overall 32,500 Chinook salmon PSC limit, increase the likelihood that groundfish resources are more fully harvested, and minimize the adverse socioeconomic impacts of the fishery closures on harvesters, processors, and communities.

1.3 Description of Action Area

This action would affect trawl vessels operating in Federal and parallel waters of the Western and Central Gulf of Alaska management areas. The proposed reapportionments do not apply to the Eastern Gulf of Alaska (including the West Yakutat District) because trawl Chinook salmon PSC limits are not established for that area. Trawling is currently prohibited east of the West Yakutat district. Trawl fishing effort has historically been low within the West Yakutat District, and reported Chinook salmon PSC has not reached a level that resulted in the Council establishing a separate PSC for that area. The potentially affected regulatory areas are shown in Figure 1.

Figure 1 Regulatory and reporting areas in the Gulf of Alaska management area



2 Description of Alternatives

The Council established the following alternatives for analysis at its June 2015 meeting.

Alternative 1. No action alternative (status quo)

Alternative 2. Allow NMFS to reallocate unused Chinook salmon PSC between the GOA pollock and non-pollock sectors based on criteria established for inseason reallocations (examples in regulations at §679.20). Existing reallocation procedures from the Rockfish Program catcher vessel to the non-Rockfish Program catcher vessel sector would not be modified.

Option 1. Only allow reallocations between the GOA pollock and the non-Rockfish Program catcher vessel sectors (no reallocation to Rockfish Program catcher vessels).

Option 2. Only allow reallocations that do not exceed (**Suboptions:** 10%, 20%, or 30%) of any initial allocation of a Chinook salmon PSC limit during a calendar year.

Option 3. Prohibit the reallocation of Chinook salmon PSC from catcher vessel sectors to the non-pollock catcher/processor sector.

Staff recommends that the word “reallocate” (and its variations) be changed to “reapportion” (and variations). This change could also be applied to the purpose and need statement, and would not alter the substance of the Council’s intent. The term “allocate” typically applies to the distribution of individual harvest privileges, as in a catch share program. The term “apportion” typically applies to the division of harvest opportunities (or PSC limits) between fleets or operational type sectors. That said, existing regulations, including the section of MSA cited in Alternative 2 (above), use the term “reallocate” to refer to the inseason movement of unharvested TAC from one sector or gear group to another. Using the terms “apportion,” “apportionment,” and “reapportion” in this action would fit better with NMFS’s efforts to develop consistency in the use of regulatory language.

2.1 Alternative 1 (No Action)

The “no action” alternative would maintain the current Chinook salmon PSC limits for vessels using trawl gear in the Western and Central GOA (Table 1). Those limits are apportioned among three sectors of the GOA non-pollock trawl fisheries: CPs, CVs, and CVs fishing under the Central GOA Rockfish Program. The PSC limit for the directed pollock fishery is only available for use by vessels in the Inshore sector. That sector is defined as CVs delivering to shoreside processors, and CPs of less than 125 feet LOA that hold an Inshore processing endorsement on their Federal Fisheries Permit (FFP) and process no more than 126 mt per week in round-weight equivalents of GOA pollock and Eastern GOA Pacific cod (in aggregate). There have been few CPs in the inshore pollock fishery during recent years. During years in which Inshore CPs have been active, two or fewer vessels participated in the pollock fishery, and they took a very small percentage of the fishery’s Chinook salmon PSC limit. Under existing regulation, any Chinook salmon taken by an Inshore CP would accrue towards the PSC limit for the appropriate area.

Table 1 Status quo GOA trawl Chinook salmon PSC limits

			Rockfish	GOA Total
	CV	C/P	Program	
Non-pollock fisheries (Am 97)	2,700	3,600	1,200	7,500
	CG	WG		
Pollock Fishery CVs (Am 93)	18,316	6,684		25,000
Total				32,500

Source: GOA Groundfish FMP Amendments 93 and 97.

The only Chinook salmon PSC rollover that is permitted under existing GOA regulations pertains to the Central GOA Rockfish Program, under Amendment 97. Each year, the Rockfish Program CV sector is apportioned 1,200 of the 7,500 non-pollock Chinook salmon PSC cap. On October 1, all but 150 of the unused Chinook salmon PSC in that sector are reapportioned to the Non-Rockfish Program CV sector. Whatever remains of the Rockfish Program CV sector’s Chinook PSC limit is reapportioned to the Non-Rockfish Program CV sector on November 15, when the Central GOA Rockfish Program closes by regulation. No reapportionment to the Non-Rockfish Program CV sector would be made prior to those dates, even if the sector was closed due to reaching its annual Chinook PSC cap. Upon those dates, NMFS inseason managers would assess any potential reapportionment on a case-by-case basis to determine whether residual effort in the Rockfish Program CV sector would cause a PSC overage during the time lag between when the rollover date occurs and when observer data from that fishery becomes available. Factors in that decision include the amount of Chinook salmon PSC available, effort in the fishery, the remaining amount of TAC available to be harvested, and expected PSC rates in the Rockfish Program CV sector at that time of year.

2.2 Alternative 2

Alternative 2 would allow the NMFS Regional Administrator, through inseason management, to determine the amount of Chinook salmon PSC that is necessary to support the directed fishery to which it was initially apportioned for the remainder of the fishing year. If NMFS determines that the Chinook salmon PSC limit for a sector exceeds the necessary amount to harvest available TAC (given known and projected effort levels), the agency may reapportion Chinook salmon PSC from that sector to another sector that is projected to have an inadequate PSC. NMFS would notify the public of such an action through the Federal Register.

The Council is considering three options that would narrow the scope of Alternative 2. Under Option 1, Chinook salmon PSC reapportionments would only be permitted from the GOA directed pollock trawl fishery to the non-pollock Non-Rockfish Program CV sector, and vice versa. No reapportionment could flow to the Central GOA Rockfish Program CV sector, and the only reapportionment of Chinook salmon PSC that was initially apportioned to that sector would be that which is already established in regulation under Amendment 97. Under Option 2, the amount that could be reapportioned from one sector to another would be capped at (suboptions) 10%, 20%, or 30% of the amount that was initially apportioned to that sector at the beginning of the year. Multiple reapportionments could be made during the year, but the total

amount could not exceed what is defined by the selected suboption.⁶ Under Option 3, no Chinook salmon PSC could be reapportioned to the CP sector of the GOA non-pollock trawl fishery. In other words, the CP sector would continue to operate under a hard cap of 3,600 Chinook salmon.

2.3 Comparison of Alternatives

Table 2 summarizes the alternatives and option under consideration, as well as their major foreseeable impacts. The major difference between Alternative 2 and the No Action Alternative is the amount of flexibility provided to the Regional Administrator to reapportion Chinook salmon PSC limits between the various GOA sectors to mitigate economic hardships that might occur as the result of a hard cap. Greater flexibility for NMFS would likely improve fishermen's ability to achieve OY during a PSC-constrained year. In making any reapportionment decision, NMFS would consider the attendant cost to the Chinook salmon resource and the directed Chinook salmon fisheries off Alaska and the West Coast of the U.S.

⁶ For example, if the Council selected Option 2 and Suboption 1 (10%), no more than 2,500 Chinook salmon could be reapportioned from the GOA pollock fishery's Chinook salmon PSC limit (25,000 fish) to other sectors, in aggregate.

Table 2 Summary of alternatives and major impacts

	Differences in Alternatives	Foreseeable Impacts
Alternative 1 (no action)	Chinook salmon may only be reapportioned from the Rockfish Program CV sector to the non-pollock Non-Rockfish Program sector; those reapportionments may only occur on October 1 and November 15.	The non-pollock/non-Rockfish Program CV sector will remain most vulnerable to early closures. It is not anticipated that NMFS will have the option of using an Emergency Rule to reopen the fishery by increasing its Chinook salmon limit.
Alternative 2	Increase NMFS's flexibility to reapportion Chinook salmon PSC to and from the pollock and non-pollock fisheries in the GOA. The Regional Administrator would determine the appropriate amount to be reapportioned, and the timing of any reapportionment.	<ul style="list-style-type: none"> • In most recent years, the Inshore pollock sector would have had sufficient Chinook salmon PSC to keep the non-pollock sector(s) open in the case of a closure similar to the one experienced in 2015, had reapportionments been permitted. • Unused Chinook salmon PSC is less likely to be available in the non-pollock CV and CP sectors. Data from recent years show that both sectors are likely to approach their limit during years of high Chinook salmon PSC. • Providing NMFS the authority to reapportion Chinook salmon PSC may increase the total number of Chinook salmon taken in the groundfish trawl fisheries relative to the status quo. Based on limited information, less than 20% of those fish originate from Alaska river systems. The impact on directed Alaska salmon fisheries is expected to be small. Greater impacts would be realized on the West Coast of the U.S. and Canada. These impacts, while important to the various user groups and the stocks, are expected to be small. • Allowing reapportionments of Chinook salmon PSC will allow GOA trawl sectors to better achieve OY, benefiting stakeholders who rely on GOA trawl-caught groundfish. • Will slightly increase the workload on NMFS Inseason management staff to calculate and implement reapportionments. In some years, it may be necessary to make several small reapportionments between sectors.
Alternative 2: Option 1	Would not allow Chinook salmon to be reapportioned from the pollock and non-pollock Non-Rockfish Program sectors to the Rockfish Program CV sector.	The Rockfish Program CVs operate under a LAPP that enables cooperatives to better manage their PSC usage through information sharing and a slower paced fishery. Based on the time series of data available for that program, RP CVs appear less likely to reach their PSC limit than do the GOA limited access trawl sectors.

<p>Alternative 2: Option 2</p>	<p>NMFS's reapportionment authority would be limited to no more than 10%, 20%, or 30% of any sector's initial apportionment.</p>	<ul style="list-style-type: none"> • Will reduce NMFS's flexibility to reapportion Chinook salmon. This may be most constraining in sectors that have a relatively small annual apportionment. • The Council could consider whether it is appropriate to select different percentage limits for different fisheries. • PSC limits defined for an FMP area in the pollock fishery would lose that designation when reapportioned to the Non-Pollock Sectors.
<p>Alternative 2: Option 3</p>	<p>NMFS's reapportionment authority would be limited by prohibiting the reapportionment of Chinook salmon PSC to the non-pollock catcher/processor sector.</p>	<p>In years when the non-pollock CP sector's Chinook salmon PSC limit of 3,600 fish is constraining, NMFS would not have the authority to reapportion additional Chinook salmon to that sector. This would most likely impact CPs that remain in the GOA and fish flatfish and rockfish after September.</p>

3 Regulatory Impact Review

This Regulatory Impact Review (RIR) examines the benefits and costs of a proposed FMP and regulatory amendment that would give NMFS inseason managers the ability to reallocate unused amounts of previously established Chinook salmon PSC limits between sectors of the GOA trawl fleet. The alternatives under consideration are further described in Section 3.3.

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 nonetheless 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, 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 this Executive Order.

3.1 Statutory Authority

Under the Magnuson-Stevens Fishery and Conservation Act (Magnuson-Stevens Act) (16 USC 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 GOA groundfish fisheries in the EEZ off Alaska are managed under the FMP for Groundfish of the GOA. The action under consideration would amend this FMP and Federal regulations at 50 CFR 679. Actions taken to amend FMPs or implement other regulations governing these fisheries must meet the requirements of Federal law and regulations.

3.2 Purpose and Need for Action

The Council adopted the following purpose and need statement at its June 2015 meeting:

Regulations establish a Chinook salmon prohibited species catch (PSC) limits of 32,500 Chinook in the Central and Western Gulf of Alaska (GOA) trawl fisheries. Chinook salmon PSC limits are managed under two separate programs; one that allocates 25,000 Chinook to the catcher vessels in the pollock trawl fishery (Amendment 93 to the GOA FMP), and another that allocates 7,500 Chinook to three sectors in the non-pollock trawl fisherie: the catcher/processor (3,600), Rockfish Program catcher vessel (1,200), and the non-Rockfish Program catcher vessel (2,700) sectors (Amendment 97 to the GOA FMP). Closures could occur under the existing Chinook salmon PSC limits.

The 2,700 Chinook salmon PSC limit on the non-pollock/non-rockfish catcher vessel sector has resulted in a closure in that fishery. Currently, there is no ability for managers to reallocate unused Chinook salmon PSC between the pollock or non-pollock fisheries. Fishery closures could be avoided, or limited, by providing NMFS the authority to use inseason management to reallocate unused Chinook salmon PSC between the GOA pollock and non-pollock fisheries would provide increased management flexibility without exceeding the overall 32,500 Chinook salmon PSC limit, increase the likelihood that groundfish resources are more fully harvested, and minimize the adverse socioeconomic impacts of the fishery closures on harvesters, processors, and communities.

3.3 Alternatives

The Council established the following alternatives for analysis at its June 2015 meeting.

Alternative 1. No action alternative (status quo)

Alternative 2. Allow NMFS to reallocate unused Chinook salmon PSC between the GOA pollock and non-pollock sectors based on criteria established for inseason reallocations (examples in regulations at §679.20). Existing reallocation procedures from the Rockfish Program catcher vessel to the non-Rockfish Program catcher vessel sector would not be modified.

Option 1. Only allow reallocations between the GOA pollock and the non-Rockfish Program catcher vessel sectors (no reallocation to Rockfish Program catcher vessels).

Option 2. Only allow reallocations that do not exceed (**Suboptions:** 10%, 20%, or 30%) of any initial allocation of a Chinook salmon PSC limit during a calendar year.

Option 3. Prohibit the reallocation of Chinook salmon PSC from catcher vessel sectors to the non-pollock catcher/processor sector.

For the purpose of analysis, consider the terms “reallocate,” “reapportion,” and variations thereof to be equivalent in meaning. Refer to Section 2 for further explanation.

3.4 Methodology for Analysis of Impacts

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.” The costs and benefits of this action with respect to these attributes are described in the sections that follow, comparing the No Action Alternative (Alternative 1) with the action alternatives. The analysts then provide a qualitative assessment of the net benefit to the Nation of each action alternative, as compared to Alternative 1.

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

CAS was implemented to better meet the increasing information needs of fisheries scientists and managers. Currently, CAS relies on data derived from a mixture of production and observer reports as the basis of the total catch estimates. The 2003 modifications in catch estimation included providing more frequent data summaries at finer spatial and fleet resolution, and the increased use of observer data. Redesigned observer program data collections were implemented in 2008, and include the recording of sample-specific information in lieu of pooled information, increased use of systematic sampling over simple random and opportunistic sampling, and decreased reliance on observer computations. As a result of these modifications, NMFS is unable to recreate blend database estimates for total catch and retained catch after 2002. Therefore, NMFS is not able to reliably compare historical data from the blend database to the current catch accounting system. This analysis relies primarily on CAS data from 2010 through 2014, which covers the five most recent years for which complete information is available.

Data is provided through the Alaska Fisheries Information Network (AKFIN), which pulls together CAS data, CFEC Fish Ticket data, and Commercial Operators Annual Report (COAR) data to supply catch and discard records, as well as estimates of gross ex-vessel and first wholesale revenues.

3.5 Background

3.5.1 Chinook PSC

A summary of the recent GOA PSC limit actions taken under GOA Groundfish Amendment 93 and Amendment 97 are presented in Section 1.1. That section describes the apportionments, the uncertainty buffer built into Amendment 97, and the Rockfish Program rollover regulations.

3.5.1.1 Biological Opinion on GOA Chinook Salmon PSC

In recent years, the Council has amended the GOA Groundfish FMP to limit the amount of Chinook salmon PSC that can be taken in trawl fisheries. Those efforts culminated in limits for the directed pollock trawl fishery (Amendment 93), and the non-pollock trawl fisheries including the Central GOA Rockfish Program (Amendment 97). Amendment 93 set a limit of 25,000 Chinook salmon, and Amendment 97 set a limit of 7,500 Chinook salmon. Throughout the deliberations on those actions, and in the Council discussion precipitating the 2015 Emergency Rule to allocate a one-time amount of additional Chinook PSC to the GOA non-pollock trawl fisheries (see Section 3.5.1.5), the Council referenced an overall GOA trawl PSC limit of 40,000 Chinook salmon. The subsection provides a brief review of the circumstances and analyses that led to the setting of that overall cap, and references to the relevant documents. In short, the 40,000 Chinook salmon limit was established to protect Endangered Species Act (ESA) listed Snake River salmon. NMFS's Biological Opinion, referenced below, found that if Chinook salmon PSC levels in the GOA trawl fisheries remained at or below 40,000 per year, then those fisheries would be unlikely to jeopardize the continued existence of ESA-listed Snake River salmon runs.

Since 1994, Chinook salmon PSC in the GOA groundfish trawl fisheries has generally remained below its incidental take limit of 40,000, except in 2007 (40,540) and 2010 (54,559). The high Chinook salmon PSC in 2010 prompted the most recent ESA reconsultation in 2012 (Stelle 2012). The 2012 reconsultation concluded that exceeding the Chinook salmon PSC limit in the GOA fishery was not a chronic situation, and retained the provisions in the incidental take statement in the 2007 Biological Opinion (NMFS 2007), which included an overall PSC limit of 40,000 Chinook salmon.

The 40,000 Chinook salmon GOA PSC limit in the incidental take statement originates from a 1994 Biological Opinion (NMFS 1994) on the impacts of the BSAI and GOA groundfish fisheries on ESA listed Snake River sockeye, spring/summer Chinook, and fall Chinook salmon. In that Biological Opinion, NMFS assumed that the annual PSC of Chinook salmon in 1994, and "for the foreseeable future," will be 40,000 or fewer. The NMFS used that assumption, and the estimated number of Snake River sockeye, spring/summer, and fall Chinook salmon present in the GOA and BSAI to conclude that the GOA and BSAI groundfish trawl fisheries were not likely to jeopardize the continued existence of listed Snake River sockeye and Chinook salmon. The 1994 Biological Opinion contained conservation recommendations that, among other things, recommended that the Council and NMFS should take necessary actions to ensure that Chinook salmon PSC is minimized to the extent practicable, and does not exceed 40,000 Chinook salmon per year in the GOA fisheries.

Subsequent incidental take statements have maintained the 40,000 Chinook salmon PSC limit established in 1994. Data from coded wire tags retrieved from GOA trawl-caught Chinook salmon have supported the

underlying assumption that taking fewer than 40,000 GOA Chinook salmon PSC per year would not be likely to jeopardize the continued existence of ESA-listed Snake River Chinook salmon, as only a small proportion of the tags indicated that the salmon originated from that protected river system.

3.5.1.2 Chinook PSC Monitoring and Estimation Procedures

NMFS estimates Chinook salmon PSC for the GOA trawl fisheries based on Observer Program data and mandatory fishing industry reports. This section provides a summary of the current observer sampling and salmon PSC estimation methods in the GOA trawl fisheries. NMFS's catch, bycatch, and PSC estimation methods are described in more detail in Cahalan et al. (2014). Additional information is also available in the analyses for GOA Groundfish FMP Amendments 93 and 97.⁷

This information is provided only for contextual understanding, considering that PSC estimation procedures and observer coverage were listed among the agency's rationale for implementing the 2015 Emergency Rule that is described in Section 3.5.1.5. *Under this action, NMFS would make no changes to observer deployment and coverage, observer sampling, and PSC estimation methods.*

3.5.1.2.1 Observer Coverage

The Observer Program places all vessels and processors in the groundfish and halibut fisheries off Alaska into either the full or partial observer coverage category. Shoreside processors and vessels participating in the trawl fisheries in the GOA fall into both of these categories:

- **Full Coverage:** All trawl CPs are included in the full coverage category and carry an observer on every trip. In addition, all CPs fishing in Rockfish Program, including sideboard fisheries, are required to carry 2 observers ("200% observer coverage"). All CVs participating in the Rockfish Program are in the full coverage category and carry an observer on every trip. No shoreside processing plants are in full coverage in the GOA.
- **Partial Coverage:** Each year NMFS develops an Annual Deployment Plan (ADP) that describes the methodology to deploy observers on vessels in the partial coverage category. In 2015, all trawl CVs not in full coverage were placed into the Large-Vessel Trip Selection pool (NMFS 2014). Vessel owners or operators are required to log each fishing trip into the Observer Declare and Deploy System (ODDS) and each trip has a probability of being selected for observer coverage. In 2015, the selection probability for Large-Vessel Trip Selection is 24% (NMFS 2014). As of 2015, partial coverage observers are not deployed to shoreside and floating processors; all of the partial coverage observers are placed onto vessels to conduct sampling.

3.5.1.2.2 Observer Sampling and Salmon PSC Estimation

Observers are responsible for assessing fishing activities and determining how to sample the unsorted catch for species composition and biological information using methodologies described in the Observer Program Sampling Manual (AFSC 2015). In the GOA trawl fisheries, observers are expected to sample

⁷ Amendment 93 EA/RIR/IRFA available at: <http://alaskafisheries.noaa.gov/sustainablefisheries/amds/93/amd93earirirfa0212.pdf>;
Amendment 97 EA/RIR/IRFA available at: <http://alaskafisheries.noaa.gov/analyses/amd97/goa97finalearirirfa.pdf>.

every haul for composition and biological data.⁸ For each sampled haul, observers are instructed to collect a random species composition sample of the total catch. Observers are trained and encouraged to use a systematic sample whenever it is logistically feasible, and they strive to take multiple, equal-sized samples from throughout the haul to obtain the largest possible sample size. However, gear handling methods in different fisheries, vessel layout, and the associated safety concerns can restrict an observer's access to unsorted catch at sea. Therefore there are differences in catch sampling and PSC estimation procedures among the GOA trawl fisheries.

GOA Trawl Pollock CVs

Catch of CVs fishing for pollock is generally either dropped or mechanically pumped from a codend (i.e., the end of the trawl net where catch accumulates) directly into refrigerated seawater (RSW) tanks. Because of the size of the codends, opportunities for sorting of any species, including salmon PSC, are extremely low. Observers attempt to obtain random species composition samples by collecting small amounts of catch as it flows from the codend into the RSW tanks. Therefore, in the GOA pollock fishery, observer samples are often obtained opportunistically and sample fractions vary. For uncommon species such as salmon, a larger sample size is desired, but large sample sizes are generally not logistically possible on pollock CVs. For this reason, whenever possible, estimates of CVs' salmon PSC are based on counts of the salmon PSC that are generated from offload sampling that occurs during delivery to a shoreside processor.

Sampling of Chinook salmon in the GOA is priority for NMFS, and there have been several iterations of the sampling design that is used to obtain genetic samples from salmon bycatch for the purposes of determining stock of origin (Faunce 2015). Starting in 2013, each ADP has outlined a Chinook salmon sampling protocol for the pollock trawl fishery. In 2013, observers were deployed to shoreside and floating processors to enumerate and genetically sample salmon PSC from the GOA pollock fishery (NMFS 2013a). Starting in 2014, NMFS revised the methods for collecting Chinook salmon in the GOA pollock fishery to improve the representativeness of samples (NMFS 2013b). Observers are deployed on trawl trips that target pollock in the GOA, and they obtain samples from all salmon bycatch in the offload at the shoreside processing facility. No sampling occurs on unobserved trips.

Shoreside processors in the GOA are not required to sort and weigh all catch by species prior to the offload entering the factory. Therefore, several GOA shoreside processors do not have a dedicated sorting operation and the vessel observer is frequently the only person sorting out the PSC salmon from a delivery. For some shoreside processors, the majority of the sorting of PSC salmon from a pollock delivery occurs inside the processing area of the shoreside processor. This is very different from Bering Sea/Aleutian Islands (BSAI) shoreside processors, which are required by regulation to provide NMFS with a Catch Monitoring and Control Plan (CMCP) that details how the processor will ensure that all species are sorted and weighed within view of the observer. CMCPs require the processor to identify a designated sorting area that precedes the fish holding bins and processing equipment, and allows an observer to monitor all locations where catch could be sorted. Under a CMCP, no other species besides pollock are allowed to enter the processing area without first being sorted and weighed. CMCPs also

⁸ In some cases, an observer is unable to sample all the hauls during a trip and is instructed to use a random break table. This could be a result of observer illness or injury, or rough weather preventing the observer from completing his or her duties.

require a designated storage location for salmon PSC within view of the observer at all times during the offload, and specific handling requirements for salmon found during the offload.

In the GOA, salmon that are missed during sorting of pollock deliveries and end up inside the processing facility are referred to as “after-scale” salmon (so called because they were initially weighed along with pollock). After-scale salmon create tracking difficulties for the shoreside processor and the observer. Although after-scale salmon are required to be given to an observer, there is no direct observation of salmon once they are moved past the observer and into the processing area. Observers currently record after-scale salmon made available to them by the shoreside processor personnel as if they had collected them during the initial sorting of the pollock delivery. In many cases, once the after-scale salmon have been found inside the processing facility by shoreside processor personnel, the observer may have already returned to sea or have been reassigned to a different vessel in a different location. After-scale salmon can better be characterized as shoreside processor reported information. Further complications in shoreside processor accounting for after-scale salmon occur when multiple CVs are delivering in quick succession, making it difficult or impossible to determine the CV trip from which the salmon originated. Also, shoreside processor personnel may not be saving after-scale salmon for observers; therefore, after-scale salmon numbers are difficult to quantify and verify for each delivery.

In the Catch Accounting System (CAS), NMFS uses the observer data to create PSC rates (a ratio of the estimated PSC to the estimated total catch in sampled hauls). The observer information from both at-sea samples and offload counts on observed trips is used to create the PSC rates that are then applied to industry supplied landings of retained catch on unobserved trips. Depending on the observer data that are available, the extrapolation from observed vessels to unobserved vessels is based on varying levels of aggregated data (post-stratification). Data are matched based on processing sector (e.g., CV), week, fishery (e.g., pollock), gear (e.g., pelagic trawl), and Federal reporting area. Further detail on the estimation procedure, including levels of post-stratification is available in Cahalan et al. (2014).

GOA Trawl Non-Pollock CVs

Unlike CVs in pollock fisheries, vessels in other GOA trawl fisheries, which include deep and shallow-water flatfish and Pacific cod, sort their catch extensively at sea. Sorting at sea is a critical attribute associated with the fisheries because of a larger amount of unmarketable bycatch. For example, vessels frequently have conveyor systems on deck to facilitate sorting of uneconomical species and PSC, which must be discarded at sea. If vessels do not have a sorting conveyor then they often sort directly from the trawl alley. Observers collect species composition samples prior to any sorting of catch by the fishing crew. Because a large amount of sorting occurs at sea and the observers are unable to monitor this sorting while engaged in other sampling duties, it is extremely difficult to verify that no salmon PSC have been discarded at sea. Because of the extensive sorting for unmarketable bycatch at sea, there is a high likelihood that salmon PSC has been sorted from the catch prior to delivery. Offload counts of salmon PSC are not possible in these fisheries because of the amount of sorting that occurs at sea in these fisheries. Therefore, PSC estimates from CVs in other GOA trawl fisheries are all derived from at-sea samples. NMFS uses the at-sea samples on observed trips to create Chinook PSC rates that are applied to unobserved vessels based on varying levels of aggregation (Cahalan et al. 2014).

Central GOA Rockfish Program CVs

Observer sampling aboard CVs in the Central GOA Rockfish Program is the same as in other non-pollock trawl CV fisheries. However, 100% observer coverage is required so that the vessels in a rockfish cooperative obtain a vessel-specific halibut PSC rate to support transferable halibut PSC allocations. Observers collect species composition samples at sea prior to any sorting of the catch by the vessel's crew. Since the majority of species caught in these fisheries are allocated to the cooperative and full retention of these species is required, sorting at sea is limited to the species that are required to be discarded. Those species would include non-salmon PSC and other prohibited species like lingcod (during certain times of the year). PSC estimates from Rockfish Program CVs are derived from at-sea samples.

Shoreside processors in the Central GOA that receive catch from Rockfish Program vessels are required to operate under a CMCP that details how the processing plant will ensure that all delivered catch is sorted and weighed within view of a CMCP specialist. The CMCP specialist is a NMFS employee who monitors portions of (but not the entire) offload. The role of the NMFS CMCP specialist is not to conduct observer sampling. The CMCP specialist ensures that the processor is following their CMCP and provides feedback to the processors to improve sorting, weighing, and reporting of delivered species.

GOA Trawl CPs

The sampling methods used on CPs allow observers to collect larger species composition samples under more controlled conditions than on CVs, because the observer is able to collect samples downstream of the fish holding tanks, just prior to the catch sorting area that precedes the fish processing equipment. Crew sorts catch under more controlled conditions than aboard CVs, and all CPs have at least one observer aboard. Additionally, on many CPs that are in the Rockfish and Amendment 80 Programs, the observer has access to catch weighing scales and an observer sampling station. Many CPs that participate in these cooperatives also have flow scales, which enhance an observer's ability to collect larger samples. The number of salmon PSC in each haul is derived from observer samples within the haul. Estimates of PSC on unsampled hauls are derived from sampled hauls on the same trip (see Cahalan et al. 2014 for more details).

3.5.1.3 Chinook PSC Levels

3.5.1.3.1 Non-pollock/Non-Rockfish

Table 3 reports the GOA Chinook salmon PSC in the non-pollock Non-Rockfish Program CV sector from 2010 through August 2015. The information in that table shows the variable nature of Chinook salmon PSC in these fisheries. In general, high and low years of PSC occurred at the same time for both the CV and CP sectors. Public testimony on past Council actions suggested that Chinook salmon are more abundant on the fishing grounds some years, and thus are more difficult to avoid. The anomaly in the data is the PSC in the 2015 Western GOA CV fisheries. PSC was much greater that year in the Pacific cod fishery than it had been in previous years. This may be a reflection of increased observer coverage in that fishery, in addition to the variable PSC levels inherent in these fisheries.

Table 3 Chinook salmon PSC in the non-pollock Non-Rockfish Program, by sector, area, month, and year (2010 through August 2015)

Sector	Area	Month	2010	2011	2012	2013	2014	2015	
CP	CG	1			0				
		2	341	67		643		0	
		3	281	307		820	61	0	
		4	1,975	1,440	885	1,756	239	339	
		5	13	17	0	181	365	127	
		6		0	0	0	0	0	
		7	13	145	0	116	0	14	
		8	0	29	0	0	0	47	
		9	79	0		0	0		
		10	112	10	126	0	0		
		11	106	144	0	70	654		
		12	187		0	0	0		
	CG Total			3,106	2,159	1,011	3,587	1,319	527
	WG	1				0			
		2			53				
		3	68	246		16			
		4	840	15	0	77	775	0	
		5	0			0	50	0	
		6					0	33	
		7	292	173	385	0		0	
8			52			0	0		
WG Total			1,277	487	438	111	1,376	33	
CP Total			4,383	2,646	1,450	3,697	2,695	560	
CV	CG	1	0	217	16	73	8	4	
		2	0	43	36	189	145	30	
		3	92	52	356	124	128	16	
		4	1,482	2,152	0	1,687	44	1,135	
		5	299	4	0	1,720	25	632	
		6	0	0		4	1		
		7	0	3	0	34	783		
		8	33	4	0	129	252		
		9	619	6		168	0		
		10	1,413	926	396	259	0		
		11	203	37	112	132	45		
		12	20	0	10	0	2		
	CG Total			4,161	3,445	926	4,519	1,430	1,818
	WG	1	0	0	0	0	0	361	
		2	0	96	0	0	0	512	
		3			1	15	1	183	
	WG Total			0	96	1	15	1	1,056
	CV Total			4,161	3,541	926	4,534	1,431	2,874
	Total			8,544	6,187	2,376	8,232	4,126	3,434

Source: AKFIN summary of catch accounting data

Table 4 shows the monthly running total percentage of the sector's GOA non-pollock Non-Rockfish Program sectors' Chinook salmon PSC. This table illustrates when most of the PSC in these fisheries was taken. The CP and CV sectors typically used a relatively small percentage of their Chinook salmon PSC from the January 20th start of the fisheries through March. CVs are typically fishing pollock and some

Pacific cod during these months. Since Chinook salmon PSC taken in the directed pollock fishery is taken from a separate limit, the table reflects mainly Chinook that was taken while targeting Pacific cod. CPs have limited effort in the GOA during the early months of the year. When effort increases in the flatfish fisheries during April, primarily the arrowtooth flounder and rex sole fisheries, Chinook salmon PSC increases for both the CVs and CPs. Prior to 2013, CP effort in the Western GOA rockfish fishery resulted in increased Chinook salmon PSC during July. That trend has not been observed in the most recent years. As expected, there is very little Chinook salmon PSC reported in November and December.

Table 4 Cumulative percentage of sector's GOA non-pollock/non-Rockfish Program Chinook salmon PSC, by month and year

Month	2010	2011	2012	2013	2014	2015	2010-2015
Cumulative Percent of CP PSC							
1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	7.79%	2.55%	3.66%	17.38%	0.00%	0.00%	7.16%
3	15.75%	23.43%	3.66%	39.98%	2.27%	0.00%	18.81%
4	79.99%	78.44%	64.74%	89.57%	39.89%	60.53%	72.88%
5	80.28%	79.07%	64.74%	94.47%	55.28%	83.20%	77.75%
6	80.28%	79.07%	64.74%	94.47%	55.28%	89.07%	77.97%
7	87.25%	91.08%	91.32%	97.62%	55.28%	91.56%	85.35%
8	87.25%	94.15%	91.32%	97.62%	55.28%	100.00%	86.18%
9	89.05%	94.15%	91.32%	97.62%	55.28%		86.69%
10	91.59%	94.56%	100.00%	97.62%	59.14%		88.97%
11	95.73%	100.00%	100.00%	100.00%	100.00%		98.79%
12	100.00%	100.00%	100.00%	100.00%	100.00%		100.00%
Cumulative Percent of CV PSC							
1	0.00%	6.12%	1.73%	1.61%	0.52%	12.71%	3.89%
2	0.00%	10.03%	5.56%	5.77%	10.64%	31.58%	9.89%
3	2.22%	11.52%	44.05%	8.84%	19.60%	38.49%	15.43%
4	37.84%	72.30%	44.05%	46.05%	22.64%	78.01%	52.65%
5	45.03%	72.40%	44.05%	83.97%	24.37%	100.00%	67.99%
6	45.03%	72.40%	44.05%	84.07%	24.45%	100.00%	68.02%
7	45.03%	72.48%	44.05%	84.83%	79.15%	100.00%	72.71%
8	45.83%	72.59%	44.05%	87.67%	96.78%	100.00%	75.11%
9	60.69%	72.78%	44.05%	91.38%	96.78%		79.65%
10	94.65%	98.94%	86.75%	97.08%	96.78%		96.79%
11	99.53%	100.00%	98.89%	100.00%	99.89%		99.82%
12	100.00%	100.00%	100.00%	100.00%	100.00%		100.00%

Source: AKFIN summary of NMFS Catch Accounting data

Note: 2015 data is only available through August

Table 5 reports the cumulative monthly Chinook salmon PSC in the non-pollock Non-Rockfish Program as a percentage of the sectors annual PSC limit. During 2012 and 2014 both the CVs and CPs stayed within their PSC limit; during 2010 and 2013 both sectors exceeded their current limit. It has been well documented that the CV sector exceeded its PSC limit early in the 2015 fishing year and was prohibited from these directed fisheries until the Emergency Rule was implemented (see Section 3.5.1.5). The CP sector has remained well under its PSC limit, having only taken about 15% through August of this year.

Table 5 Cumulative percentage of the sector's current annual GOA non-pollock Non-Rockfish Program PSC limit, by month and year

Month	2010	2011	2012	2013	2014	2015	2010-2014
Cumulative Percent of CP PSC Limit (3,600 fish)							
1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	9.48%	1.87%	1.47%	17.85%	0.00%	0.00%	6.13%
3	19.17%	17.22%	1.47%	41.07%	1.70%	0.00%	16.13%
4	97.38%	57.65%	26.07%	92.00%	29.86%	9.42%	60.59%
5	97.74%	58.11%	26.07%	97.03%	41.39%	12.95%	64.07%
6	97.74%	58.11%	26.07%	97.03%	41.39%	13.86%	64.07%
7	106.22%	66.95%	36.77%	100.26%	41.39%	14.25%	70.32%
8	106.22%	69.20%	36.77%	100.26%	41.39%	15.57%	70.77%
9	108.40%	69.20%	36.77%	100.26%	41.39%		71.20%
10	111.50%	69.50%	40.27%	100.26%	44.28%		73.16%
11	116.54%	73.50%	40.27%	102.71%	74.87%		81.58%
12	121.74%	73.50%	40.27%	102.71%	74.87%		82.62%
Cumulative Percent of CV PSC Limit (2,700 fish)							
1	0.00%	8.03%	0.59%	2.71%	0.28%	13.53%	2.26%
2	0.00%	13.16%	1.91%	9.69%	5.64%	33.61%	5.93%
3	3.42%	15.10%	15.11%	14.85%	10.38%	40.97%	11.48%
4	58.32%	94.81%	15.11%	77.32%	12.00%	83.03%	50.21%
5	69.39%	94.94%	15.11%	141.01%	12.91%	106.44%	64.99%
6	69.39%	94.94%	15.11%	141.17%	12.95%	106.44%	65.03%
7	69.39%	95.05%	15.11%	142.45%	41.94%	106.44%	70.95%
8	70.63%	95.19%	15.11%	147.23%	51.28%	106.44%	73.97%
9	93.53%	95.43%	15.11%	153.45%	51.28%		79.70%
10	145.87%	129.75%	29.76%	163.03%	51.28%		101.31%
11	153.39%	131.13%	33.92%	167.93%	52.93%		105.13%
12	154.11%	131.13%	34.31%	167.93%	52.98%		105.36%

Source: AKFIN summary of NMFS Catch Accounting data

Note: 2015 data is only provided through August

3.5.1.3.2 GOA Pollock Fisheries

A Chinook salmon limit of 25,000 fish is apportioned to the directed Western GOA pollock fishery (6,684 Chinook salmon) and the Central GOA pollock fishery (18,316 Chinook salmon). Inshore/offshore regulations limit participation in this fishery to primarily catcher vessels. The TAC for pollock is apportioned among statistical areas 610, 620, and 630 in proportion to the distribution of the pollock biomass as determined by the most recent NMFS surveys. The four Western and Central GOA seasonal apportionments are established under paragraph §679.2(a)(5)(iv)(A), with each season allocated 25% of the available TAC. Those four seasons are:

- A season. From 1200 hours, A.l.t., January 20 through 1200 hours, A.l.t., March 10;
- B season. From 1200 hours, A.l.t., March 10 through 1200 hours, A.l.t., May 31;
- C season. From 1200 hours, A.l.t., August 25 through 1200 hours, A.l.t., October 1; and
- D season. From 1200 hours, A.l.t., October 1 through 1200 hours, A.l.t., November 1.

Table 6 shows that Chinook salmon PSC in the Central GOA is generally greatest in February and March, during the A and B seasons. In the Western GOA Chinook salmon PSC extends into April. The summer fishery closure between the B and C seasons means that no PSC accrues to the limit in during June, July

or early- and mid-August. When the C and D seasons open, some PSC is caught at the end of August, but the majority is caught in September and October.

Table 6 Chinook PSC in the directed pollock fisheries by area, month, and year (2010 through August 2015)

Area	Month	2010	2011	2012	2013	2014	2015*
CG	1	42	0	0	323	1	85
	2	3,469	1,573	2,000	3,792	745	2,027
	3	1,256	712	614	534	2,045	3,098
	4					70	680
	5						44
	6				0		
	7		0				
	8				442	242	
	9	2,823	497	4,363	545	720	
	10	4,718	8,006	3,648	5,336	3,387	
	11			214	86	254	
	12				0		
CG Total		12,308	10,788	10,838	11,056	7,463	5,935
WG	1	342		175	0	11	1
	2	621		281	0	2	
	3	384	418	324	68	87	268
	4	426	45	21		104	148
	5					1	
	6		0				
	7						
	8	331	41	7	25	156	
	9	1,490	661	102	68	2,070	
	10	28,202	2,405	5,208	530	711	
	11		3		930	0	
	12						
WG Total		31,796	3,573	6,118	1,621	3,142	417
GOA Total		44,104	14,361	16,956	12,677	10,605	6,352

Source: AKFIN summary of NMFS Catch Accounting data

Note: 2015 data is only provided through August

Table 7 shows that in the Central GOA, on average, about 60% of the Chinook salmon PSC is taken in the C and D seasons. In the Western GOA, on average about 90% of the PSC is taken in the C and D season. The fact that the majority of Chinook salmon PSC occurs later in the year will complicate reapportionment decisions that need to be made earlier in the year. However, the flexibility to reapportion PSC back to the pollock fishery if it is unused by another sector, and the knowledge that this sector has been consistently under its PSC limit, may mitigate some of those concerns.

Table 7 Cumulative percentage of sector’s GOA pollock fishery Chinook salmon PSC, by month and year

Month	2010	2011	2012	2013	2014	2010 through	
						2015	2014
Cumulative Percent of CG PSC							
1	0%	0%	0%	3%	0%	1%	1%
2	29%	15%	18%	37%	10%	36%	24%
3	39%	21%	24%	42%	37%	88%	38%
4	39%	21%	24%	42%	38%	99%	40%
5	39%	21%	24%	42%	38%	100%	40%
6	39%	21%	24%	42%	38%	100%	40%
7	39%	21%	24%	42%	38%	100%	40%
8	39%	21%	24%	46%	42%	100%	41%
9	62%	26%	64%	51%	51%	100%	56%
10	100%	100%	98%	99%	97%	100%	99%
11	100%	100%	100%	100%	100%	100%	100%
12	100%	100%	100%	100%	100%	100%	100%
Cumulative Percent of WG PSC							
1	1%	0%	3%	0%	0%	0%	1%
2	3%	0%	7%	0%	0%	0%	3%
3	4%	12%	13%	4%	3%	64%	6%
4	6%	13%	13%	4%	6%	100%	8%
5	6%	13%	13%	4%	7%	100%	8%
6	6%	13%	13%	4%	7%	100%	8%
7	6%	13%	13%	4%	7%	100%	8%
8	7%	14%	13%	6%	12%	100%	9%
9	11%	33%	15%	10%	77%	100%	19%
10	100%	100%	100%	43%	100%	100%	98%
11	100%	100%	100%	100%	100%	100%	100%
12	100%	100%	100%	100%	100%	100%	100%

Source: AKFIN summary of NMFS Catch Accounting data

Note: 2015 data is only provided through August

Table 8 reports a monthly running total of the percentage of the directed pollock fishery’s Chinook salmon PSC limit that has been taken as a running total in the pollock fisheries by month. While there is a substantial increase in PSC during the C and D seasons, the percentage of the current available limit that typically remains could still accommodate a reapportionment of Chinook salmon during most years. In the Western GOA, a total of 28,202 Chinook salmon were estimated to be taken during October 2010. This unusually large amount of PSC taken that month tends to skew the results reported in the 2010 through 2014 average. Improved observer coverage levels in the GOA trawl fisheries and efforts to avoid PSC to the extent practicable should reduce the likelihood of that level of PSC occurring in a single future month.

Table 8 Cumulative percentage of the sector's current annual GOA pollock fishery Chinook Salmon PSC limit, by month and year

Month	2010 through						2014
	2010	2011	2012	2013	2014	2015	
Cumulative Percent of CG PSC Limit (18,316 fish)							
1	0%	0%	0%	2%	0%	0%	0%
2	19%	9%	11%	22%	4%	12%	13%
3	26%	12%	14%	25%	15%	28%	19%
4	26%	12%	14%	25%	16%	32%	19%
5	26%	12%	14%	25%	16%	32%	19%
6	26%	12%	14%	25%	16%	32%	19%
7	26%	12%	14%	25%	16%	32%	19%
8	26%	12%	14%	28%	17%	32%	20%
9	41%	15%	38%	31%	21%		29%
10	67%	59%	58%	60%	39%		57%
11	67%	59%	59%	60%	41%		57%
12	67%	59%	59%	60%	41%		57%
Cumulative Percent of WG PSC Limit (6,684 fish)							
1	5%	0%	3%	0%	0%	0%	2%
2	14%	0%	7%	0%	0%	0%	4%
3	20%	6%	12%	1%	1%	4%	8%
4	27%	7%	12%	1%	3%	6%	10%
5	27%	7%	12%	1%	3%	6%	10%
6	27%	7%	12%	1%	3%	6%	10%
7	27%	7%	12%	1%	3%	6%	10%
8	31%	8%	12%	1%	5%	6%	12%
9	54%	17%	14%	2%	36%		25%
10	476%	53%	92%	10%	47%		136%
11	476%	53%	92%	24%	47%		138%
12	476%	53%	92%	24%	47%		138%

Source: AKFIN summary of NMFS Catch Accounting data

Note: 2015 data is only provided through August

3.5.1.3.3 Rockfish Program CVs

The Rockfish Program CVs are apportioned an annual limit of 1,200 Chinook salmon. Any Chinook salmon caught by Rockfish Program CVs, when checked into a Rockfish Program cooperative, accrue against that limit. Table 9 indicates that the majority of the PSC is typically caught during May and June. During some years there is also substantial catches of Chinook salmon in September; in 2014 about 25% of the total was caught in November.

Table 9 Chinook salmon PSC in the Rockfish Program by area, month, and year (2010 through August 2015)

Area	Month	2010	2011	2012	2013	2014	2015
CG	5	409	304	287	851	300	690
	6	551	64	369	69	37	91
	7	6	0	0	86	0	0
	8	0	0	0	0	0	
	9	0	0	143	254	34	
	10	0	29	0	0	0	
	11	0	0	0	0	131	
CG Total		966	397	800	1,260	503	780

Source: AKFIN summary of NMFS Catch Accounting data

Note: 2015 data is only provided through August

Table 10 shows the running total percentage of Chinook salmon caught in the Rockfish Program. In each year considered at least 67% of the total PSC was caught before July. In all but one year at least 93% of the total was taken before October. Given that the current regulations allow Chinook salmon that is projected to go unused to be reapportioned on October 1 and November 15, NMFS Inseason Management staff should have a reasonable basis to estimate the appropriate amount. However, because the reapportionment would likely not occur until late in the fishing year, it may have relatively little benefit if the PSC limit in another sector is reached early in the fishing year.

Table 10 Cumulative percentage of Rockfish Program Chinook salmon PSC, by month and year

Area	Month	2010	2011	2012	2013	2014	2015
CG	5	42%	77%	36%	68%	60%	88%
	6	99%	93%	82%	73%	67%	100%
	7	100%	93%	82%	80%	67%	100%
	8	100%	93%	82%	80%	67%	100%
	9	100%	93%	100%	100%	74%	
	10	100%	100%	100%	100%	74%	
	11	100%	100%	100%	100%	100%	

Source: AKFIN summary of NMFS Catch Accounting data

Note: 2015 data is only provided through August

Table 11 indicates that Chinook salmon PSC may be available to reapportion from the Rockfish Program. Years in which Chinook salmon PSC would not have been available also tend to be years when PSC was needed in the non-pollock fisheries. The years of greatest excess were years when it was not needed in the non-pollock fisheries, the exception being 2011. This again shows that in years of relatively high salmon PSC, the pollock sector seems to be the only fishery that was consistently under their PSC limit and would be able to provide a reapportionment to the non-pollock Non-Rockfish Program sectors.

Table 11 Cumulative percentage of the current annual Rockfish Program Chinook Salmon PSC limit (1,200 Chinook salmon), by month and year

Area	Month	2010	2011	2012	2013	2014	2015	2010 Through 2014
CG	5	34%	25%	24%	71%	25%	57%	36%
	6	80%	31%	55%	77%	28%	65%	54%
	7	80%	31%	55%	84%	28%	65%	56%
	8	80%	31%	55%	84%	28%	65%	56%
	9	80%	31%	67%	105%	31%		63%
	10	80%	33%	67%	105%	31%		63%
	11	80%	33%	67%	105%	42%		65%

Source: AKFIN summary of NMFS Catch Accounting data

Note: 2015 data is only provided through August

3.5.1.4 NMFS Inseason Reapportionment Process

The Council recommended separate Chinook salmon PSC limits for each trawl sector (CPs, Rockfish Program CVs, and non-pollock Non-Rockfish Program CVs) in order to allow the sectors to better manage their fisheries and incidental catch internally. However, subdividing PSC limits and apportioning smaller amounts to a small subset of participants can sometimes increase the likelihood of a fishery closure, all else equal. Moreover, while one sector's PSC limit is reached, another's might not be fully used.⁹ Listed below are four examples of existing regulations that allow for inseason reapportionments of PSC in order to address these issues and keep fisheries open:

1. Under Amendment 97, NMFS can reapportion GOA Chinook salmon PSC limits from the Rockfish Program CV sector to the non-pollock Non-Rockfish Program CV sector on October 1 and November 15 of each year. On October 1, all but 150 of the Chinook salmon PSC remaining in the Rockfish Program CV sector apportionment is rolled over to the Non-Rockfish Program CV sector for use in fall non-pollock trawl fisheries. Any remaining Chinook PSC in the Rockfish Program CV sector is rolled over when the Program season ends on November 15;
2. NMFS may roll over up to 55% of the trawl halibut PSC limit that was allocated to Rockfish Program cooperatives as cooperative quota (CQ) but was not used in the Program fishery. That amount of halibut PSC is added to the last seasonal apportionment (for October 1 through December 31) during the current fishing year;¹⁰
3. NMFS may reapportion halibut PSC limits from the BSAI trawl limited access sector (non-AFA CVs) and from the American Fisheries Act (AFA) sectors' limits to Amendment 80 cooperatives;
4. Community Development Quota (CDQ) groups and Amendment 80 cooperatives have the ability to transfer PSC limits among themselves.

Through provisions like the ones listed above, NMFS inseason managers are able to provide economic benefits by reapportioning unused PSC to different user groups toward the end of each fishing year. However, existing Federal regulations do not include specific provisions for reallocating GOA Chinook salmon PSC among the CP and CV trawl gear sectors.

⁹ It is not the Council's intent that PSC is fully used. The Council intends that PSC always be avoided to the extent practicable.

¹⁰ The final 2015 apportionment of trawl halibut PSC limits is defined in Table 16 of the GOA annual harvest specifications, available at: http://alaskafisheries.noaa.gov/sustainablefisheries/specs15_16/goatable16.pdf.

In the GOA, the trawl CP sector may use its Chinook salmon PSC limit for any of its target fisheries. The CP sector does have a seasonal limit prior to June 1; the Council recommended that seasonal limit in order to reserve at least some Chinook salmon PSC to support the CPs' Rockfish Program fisheries, through Amendment 97. The CP PSC limit for the period prior to June 1 is not a seasonal allocation, meaning PSC that is not used during that period is still available to the sector after June 1.

By contrast, the trawl CV sector has four separate Chinook salmon PSC limits: (1) Western GOA pollock directed fishery, (2) Central GOA pollock directed fishery, (3) Rockfish Program CV sector, and (4) non-pollock Non-Rockfish Program CV sector. The only reapportionment currently available for the trawl CV sector is from the Rockfish Program to the non-pollock Non-Rockfish Program CV sector. Allowing reapportionments to and from all trawl CV sectors and from the trawl CP sector to the trawl CV sector would provide management with more flexibility than is currently available, and may prevent a fishery closure or allow a closed fishery to reopen.

When reallocating groundfish TACs or reapportioning PSC limits, NMFS is careful not to negatively impact the sector from which a harvest opportunity was reallocated or reapportioned. In some cases the decision is easy because there is little to no effort remaining in the sector that is the source of the reapportionment. A sector may have stopped fishing – voluntarily or because of a season closure date – and unused TAC or PSC remains. In most cases NMFS reapportions groundfish and PSC limits near the end of the year. Inseason management staff can better predict the amount of effort that will be in a fishery when the reapportionment date is closer to the end of the year. Towards the end of the fishing year, effort levels are often lower due to either weather conditions or TACs having been reached.

NMFS goes through several steps when deciding to reallocate a PSC limit from one sector to another; the process takes up to one week to complete:

1. NMFS determines that a sector's PSC limit has been reached or is projected to be reached;
2. If sufficient PSC is not available for reapportionment from another sector, close the sector;
3. If PSC limit is available from another sector, proceed with reapportionment (Step #4);
4. Review current effort (# of vessels, rate of PSC, amount of groundfish in the sector that reached its PSC limit ("limited sector");
5. Project future effort in the limited sector based on and on discussions with the fleet;
6. Review current effort (# of vessels, rate of PSC, amount of groundfish TAC remaining in the sector with projected excess PSC ("reapportion sector");
7. Project future effort in the reapportion sector based on both historical effort and discussions with the fleet;
8. Issue a reapportionment by writing and processing an Inseason Action.

NMFS inseason decision to reapportion GOA Chinook salmon PSC limits may be more difficult than the currently permitted PSC limit reapportionments for the following reasons:

1. Chinook PSC has been highly variable by fisheries and year, so it is difficult to project future PSC rates based on rates in current or prior year;
2. The GOA trawl CV sector participates in various fisheries with many different rates (nine non-pelagic trawl gear target fisheries and six pelagic trawl gear target fisheries);

3. Trawl CVs vary in their dependence upon different target fisheries, and may not uniformly favor reapportionments;
4. TAC levels may increase or decrease from year to year, which can change the amount of PSC that is necessary to harvest the available TAC;
5. The GOA limited access trawl fleet may be limited in its ability to organize to avoid or limit the use of Chinook salmon PSC after a reapportionment has occurred, thus limiting NMFS confidence in PSC rate projections.

NMFS considers its ability to reapportion harvest opportunities and PSC limits to be an important function. The agency works closely with each sector before issuing reapportionments to understand the need for PSC during the period remaining in the year. NMFS anticipates that most reapportionments would be of small amounts, and several sequential reapportionments may be required during a season. Each reapportionment requires publication of the action in the Federal Register. NMFS uses the Inseason Action procedure for many management actions, such as opening and closing fisheries, issuing roughly 70 to 100 Inseason Actions in a typical year. An action may take up to a week to process, but often takes only a few days.

3.5.1.5 2015 Emergency Rule

As noted in Section 1.1, the GOA Non-Rockfish Program CV sector's non-pollock fisheries were closed on May 3, 2015 due to the attainment of the Chinook salmon PSC limit. On August 10, 2015 NMFS established an emergency rule that provided the sector with 1,600 additional Chinook salmon PSC¹¹, which should allow the sector to prosecute the Pacific cod B season and fall flatfish fisheries. The Council recommended the number of 1,600 Chinook salmon based on the sector's average PSC use after May 1 during the 2010 through 2014 period. That additional Chinook salmon PSC is separate and distinct from the sector's base-PSC limit of 2,700, and it expires on December 31, 2015. Noting that distinction is important, because it means that the Chinook salmon PSC made available through the Emergency Rule will not be debited to retroactively account for the PSC overage that occurred when the original hard cap was reached.¹² In providing a supporting analysis for the Emergency Rule, NMFS developed a rationale on the basis that the Chinook PSC closure was the result of unforeseen circumstances, and that the non-pollock Non-Rockfish Program CV sector's PSC use in the early months of 2015 was significantly greater than the historical levels that were the basis of the Amendment 97 hard cap (2,700 Chinook).

Section 305(c) of the MSA provides authority for rulemaking to address an emergency. NMFS's Policy Guidelines for the Use of Emergency Rules state that the only legal prerequisite for such rulemaking is that an emergency must exist, and that NMFS must have an administrative record justifying emergency regulatory action and demonstrating compliance with the MSA and the National Standards.¹³ Three criteria must be met in order for a situation to be considered a fishery emergency:

1. It must result from recent, unforeseen events or recently discovered circumstances;

¹¹ 80 FR 47864, August 10, 2015.

¹² NMFS had estimated the GOA non-pollock/non-Rockfish CV trawl sector's Chinook salmon PSC at 2,624 on April 30, 2015, thus triggering the closure. NMFS runs additional catch estimation reports over the summer to incorporate revisions to PSC rates as new observer data are incorporated into estimates. NMFS final estimate for the sector's Chinook salmon PSC at the time of the closure stands at 2,874, representing an overage of 174 Chinook salmon PSC.

¹³ See NMFS Instruction 01-101-07 (March 31, 2008) and 62 FR 44421, August 21, 1997).

2. It must present serious conservation or management problems in the fishery; and
3. It must be able to be addressed through emergency regulations for which the immediate benefits outweigh the value of advance notice, public comment, and deliberative consideration of the impacts on participants to the same extent as would be expected under the normal rulemaking process.

NMFS prepared an RIR for the implementation of the Emergency Rule; Section 1.3.3 of that document describes how the circumstances in the GOA non-pollock Non-Rockfish Program CV sector trawl fishery meet each criterion.¹⁴

The first criterion (*unforeseen events*) is met by the unanticipated increase in Chinook salmon PSC in the Western GOA non-pollock trawl fisheries, relative to the average Chinook salmon PSC levels that formed the basis for the limit of 2,700 established under Amendment 97. Western GOA non-pollock trawl CVs' Chinook PSC level from January through April of 2015 was 1,056 fish. That amount is nearly 10 times greater than the maximum amount used during any complete calendar year from 2007 through 2011, and nearly 24 times the annual average for that area during that time period. In the Federal Register (FR) notice of the emergency rule, NMFS states that "the magnitude of Chinook salmon use by the sector in the Western GOA when compared with the average use of Chinook salmon by the sector in the Central GOA [which was in line with historical levels] seems to indicate that 2015 is not simply a high encounter year for Chinook salmon." Moreover, the increase in Western GOA Chinook salmon PSC levels occurred after the implementation of improved PSC data collection methods in 2013 – i.e., the restructured North Pacific Groundfish and Halibut Observer Program. Prior to the restructuring, vessels less than 60 feet LOA did not carry observers, and their PSC levels were estimated from observers on larger vessels. The Western GOA CV trawl fleet has a high proportion of vessels under 60 feet. NMFS was aware that observer sampling procedures produce catch estimates with some unknown amount of variability, and that deriving the Amendment 97 non-pollock Chinook PSC limits from that data would thus be based on data with some variability. The Council and NMFS assumed, however, that basing the selected limit on several historical years (2007 through 2011) would provide a reasonable estimate of likely PSC levels in the future, and would provide adequate harvest opportunity consistent with the objectives of Amendment 97. The Council and NMFS did not foresee how the application of Chinook salmon PSC data under the restructured program would compare with the previous observer program (pre-2013), especially in the Western GOA. The FR notice goes on to state that new Observer Program data on previously unobserved vessels "resulted in estimates of a substantial and unexpected amount of Chinook salmon PSC [which] led to the closure of the [non-pollock] Non-Rockfish Program CV sector fisheries."

The second criterion (*serious conservation or management problems*) is met because the early fishery closure prevented the sector from harvesting thousands of metric tons of groundfish, resulting in forgone revenue for harvesters, processors, and communities. Without an Emergency Rule, NMFS estimated that the closure would have prevented harvest of 13,000 to 15,000 metric tons of groundfish over the remainder of 2015, based on average groundfish catch by the sector during 2012 through 2014 and 2010 through 2014 (see Section 1.5 of). NMFS estimated forgone revenue to be approximately \$4.6 million in ex-vessel value, or \$11.3 million in first wholesale value (see Section 1.6.1 of the Emergency Rule RIR

¹⁴ <http://alaskafisheries.noaa.gov/analyses/goatrawl-chinookpsc-rir0715.pdf>.

for additional detail). The Council's objective for the Emergency Rule was to restore lost harvesting opportunities to the maximum extent possible, while continuing to impose a limit on the use of Chinook salmon PSC in the GOA trawl fisheries that will not exceed the combined Chinook salmon PSC limits established under Amendments 93 and 97. NMFS determined that the Emergency Rule will not create conservation issues with regard to Chinook salmon, and that the maximum allowable amount of GOA Chinook salmon PSC (40,000 fish) would not be exceeded (refer back to Section 3.5.1.1). In fact, the Emergency Rule RIR states that it is "highly unlikely that this emergency rule will result in total Chinook salmon PSC from all GOA trawl groundfish fisheries exceeding 32,500 Chinook salmon," given estimated PSC levels in the 2015 pollock trawl fishery.

The third criterion (*immediate benefits outweigh the value of the normal rule making process*) is met because it was not possible to address the issue of the fishery closure without an Emergency Rule. Waiving the notice-and-comment rulemaking period serves the industry and public by allowing for harvest of the remaining 2015 flatfish and Pacific Cod fisheries. The Emergency Rule RIR notes that the Council is seeking an FMP amendment to address this, and similar, situations in a more permanent manner through the action analyzed in this document.

3.5.1.6 Future Use of Emergency Rules

The previous section describes the criteria that must be met to implement an Emergency Rule. *Because one of the criteria for an Emergency Rule is that recent events or circumstances must be unforeseen, NMFS is unlikely to have the ability to respond with an Emergency Rule after any future groundfish closures that are caused by reaching Amendment 97 PSC limits.* Given that stakeholders should not expect future relief from binding Amendment 97 limits through an Emergency Rule, policy makers are considering this action to provide greater flexibility, and to prevent fisheries from prematurely closing in the future.

3.5.2 GOA Groundfish Fleet and Harvest

3.5.2.1 Active Vessels and Participation

Table 12 is a matrix showing the participation of GOA trawl vessels in the 2014 fisheries. Both CVs and CPs are included in the table. As documented in other GOA trawl issues, vessels that fish pollock in area 610 tend to fish for Pacific cod, but very few fish for any other groundfish species. Participants in the 620 and 630 pollock fishery are more diversified and also fish for Pacific cod, flatfish, and rockfish. Many of these vessels are AFA qualified and participate in the BSAI fisheries throughout the year.

CPs primarily participate in the GOA rockfish and flatfish fisheries, because their effort in the pollock and Pacific cod fisheries is constrained under Inshore/Offshore regulations.

Table 12 CV and CP participation across target fisheries and seasons, 2014

Target/Area/Season	Pollock (610) A/B	Pollock (610) C/D	Pollock (620) A/B	Pollock (620) C/D	Pollock (630) A/B	Pollock (630) C/D	Pacific Cod A	Pacific Cod B	Rockfish Program	Deep Water Flats	Shallow Water Flats	Rex Sole	Arrowtooth Flounder	Flathead Sole	BSAI (Jan-June)	BSAI (July-Dec)
Pollock (610) A/B	17	13	4	4	4	4	17	1	1		1		1		1	
Pollock (610) C/D		22	3	5	3	5	19	1	1				1		5	2
Pollock (620) A/B			43	38	43	38	32	22	28	1	16	5	18	2	17	15
Pollock (620) C/D				43	38	43	31	23	27	1	17	5	17	2	19	16
Pollock (630) A/B					43	38	32	22	28	1	16	5	18	2	17	15
Pollock (630) C/D						45	31	23	27	1	17	6	18	3	21	17
Pacific Cod A							52	20	23		13	5	18	2	11	9
Pacific Cod B								23	17	1	12	4	14	2	9	8
Rockfish Program									33	2	14	4	17	1	18	18
Deep Water Flats										2					2	2
Shallow Water Flats											18	5	12	2	6	5
Rex Sole												7	6	1	3	3
Arrowtooth Flounder													23	3	9	8
Flathead Sole														3	1	
BSAI (Jan-June)															34	26
BSAI (July-Dec)																27

Notes: "Rockfish Program" includes all targets in that program; BSAI includes all groundfish targets.

Source: Comprehensive_Blend_CA data, provided by AKFIN

Table 13 shows the number of CVs and CPs that participated in various GOA trawl fisheries from 2003 through June 2015. The table is broken out to reflect the total number of vessels that would be impacted by the various Chinook salmon PSC limits being considered. In terms of communities and processors, the potential PSC reapportionments that impact the Western GOA have the greatest impact on the communities of King Cove and Sand Point. Reapportionments that impact the Central GOA primarily impact the community of Kodiak.

The CP portion of the table shows that in 2014 a total of 11 vessels fished in the GOA. More CPs fished in the Western GOA (8) than in the Central GOA (7). When Rockfish Program data are excluded in the Central GOA the number of vessels decreases to four. This represents the GOA CP flatfish fleet.

A total of 69 CVs fished with trawl gear in the GOA during 2014. Only one of these vessels did not participate in the pollock fishery. Fifty-five CVs fished in the non-pollock Non-Rockfish Program fisheries. CVs that fished in the Rockfish Program also participated in some other GOA trawl fishery. The table also indicates that most Western GOA catcher vessels fished in the pollock and Pacific cod fisheries. In the Central GOA a greater percentage of the fleet fished only in the GOA pollock fishery, since only 48 of the 62 vessels fished in the non-pollock fisheries.

Table 13 Active GOA trawl vessels by year, designation, area, and fishery

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Catcher/Processors													
GOA all fisheries	21	16	16	15	15	14	18	17	17	17	14	11	10
GOA pollock fishery*									3	1	3	2	
Non-pollock/Non-Rockfish Program	21	16	16	15	15	14	18	17	17	17	14	11	10
Western GOA all fisheries	16	15	13	11	13	11	14	13	14	15	10	8	8
Western GOA non-pollock fisheries	16	15	13	11	13	11	14	13	14	15	9	8	8
Central GOA all fisheries	15	11	12	12	9	10	12	10	8	8	8	7	6
Central GOA non-pollock/non-Rockfish Program	15	11	12	12	9	10	12	8	5	5	5	4	4
Central GOA/non-Rockfish Program	15	11	12	12	9	10	12	8	5	5	5	4	4
Catcher Vessels													
GOA all fisheries	92	77	79	74	72	73	71	67	68	70	69	69	67
GOA pollock fishery	73	68	66	65	59	61	62	63	62	67	64	68	57
GOA non-pollock/non-Rockfish Program	74	64	69	62	63	65	59	52	53	62	58	55	51
Western GOA all fisheries	40	33	37	34	37	29	31	29	26	32	30	27	23
Western GOA non-pollock	23	17	29	25	28	24	25	15	12	24	23	24	23
Central GOA all fisheries	63	57	51	48	41	46	40	43	51	62	58	62	51
Central GOA non-pollock fisheries	55	51	40	38	37	41	34	38	42	48	49	48	33
Central GOA non-Rockfish Program fisheries	63	57	51	48	41	46	40	43	51	62	58	62	51

* Reported catch was less than 400 mt for all 6 CPs from 2011 through 2014
Note: 2015 data reported through June

Table 14 focuses on the GOA early and late season pollock fisheries in the Western and Central GOA. The information is provided to give an indication of the number of vessels that could be impacted by a closure or reapportionment at different times of the year. That table shows that in more recent years the number of vessels fishing during the early seasons is similar to the number of vessels fishing pollock later in the year. This has not always been the trend, especially in area 620, where the number of vessels was typically greater in the later season fisheries.

Table 14 Number of GOA trawl vessels targeting pollock, 2004 through 2014

Year	Season	610	620	630	All GOA
2004	A/B	20	31	38	58
	C/D	21	41	32	61
2005	A/B	27	19	29	54
	C/D	23	46	38	63
2006	A/B	23	20	29	50
	C/D	26	44	25	64
2007	A/B	17	9	23	39
	C/D	20	36	25	54
2008	A/B	14	16	27	42
	C/D	15	36	23	52
2009	A/B	19	23	31	51
	C/D	17	32	33	50
2010	A/B	21	33	33	53
	C/D	22	36	36	55
2011	A/B	22	37	36	57
	C/D	20	40	31	53
2012	A/B	26	53	42	61
	C/D	22	39	33	59
2013	A/B	15	42	41	52
	C/D	21	40	37	57
2014	A/B	22	43	45	62
	C/D	17	43	43	56

Source: NMFS GOA Inseason Management Report, December 2014. Available at:
<http://nfpmc.legistar.com/gateway.aspx?M=F&ID=5f8a4fc3-cb62-437d-bb2b-e11fc2144311.pdf>

Table 15 focuses specifically on the number of CVs that targeted Pacific cod in the Western and Central GOA. This table closely reflects the number of vessels that fished in the non-pollock fishery in Table 12; the result should be expected since most of the CVs that fish species other than pollock in the GOA target Pacific cod as part of their annual fishing plan.

Table 15 Number of GOA trawl CVs targeting Pacific cod, 2004 through 2014

Year	WGOA	CGOA
2004	17	48
2005	28	38
2006	25	33
2007	27	34
2008	23	41
2009	25	34
2010	15	38
2011	12	41
2012	24	47
2013	23	45
2014	24	48

Source: NMFS GOA Inseason Management Report, December 2014. Available at: <http://npfmc.legistar.com/gateway.aspx?M=F&ID=5f8a4fc3-cb62-437d-bb2b-e11fc2144311.pdf>

3.5.2.2 Groundfish Harvest

Detailed information of GOA ABCs, OFLs, and TACs are presented on the NOAA Fisheries website¹⁵ going back to 1986. Annual catch data are also available¹⁶ on an annual basis for the GOA. The example provided in the footnote links to the 2014 data. Information from those two sources was used to generate Table 16 for the pollock, Pacific cod, and flatfish fisheries. The Council recommended TACs for 2015 and 2016 that are less than the ABCs for pollock, Pacific cod, shallow-water flatfish in the Western GOA, arrowtooth flounder, flathead sole in the Western and Central GOA, and Atka mackerel. The shallow-water flatfish, arrowtooth flounder, and flathead sole TACs are set to allow increased harvest opportunities.

The pollock fishery TAC remained relatively stable over the past three fishing years in the Western GOA, but the fleet had difficulties harvesting the quota in 2013 and 2014. The inability harvest their quota has resulted in some of the Western GOA pollock to be distributed to the Central GOA (§679.20(a)(5)(iv)(B)). The pollock TAC in the Central GOA has more than doubled since 2012, and the fleet has been successful in harvesting its allocation each year. The Pacific cod TAC has been relatively stable in all areas, with a modest increase in recent years. The fleet has harvested more than 85% of the TAC every year in the Central and Western GOA. The arrowtooth flounder TAC in the Central GOA was increased from 30,000 mt in 2011 to 75,000 mt in 2012. It has remained at that level to accommodate increased harvests in that fishery and ensure the TAC was not exceeded.

¹⁵ http://alaskafisheries.noaa.gov/sustainablefisheries/historic/specs/goa_hs1986-2014.pdf

¹⁶ http://alaskafisheries.noaa.gov/2014/car110_goa.pdf

Table 16 All gear types ABC, TAC, and catch for GOA pollock, Pacific cod, and flatfish fisheries, 2012 through 2014

Species	Area	2014				2013				2012			
		ABC	TAC	Catch	% Caught	ABC	TAC	Catch	% Caught	ABC	TAC	Catch	% Caught
Pollock	Shumagin (610)	36,070	30,884	13,364	43%	28,072	28,072	7,711	27%	30,270	30,270	27,893	92%
	Chirikof (620)	81,784	84,274	83,082	99%	51,443	51,443	53,112	103%	45,808	45,808	45,095	98%
	Kodiak (630)	39,756	39,756	42,757	108%	27,372	27,372	29,888	109%	26,348	26,348	25,987	99%
	WYK (640)	4,741	4,741	1,056	22%	3,385	3,385	2,940	87%	3,244	3,244	2,381	73%
	Total	174,976	174,976	140,259	80%	121,046	121,046	93,651	77%	116,444	116,444	101,356	87%
Pacific cod	W	32,745	22,922	21,686	95%	28,280	21,210	19,077	90%	28,032	21,024	18,374	87%
	C	53,100	39,825	40,219	101%	49,288	36,966	31,936	86%	56,940	42,705	37,776	88%
	E	2,655	1,991	318	16%	3,232	2,424	467	19%	2,628	1,971	339	17%
	Total	88,500	64,738	62,223	96%	80,800	60,600	51,479	85%	87,600	65,700	56,489	86%
Sablefish	W	1,480	1,480	1,200	81%	1,750	1,750	1,384	79%	1,780	1,780	1,397	78%
	C	4,681	4,681	4,729	101%	5,540	5,540	5,207	94%	5,760	5,760	5,327	92%
	WYK	1,716	1,716	1,669	97%	2,030	2,030	2,106	104%	2,247	2,247	2,033	90%
	Total	10,572	10,572	7,598	72%	12,510	12,510	11,944	95%	12,960	12,960	11,955	92%
Shallow-water Flatfish	W	20,376	13,250	246	2%	19,489	13,250	155	1%	21,994	13,250	153	1%
	C	17,813	17,813	4,499	25%	20,168	18,000	5,357	30%	22,910	18,000	3,869	21%
	WYK	2,039	2,039	2	0%	4,647	4,647	1	0%	4,307	4,307	0	0%
	Total	40,805	33,679	4,747	14%	45,484	37,077	5,515	15%	50,683	37,029	4,022	11%
Deep-water Flatfish	W	302	302	68	23%	176	176	20	11%	176	176	2	1%
	C	3,727	3,727	278	7%	2,308	2,308	215	9%	2,308	2,308	284	12%
	WYK	5,532	5,532	5	0%	1,581	1,581	3	0%	1,581	1,581	3	0%
	Total	5,126	5,126	351	7%	5,126	5,126	242	5%	5,126	5,126	291	6%
Rex Sole	W	1,270	1,270	126	10%	1,300	1,300	104	8%	1,307	1,307	215	16%
	C	6,231	6,231	3,450	55%	6,376	6,376	3,603	57%	6,412	6,412	2,210	34%
	WYK	813	813	1	0%	832	832	0	0%	836	836	0	0%
	Total	9,341	9,341	3,577	38%	9,560	9,560	3,707	39%	9,612	9,612	2,425	25%
Arrowtooth Flounder	W	31,142	14,500	1,895	13%	27,181	14,500	805	6%	27,495	14,500	1,233	9%
	C	115,612	75,000	34,326	46%	141,527	75,000	20,561	27%	143,162	75,000	19,328	26%
	WYK	37,232	6,900	52	1%	20,917	6,900	40	1%	21,159	6,900	28	0%
	Total	195,358	103,300	36,273	35%	210,451	103,300	21,449	21%	212,882	103,300	20,641	20%

Source: NMFS inseason management annual reports.

Table 17 focuses only on trawl catch in 2013 and 2014. This is particularly important for species that are taken with multiple types of gear, like Pacific cod and sablefish to compare information reported in Table 16. This table also provides some information on the catch in the rockfish fisheries. Other tables in this section exclude Rockfish Program catch unless it is noted that information is included. Rockfish Program catch is separated out in most tables because the Rockfish Program receives its own Chinook salmon PSC apportionment.

Table 17 GOA trawl CV catch by species, 2013 and 2014

Species	2013		2014	
	Retained	Total	Retained	Total
Pollock	91,184	93,562	138,480	139,791
Pacific Cod	19,384	21,694	23,208	26,667
Arrowtooth Flounder	16,066	21,158	32,418	35,650
Shallow Water Flatfish	5,279	5,497	4,136	4,560
Rex Sole	3,639	3,707	3,491	3,536
Flathead Sole	2,483	2,799	2,306	2,445
Deep Water Flatfish	140	223	237	343
Pacific Ocean Perch	12,177	13,181	15,989	17,615
Northern Rockfish	4,679	4,869	4,104	4,249
Dusky Rockfish	2,969	3,116	2,946	3,020
Rougheye Rockfish	326	336	507	534
Shortraker Rockfish	273	356	317	337
Thornyhead Rockfish	199	216	461	477
Other Rockfish	171	520	513	861
Sablefish	799	846	889	954
Atka Mackerel	846	1,273	965	1,033
Total	162,637	176,975	231,917	244,552

Table 18 and Table 19 provide information on the percentage of trawl vessel gross ex-vessel value generated by month for three categories of fisheries. The categories were selected to represent the impact closures of the pollock fishery and non-pollock fisheries could have at various times of the year. The Rockfish Program value was excluded because vessels in that fishery have a separate Chinook salmon PSC allocation. All fisheries other than pollock and Pacific cod are aggregated in the “other” target class. This was done to eliminate issues with reporting confidential data and because combining that class with Pacific cod represents the target fisheries in the non-pollock/non-Rockfish Program Chinook salmon apportionments.

Table 19 shows the cumulative percentage of gross ex-vessel revenue generated by the CV fleet in the each of the fisheries. In the Western GOA a closure of the non-pollock fishery would have little impact on the Pacific cod revenue after February. The modest revenue generated in the other fishery category would all be forgone if the fishery was closed prior to August.

Finally, Table 20 shows the percentage of total GOA trawl vessel revenue that was generated on average by month, area, and fishery. If a closure were to occur in a fishery, summing the percentages for that area would give a general idea of the historic amount of ex-vessel gross revenue generated after the closure occurred.

Table 18 Average percent of GOA CV fishery ex-vessel gross value generated by month and fishery, 2008 through 2014 (excludes Rockfish Program value)

Area	Targets	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
610	Other	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%
	Pacific cod	11%	80%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Pollock	2%	4%	25%	6%	0%	0%	0%	10%	24%	29%	0%	0%
610 Total		5%	28%	20%	4%	0%	0%	0%	7%	17%	20%	0%	0%
620	Other	0%	9%	3%	19%	15%	8%	14%	3%	5%	16%	8%	1%
	Pacific cod	15%	20%	38%	5%	0%	0%	0%	0%	8%	14%	0%	0%
	Pollock	1%	20%	50%	1%	0%	0%	0%	3%	10%	15%	1%	0%
620 Total		3%	19%	46%	2%	1%	0%	1%	2%	10%	15%	1%	0%
630	Other	0%	8%	7%	27%	8%	4%	7%	11%	6%	14%	6%	1%
	Pacific cod	31%	7%	22%	3%	0%	0%	0%	0%	26%	11%	0%	0%
	Pollock	1%	14%	18%	0%	0%	0%	0%	2%	27%	37%	1%	0%
630 Total		9%	10%	16%	9%	2%	1%	2%	4%	20%	23%	2%	0%
640	Other	0%	0%	0%	0%	0%	0%	94%	6%	0%	0%	0%	0%
	Pollock	0%	14%	73%	12%	0%	0%	0%	0%	1%	0%	0%	0%
640 Total		0%	12%	65%	10%	0%	0%	11%	1%	1%	0%	0%	0%
Total all areas		6%	17%	29%	6%	1%	1%	1%	4%	15%	19%	1%	0%

Source: Comprehensive_Blend_CA data, provided by AKFIN

Note: The “other” fishery category is all GOA target fisheries other than Pacific cod and pollock

Table 19 Running total percent of GOA CV fishery ex-vessel gross value generated by month and fishery, 2008 through 2014 (excludes Rockfish Program value)

Area	Targets	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
610	Other	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%
	Pacific cod	11%	91%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Pollock	2%	6%	31%	37%	37%	37%	37%	47%	71%	100%	100%	100%
610 Total		5%	32%	52%	56%	56%	56%	56%	63%	80%	100%	100%	100%
620	Other	0%	9%	12%	31%	47%	54%	68%	70%	76%	91%	99%	100%
	Pacific cod	15%	35%	73%	78%	78%	78%	78%	78%	86%	100%	100%	100%
	Pollock	1%	21%	71%	72%	72%	72%	72%	74%	84%	99%	100%	100%
620 Total		3%	22%	68%	71%	71%	72%	72%	75%	84%	99%	100%	100%
630	Other	0%	9%	15%	42%	50%	54%	61%	72%	79%	93%	99%	100%
	Pacific cod	31%	39%	60%	63%	63%	63%	63%	63%	89%	100%	100%	100%
	Pollock	1%	15%	33%	34%	34%	34%	34%	35%	62%	99%	100%	100%
630 Total		9%	19%	35%	44%	46%	48%	50%	54%	74%	97%	100%	100%
640	Other	0%	0%	0%	0%	0%	0%	94%	100%	100%	100%	100%	100%
	Pollock	0%	14%	87%	99%	99%	99%	99%	99%	100%	100%	100%	100%
640 Total		0%	12%	77%	87%	87%	87%	98%	99%	100%	100%	100%	100%
Total all areas		6%	23%	51%	57%	58%	59%	60%	64%	80%	98%	100%	100%

Source: Comprehensive_Blend_CA data, provided by AKFIN

Note: The “other” fishery category is all GOA target fisheries other than Pacific cod and pollock

Table 20 Percentage of CVs gross GOA ex-vessel revenue by fishery, area, month, and annually from 2008 through 2014

Area	Targets	1	2	3	4	5	6	7	8	9	10	11	12	Annual
610	Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Pacific cod	0.7%	4.8%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%
	Pollock	0.2%	0.6%	3.4%	0.8%	0.0%	0.0%	0.0%	0.0%	1.3%	3.3%	3.9%	0.0%	0.0%
610 Total		0.9%	5.4%	3.9%	0.8%	0.0%	0.0%	0.0%	1.3%	3.3%	3.9%	0.0%	0.0%	19.7%
620	Other	0.0%	0.1%	0.1%	0.3%	0.2%	0.1%	0.2%	0.0%	0.1%	0.2%	0.1%	0.0%	1.5%
	Pacific cod	0.7%	0.9%	1.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.4%	0.6%	0.0%	0.0%	4.3%
	Pollock	0.4%	6.0%	15.3%	0.3%	0.0%	0.0%	0.0%	0.8%	3.1%	4.6%	0.3%	0.0%	30.9%
620 Total		1.1%	7.1%	17.0%	0.8%	0.2%	0.1%	0.2%	0.9%	3.5%	5.4%	0.4%	0.0%	36.7%
630	Other	0.1%	1.1%	0.9%	3.5%	1.0%	0.5%	1.0%	1.5%	0.9%	1.8%	0.8%	0.2%	13.2%
	Pacific cod	3.5%	0.8%	2.4%	0.3%	0.0%	0.0%	0.0%	0.0%	2.8%	1.3%	0.0%	0.0%	11.1%
	Pollock	0.2%	2.4%	3.2%	0.0%	0.0%	0.0%	0.0%	0.3%	4.7%	6.6%	0.1%	0.0%	17.6%
630 Total		3.8%	4.3%	6.5%	3.8%	1.0%	0.5%	1.0%	1.8%	8.4%	9.6%	0.9%	0.2%	41.9%
640	Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
	Pollock	0.0%	0.2%	1.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%
640 Total		0.0%	0.2%	1.1%	0.2%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%
Total all areas		5.7%	17.0%	28.6%	5.6%	1.3%	0.7%	1.4%	4.1%	15.2%	18.9%	1.3%	0.2%	100.0%

Source: Comprehensive_Blend_CA data, provided by AKFIN

Note: The “other” fishery category is all GOA target fisheries other than Pacific cod and pollock

3.5.3 Primary GOA Trawl Groundfish Communities

Amendment 97 (NPFMC 2014) stated that the three communities where community-level impacts are most likely are King Cove, Sand Point, and Kodiak. Community profiles for each of these communities can be found on the Alaska Fisheries Science Center’s website (Himes-Cornell 2013a 2013b). These profiles provide a summary of each community’s structure and fishery dependence.

The magnitude of any effects will depend on the timing of any fishery closures and the foregone harvests caused by those closures. Closures that occur after the early Western GOA pollock and Pacific cod seasons will predominately impact Kodiak. Kodiak is substantially engaged in a wide range of Gulf groundfish trawl fisheries through both its local fleet and processors. Kodiak processing operations form the core of Central Gulf groundfish shore-based processing. Kodiak is especially vulnerable to adverse economic impacts from closures of Central Gulf non-pollock groundfish trawl fisheries. Pacific cod fisheries in late summer and early fall, and in the flatfish fisheries (including both shallow-water flatfish and arrowtooth flounder) late in the year are important to Kodiak. These fisheries fill important gaps in non-GOA-groundfish activity for both the fleet harvesting these species and processing plants that receive deliveries. A closure of the flatfish fisheries late in the year could create a range of challenges with respect to continuity of operations and utilization of processing labor in Kodiak. For Kodiak shore-based processors, flatfish (year-round) accounted for roughly 10 percent of combined flatfish and other groundfish first wholesale gross revenues on an annual average basis in recent years, and roughly 5 percent of first wholesale gross revenues for all species combined.

Although non-pollock groundfish fisheries serve an important role in King Cove and Sand Point economies, those communities are likely to be largely unaffected by any closure that occurs after the Pacific cod A season, as the CV sector has little involvement in any other Western GOA non-pollock trawl fisheries. As a consequence, the impacts of any, except for the most constraining limits, on Chinook PSC to King Cove and Sand Point are likely to be minimal. In most other Alaska communities, the scope of overall impacts anticipated to result from any of the management alternatives assessed for the proposed

Chinook PSC limits, however, community-level impacts would likely not be discernible for most of the engaged communities.

3.6 Impacts of Alternative 1 – No Action

The no action alternative would maintain the existing management structure, wherein Chinook salmon PCS may only be reapportioned from the Rockfish Program CV sector to the non-pollock Non-Rockfish Program CV sector on October 1 and November 15. Even then, a rollover could only occur if there is unused Chinook salmon PSC in the Rockfish Program CV sector. If NMFS determines that more than 150 Chinook salmon are available in the Rockfish Program CV sector, any Chinook salmon PSC above that amount may be reapportioned to the non-pollock Non-Rockfish Program CV sector on October 1; any remaining Rockfish Program Chinook PSC would be reapportioned to the Non-Rockfish Program CV sector upon the Rockfish Program's season end-date of November 15.

This year (2015) is the first year that reapportionments from the Rockfish Program are allowed, under Amendment 97. Based on the most recently available fishery data, NMFS Inseason management staff is preparing to reapportion approximately 275 Rockfish Program Chinook salmon PSC to the non-pollock Non-Rockfish Program CVs. This year, any reapportionment from the Rockfish Program would be additional to 1,600 Chinook salmon that were made available to that fishery under the August 10 Emergency Rule. Because 2015 is the first year in which a Rockfish Program rollover could occur, there is no historical trend by which to estimate the expected size of an annual rollover for the fall non-pollock Non-Rockfish Program CV sector. The analysis prepared for Amendment 97 examined historical data on Chinook salmon PSC use in the Rockfish Program CV sector, and concluded that an October 1 rollover would have occurred in five of the six years from 2007 through 2012. The largest of those rollovers would have been 682 Chinook salmon PSC, and the smallest would have been 85 Chinook salmon PSC.¹⁷ The Amendment 97 Rockfish Program rollover provides somewhat limited relief for a non-pollock trawl fishery that has been closed, given that no rollover could occur prior to October 1 and that the amount of the rollover is dependent upon PSC avoidance in the Rockfish Program fishery. Moreover, after deducting any overage from the PSC event that caused the closure, NMFS would have to estimate non-pollock effort to determine if the anticipated rollover amount is sufficient to reopen the fishery at all.

In past years, the majority of Chinook salmon PSC has been taken in the Central GOA, in part due to greater overall effort levels in that area. During 2015, more than one-third of the PSC was taken in the Western GOA. This deviation from the historical trend has been attributed to several factors: changes in observer coverage, changes in fishing patterns, and higher PSC rates (number of Chinook salmon per metric ton of groundfish catch). Together these factors resulted in the GOA Chinook salmon PSC limit for the non-pollock Non-Rockfish Program CV sector to be exceeded; the fishery closed on May 3, 2015.

In preparing an RIR for the Emergency Rule to reopen the GOA non-pollock Non-Rockfish Program CV sector, NMFS estimated that the closure would have prevented the harvest of 13,000 mt to 15,000 mt of

¹⁷ As a caveat, it is important to remember that those retrospective figures are not a reliable indicator of the rollover amount in any given future year; Chinook salmon PSC levels are highly variable from year to year, and those data come from years when the Rockfish Program CV sector was not fishing under a Chinook hard cap (meaning that the sector might have been more concerned with actively avoiding halibut PSC rather than Chinook PSC).

groundfish over the remainder of 2015. NMFS estimated that the forgone revenue from that closure would have been approximately \$4.6 million in ex-vessel value, or \$11.3 million in first wholesale value. Based on information presented in Table 20, almost all of the forgone revenue impact would have been realized by the stakeholders who are reliant on the Central GOA non-pollock Non-Rockfish Program CV fisheries. (These estimates are specific to the 2015 fishing year.)

Assuming that skippers and crew members are paid roughly 40% of the gross ex-vessel value of catch (NMFS 2015), crew members working on CVs that deliver to Kodiak would have lost approximately \$1.8 million in pre-tax income. That money would have been spent in Kodiak and in other communities within and outside of Alaska.

In the absence of an Emergency Rule, processors would have lost approximately \$11.3 million in first wholesale gross revenue. These reductions would primarily be distributed among the 13 groundfish processors in the Kodiak Borough (NPFMC 2014). The reduction in trawl deliveries would also impact plant workers. Workers were laid off when the closure was implemented. A significant proportion of the Kodiak processing work force is made up of permanent residents. Those individuals realized some loss of income, and that loss would have been greater if the Emergency Rule had not allowed the fall non-pollock trawl fisheries to reopen. While Kodiak plants – with their relatively higher proportion of resident workers – may incur fewer expenses related to employee room and board, they are adversely affected by unpredictable temporary shut-downs that reduce work force morale, community stability, and the operators' ability to retain quality long-term employees.

The Kodiak Island Borough Shore-Based Raw Fish Severance Tax is set a 1.075% of ex-vessel value. Assuming the forgone revenue calculated in the Emergency Rule (\$4.6 million) would have all been sold to processors within the Kodiak Borough, the foregone borough tax revenue would have been about \$50,000. This represents roughly 3% of the Raw Fish Severance Tax¹⁸ that was collected in 2014.

It is anticipated that harvesters would learn how to avoid similar situations in the future, especially in regards to the impacts of non-representative fishing when observers are onboard vessels. Because Chinook salmon PSC levels are difficult to predict, it is not assumed that 2015 PSC rates and conditions will typify the fishery in all future years. It is also possible that fishermen in the Western GOA will modify their fishing patterns to better avoid Chinook salmon PSC in the future.

Since 2015 is the first year that the GOA Non-Rockfish Program CV sector is fishing under the Amendment 97 non-pollock Chinook salmon PSC limits, there is little track record to upon which to base an estimate of how often and how early in the year the fishery might be closed. The closure that occurred on May 3, 2015 fell near the earliest anticipated closure date that was considered in the Amendment 97 impact analysis, so the impacts described in the RIR for the 2015 Emergency Rule could be considered a reasonable analogue for the “worst case” scenario for a future closure. When Amendment 97 was implemented, the Council acknowledged that the apportionment to the non-pollock Non-Rockfish Program CVs had the potential to be the most limiting of any Chinook PSC apportionments. The allotment of 2,700 Chinook salmon was close to the long-term historical average PSC use in that sector, and the limit was exceeded in roughly half of the years that were used as a basis to establish the limit. The

¹⁸ <http://www.kodiakak.us/DocumentCenter/View/7113>

Council recommended a limit that was close to the sector’s historical average PSC use because the sector does not operate under a catch share program, and the limit was intended to incentivize maximum effort to avoid Chinook salmon.

Participants in the Central GOA non-pollock trawl fishery have worked to develop voluntary cooperative structures, often out of necessity, so that the fishery could be prosecuted in an orderly manner. The Kodiak-based CV fleet has developed temporary voluntary agreements for the purposes of minimizing PSC during high-encounter periods and to moderate effort as a seasonal TAC limit is approaching. In some cases, these efforts have had limited success because it is not possible to limit effort by vessels that are not willing to abide by voluntary, non-binding agreements.¹⁹ When vessels break with the voluntary cooperative fishing plan, cooperative participants have a reduced incentive to limit their effort or maintain a stand-down. Voluntary management measures have often been a challenge in Regulatory Area 620 because that area can be feasibly prosecuted by participants that home-port in either the Western or the Central GOA. These challenges are among the reasons that the Council is currently considering development of a “GOA Trawl Bycatch Management Program,” which, in its current form, would establish a formal cooperative structure for both the pollock and non-pollock trawl fisheries.

If Chinook salmon PSC limits constrain groundfish harvest on a consistent annual basis, the Council and NMFS might determine that it is appropriate to review the limits established by Amendment 97 to determine whether they are practicable and consistent with National Standards 1 and 9. National Standard 1 states that conservation and management measures shall prevent overfishing while achieving optimum yield on a continuing basis. National Standard 9 states that management measures shall, to the extent practicable, minimize bycatch and, to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

3.7 Impacts of Alternative 2 – Allow Inseason Reapportionment

Alternative 2 would provide regulatory authority for NMFS to make inseason reapportionments of GOA Chinook salmon PSC that is projected to be unused in the sector to which it was initially apportioned under Amendments 93 and 97. Chinook salmon PSC could be moved to another sector that is facing a PSC limit constraint. Multiple reapportionments could be made in the course of a single year, and NMFS would have the ability to move Chinook PSC back in the sector from which it was previously reapportioned if that fishery were to face an unexpected constraint later in the year. NMFS would not expect to take the latter action described, as inseason managers would exercise caution in reapportioning PSC from a sector in which a later constraint might occur. The GOA trawl sectors affected by this action would be the directed pollock fishery (CVs), Rockfish Program CVs, non-pollock Non-Rockfish Program CVs, and Non-Rockfish Program CPs. The Amendment 97 procedures that allow inseason rollovers from the Rockfish Program CV sector to the non-pollock Non-Rockfish Program CV sector would not be modified under this action. The options under the action alternative considered in this document would limit the scope of NMFS’s authority to reapportion Chinook salmon PSC to or from specific GOA trawl sectors, or would limit the maximum amount that can be reapportioned.

¹⁹ Industry-led catch sharing plans in the Central GOA have failed in the past due to outside effort. The Area 620 pollock fishery in 2012 (“C” season) and 2013 (“D” season) were thought to have resulted in higher Chinook PSC when the catch share plan fell apart (J. Bonney. 2015. Alaska Groundfish Data Bank. Pers. Comm.).

Unlike many allocation decisions that the Council and NMFS face, the reapportionment of Chinook salmon is not expected to have negative impacts on any group of groundfish harvesters. This action would allow some of the overall GOA Chinook salmon PSC limit that has been set in regulation (32,500 Chinook salmon per year) to be reapportioned from a sector with a projected excess of PSC to a sector that is constrained by its PSC limit. If the sector receiving the apportionment does not need the entire amount, it could be reapportioned back to the original sector later in the year. If no sector is determined to have excess Chinook salmon PSC available under the limit that is set for it in regulation, a sector that has reached its limit would not receive an inseason reapportionment and would be closed to directed fishing. As noted in Sections 3.5.1.5 and 3.5.1.6, GOA trawl sectors should not anticipate relief from constraining PSC limits through future Emergency Rule actions.

The proposed action could reduce fishermen's uncertainty regarding their ability to prosecute trawl fisheries under the existing PSC limits. The likelihood of a fishery closure would be reduced under this action. However, participants in one sector might be concerned about some of their initial PSC limit being reapportioned to another sector in which they do not participate. That concern would stem from the risk that the fisheries in which they participate could experience unexpectedly high PSC levels later in the year, after a reapportionment *from* their sector has been made. Such a scenario would not necessarily constitute a pure benefit transfer, as many individuals participate in more than one of the sectors defined in this analysis. For example, many Central GOA CVs trawl for pollock, participate in a Rockfish Program cooperative, and also prosecute GOA non-pollock fisheries throughout the year. One user group that might be the most concerned about reapportionments from their sector would be Central GOA CVs that have a high dependency on the directed pollock fishery, and thus would receive no benefit from a reapportionment to the non-pollock fisheries. That said, most CVs that fish GOA pollock in the C and D seasons are also active in other GOA trawl sectors; pollock vessels that tend to focus on the early-season fisheries (A and B seasons) would be less exposed to the impact of a PSC closure that occurred mid-year.

This analysis does not attempt to forecast the actual amount of Chinook salmon PSC that might need to be reapportioned to a given sector. Quantitative impacts are, at this stage, limited to the example of the 2015 non-pollock Non-Rockfish Program CV closure as an example of a high-impact scenario. The process that NMFS Inseason Management would use to determine the necessary and available reapportionment amount is described in Section 3.5.1.4. Based on that process, the number of Chinook salmon that would need to be reapportioned will vary annually and by sector, depending on factors such as effort, projected PSC rates, and the amount of TAC remaining in the fishery or season. Inseason managers will synthesize that information and use professional judgment to determine the amount of Chinook salmon PSC to reapportion. Based on the uncertainty associated with a sector's PSC demand over the remainder of a year, Inseason Management is expected to take a conservative approach that minimizes potential adverse impacts on the sector from which initial PSC apportionments were reapportioned. NMFS staff will engage sector participants and representatives directly in order to understand their anticipated fishing patterns and effort. The most vulnerable set of stakeholders would likely be individual harvesters that participate in the sector that is "funding" the reapportionment, but do not participate in the fishery that receives the reapportionment. For example, Western GOA pollock participants are less likely to benefit from PSC being reapportioned from the pollock sector to the non-pollock Non-Rockfish Program CV sector, since the latter fishery is primarily prosecuted by trawl vessels

based in the Central GOA. Those Western GOA participants tend to have less financial dependency upon Federal fisheries later in the year, after a reapportionment would have occurred; nevertheless, Western GOA trawlers might view inseason reapportionments as a limit on their ability to increase effort in fisheries that occur after March.

Options that provide the most flexibility are likely to result in the greatest opportunity for this action to achieve the goals defined in the Purpose and Need statement. Increased flexibility to access Chinook salmon PSC from various apportionments allows NMFS Inseason Management to determine the best course of action to facilitate the achievement of optimum yield. If it appears that a sector is not acting in manner consistent with the overall goals and objectives of the FMP, agency staff would have the option of not reapportioning Chinook salmon PSC, and allowing a fishery close under the hard cap. Under Alternative 2, NOAA Fisheries staff must determine:

- When sufficient Chinook salmon PSC is available to be reapportioned, based on the anticipated effort in the fisheries;
- When fisheries are anticipated to reach their Chinook salmon PSC limit, and how much additional Chinook salmon PSC is needed to keep the fishery open; and
- Whether it is appropriate to reapportion Chinook salmon to a sector based on their fishing behavior and the steps that the sector has taken to minimize PSC usage to the extent practicable.

Based on the 2015 fishing year, NMFS determined that 1,600 Chinook salmon were needed to reopen the GOA non-pollock Non-Rockfish Program CV trawl fisheries. Because the closure occurred early in the fishing year, that amount of Chinook salmon PSC is used as a benchmark for the amount of Chinook salmon that might need to be reapportioned in a future year. While this amount is used as the benchmark in this discussion, it is acknowledged that future reapportionments may differ from this amount; sufficient data to generate reliable estimates are not currently available. Additional years of data fishing under the new hard caps and the restructured Observer Program are critical to developing better estimates. It is also difficult to predict how TACs will change in the future. Higher TACs and PSC usage rates, especially in the pollock and Pacific cod trawl fisheries, will impact the amount of Chinook salmon PSC that is used in the pollock and the non-pollock fisheries. Pollock TACs have been increasing in recent years, and the increased effort to harvest those fish could result in more Chinook salmon being taken, even if PSC rates remain similar to the levels observed prior to the TAC increase.

Existing Chinook salmon PSC apportionments and data on historical PSC use would suggest that reapportionments between non-pollock CVs and non-pollock CPs are unlikely to provide substantial benefits most years. Table 3 shows that in years that the CV or CP sector would benefit from a reapportionment of Chinook salmon PSC, the other sector was unlikely to have an excess that would meet the constrained sector's needs. In years that one sector did have sufficient Chinook salmon PSC to provide an inseason reapportionment, the other sector was not constrained by its PSC limit.

Reapportionments between the pollock fishery and the non-pollock Non-Rockfish Program CV sector would primarily benefit the non-pollock sector. Since Amendment 93 went into effect in 2012, the Chinook PSC apportionment to the pollock fishery has been sufficient to allow the fishery to remain open as long as TAC is available and one of the four seasons is open for directed fishing. Looking back at

historical data, including years prior to the implementation of Amendment 93, the pollock fishery took at least 8,000 fewer Chinook salmon than the 25,000 fish limit in every year except 2010. The Inshore pollock fishery reached the cap level in 2010 primarily because of one week when exceptionally high Chinook PSC was recorded; had that week been an “average” week, the PSC limit would not have been constraining in that year. Therefore, it seems likely that the GOA pollock sector would be able to provide at least 1,600 Chinook salmon to the non-pollock Non-Rockfish Program CV sector most years. Recall that 1,600 Chinook salmon was the amount required in 2015, and is assumed to represent a high annual level of demand for additional Chinook salmon PSC in the non-pollock Non-Rockfish Program CV sector.

As discussed under the No Action Alternative, reapportionments from the Rockfish Program CV sector are not available until October 1. Because this is the first year of the program, the Council has limited information about the nature of potential future reapportionments from that fishery. The projected 2015 reapportionment of about 275 Chinook salmon to the non-pollock Non-Rockfish Program CV sector is expected to provide a buffer with the 1,600 Chinook salmon from the Emergency Rule. Had only the Chinook salmon from the Rockfish Program been available in 2015, it would have provided little relief to the community of Kodiak, Central GOA processors, and the Central GOA CV fleet. Future reapportionments from the Rockfish Program may provide a buffer against reaching the Chinook salmon limit, but it is unlikely that reapportionments from the Rockfish Program will provide sufficient relief to Central GOA stakeholders if early season closures occur in the non-pollock Non-Rockfish Program CV sector in the future. Recall, also, that rollovers from the Rockfish Program would first be debited to cover any Chinook PSC overage that occurred in the non-pollock sector if that fishery had been closed; only after covering any such overage would rolled-over PSC be made available to support Pacific cod and flatfish fisheries.

While recent data indicates that the Western GOA pollock fishery has been well under its Chinook salmon PSC limit, that sector has had difficulty harvesting the entire Area 610 pollock TAC in recent years. The underharvest of Western GOA pollock has been attributed, anecdotally, to difficulty finding fish that are aggregated in large schools. When pollock are more difficult to catch, harvesters may spend more time towing their nets through the water, which could result in higher PSC rates. Though uncertain, it is possible that increased abundance of harvestable pollock could increase Chinook salmon PSC. More abundant pollock would require relatively shorter tows to fill the codends. However, even if rates are lower, increasing the total pollock catch might increase the gross number of Chinook salmon PSC. The uncertainty associated with annual Chinook salmon PSC rates makes it difficult to project catch into the future. Options that allow NMFS Inseason managers to review the fishery during the year and make projections based on observed fishery conditions are more reliable for determining the appropriate timing and amount of reapportionments.

The analysts assume that the “uncertainty pool” buffer from Amendment 97 is not affected by this action. The calculation of the buffer will still be based on PSC performance relative to the initial apportionment of 2,700 Chinook salmon to the non-pollock Non-Rockfish Program CV sector. If the aggregate Chinook salmon PSC taken by vessels operating in that sector is less than 2,340 Chinook salmon, the sector would fish under a total apportionment of 3,060 Chinook salmon in the following year. This buffer essentially makes a limited amount of past PSC savings available for use in the following year if unusually high PSC

rates occur. The amount of Chinook PSC in the “buffer” would be less than or equal to the number of salmon avoided during the previous year – relative to the base PSC limit – so there is no possibility that average annual PSC in the sector would exceed 2,700. In that sense, the buffer would not adversely affect the Chinook salmon resource, provides the fleet with flexibility in some cases, and, most importantly, keeps the fleet focused on achieving Chinook PSC levels that out-perform the maximum amount allowed. To the latter point, a sector’s PSC avoidance efforts might benefit that sector in the future in the form of an earned “insurance” policy against the impacts of a year of abnormally high PSC encounter. As noted throughout the analyses supporting Amendment 97, Chinook salmon PSC is known to be highly variable, and not all of the factors that result in a high-encounter year can be perfectly controlled by the harvest sector.

Because NMFS must determine the availability and size of any Chinook salmon PSC reapportionment, the agency would need to consider possible tensions that a reapportionment could create between vessels that fish only for early-season pollock and Pacific cod and vessels that fish pollock, Pacific cod, or flatfish later in the year. Flatfish and Pacific cod fisheries are not only limited by Chinook salmon PSC, but also by TACs and halibut PSC. NMFS would need to consider the fact that reapportioning Chinook salmon to support a flatfish fishery might not be an efficient use – or worth the risk of causing a closure in the fishery from which the PSC was taken – because that flatfish fishery is likely to be constrained by halibut PSC.

During years in which a constrained sector receives a Chinook salmon PSC reapportionment, the flexibility provided by Alternative 2 is likely to increase the aggregate amount of Chinook salmon that are taken across all GOA trawl fisheries relative to what would have been allowed under Alternative 1. Despite the modest increase in the number of Chinook salmon PSC taken in GOA trawl fisheries under this action alternative, it is still expected that trawl operators will minimize Chinook PSC to the extent practicable. Any marginal PSC increase should be evaluated in light of the most recently available information on the stock of origin for Chinook salmon taken in the GOA trawl fisheries. The State of Alaska analyzed 2,029 Chinook salmon PSC samples collected during the 2013 GOA Rockfish Program trawl fishery; those samples indicated that the U.S. West Coast stocks (Washington/Oregon/California) made up the largest portion of Chinook PSC taken in that GOA fishery (60%), with smaller contributions by stocks from British Columbia (31%), Coastal Southeast Alaska (6%), and the Northwest GOA (2%) (Guyon 2015). Genetic samples taken from 279 Chinook salmon PSC taken during the 2013 GOA arrowtooth flounder trawl fishery concluded that the sampled PSC came from U.S. West Coast (43%), British Columbia (39%), Coastal Southeast Alaska (14%), and Northwest GOA (3%) stocks (*ibid.*). The Guyon study also sampled Chinook salmon from an April 2013 haul that used a salmon excluder device in the Shelikof Strait near Kodiak Island. The stock composition of Chinook salmon PSC from that haul showed that the majority of those 95 Chinook salmon originated from the U.S. West Coast (79%), British Columbia (17%), and Coastal Southeast Alaska (3%).

The Guyon study indicated that, depending on the fishery studied, less than 10% to 20% of the sampled Chinook salmon taken as PSC originated from Alaska stocks. Assuming that 1,600 additional Chinook are taken (based on the 2015 Emergency Rule) one might expect that fewer than 300 of those fish would have originated in Alaska. The remaining impact on stocks would accrue to other areas of the U.S. West Coast and Canada. Chinook salmon stocks, no matter their stock of origin, must be avoided to the

extent practicable. The reduction in PSC levels benefits directed salmon fishery users (commercial, tribal, subsistence, and hatchery), as well as consumers of Chinook salmon. The proposed action is expected to slightly increase the number of Chinook salmon taken as PSC in years when reapportionments occur. It is known that Chinook salmon are highly valued by commercial salmon harvesters, sport fishermen, subsistence users, species that prey upon salmon (including ESA listed species), and salmon stocks that are protected under the ESA and prioritized for conservation and recovery. However, the analysts cannot estimate the change in the number of Chinook salmon that would accrue to each user group as a result of this action.

Selecting **Option 1** would only allow NMFS to reapportion Chinook salmon PSC between the GOA Inshore pollock sector and the Non-Rockfish Program CV sector. As discussed above, this option would limit the agency's flexibility to reapportion Chinook salmon from other fisheries (i.e., the Rockfish Program CV sector and the CP sector) when Chinook salmon PSC limits constrain these fisheries. The primary beneficiary of this option would be the non-pollock Non-Rockfish Program CVs. Based on historical performance and the amount of the non-pollock Non-Rockfish Program CV sector's PSC limit relative to its expected use, it is unlikely that Chinook salmon PSC could be reapportioned from that sector to the pollock fishery in most years. Given the small size of the non-pollock sector's PSC apportionment, relative to that of the pollock fishery, any reapportionment that was available would provide a relatively small expected benefit. Moreover, any PSC reapportionment to the pollock fishery might have to be divided between the Western and Central GOA pollock sectors if both areas were projected to exceed their limits; NMFS would likely determine the relative size of the reapportionments to those sectors based on expected effort.

The Chinook salmon PSC that would not be available for reapportionment under Option 1 relative to Alternative 2 with no option selected – i.e., PSC that is initially apportioned to the Rockfish Program CV sector and the GOA CP sector – is expected to have little impact most years. Nevertheless, NMFS has indicated that it anticipates the possibility of making multiple small reapportionments throughout a PSC-constrained year. During some years, depending on the availability of excess Chinook PSC in the GOA pollock fishery, those small reapportionments could be important to the constrained non-pollock Non-Rockfish Program CV sector.

Selecting **Option 2** would not limit the sectors from which Chinook salmon PSC could be reapportioned, nor would it limit the sectors that could receive an inseason reapportionment. This option would limit the amount of Chinook salmon PSC that could be reapportioned from any given sector to no more than 10%, 20%, or 30% of that sector's initial annual Chinook PSC apportionment. Table 21 shows the maximum number of Chinook salmon that could be reapportioned from the Inshore pollock fishery PSC limit. Presuming that the most likely reapportionment would flow from the pollock fishery, any of the three suboptions would allow up to (and beyond) 1,600 fish to be reapportioned. The Council may wish to clarify whether the suboptions apply at the area-level for the GOA pollock sector; in other words, there could be separate maximum reapportionment amounts for the Western and Central GOA. Under any of the suboptions, the number of Chinook salmon that could be reapportioned from the Central GOA exceeds the 1,600 fish that were deemed necessary to reapportion through the 2015 Emergency Rule. If only the Western GOA had excess Chinook salmon at the time that a reapportionment was required, the 30% limit is the only option that would have allowed for a 1,600 fish reapportionment.

Table 21 Reapportionment limits of 10%, 20%, or 30% of the Inshore pollock fishery Chinook salmon PSC limit

	CG	WG	GOA Total
Status Quo Limits	18,316	6,684	25,000
10% reapportionment limit	1,832	668	2,500
20% reapportionment limit	3,663	1,337	5,000
30% reapportionment limit	5,495	2,005	7,500

Table 22 reports the maximum number of Chinook salmon that could be reapportioned from the non-pollock Non-Rockfish Program Chinook salmon limit under each of the three suboptions. The limits from the CV sector result in a maximum reapportionment of 810 Chinook salmon PSC. The CP sector apportionment is larger, so the maximum number of Chinook salmon that could be reapportioned from that sector is 1,080 fish. It is assumed that the Rockfish Program reapportionment rules would not be changed under this action, so there is no limit on the amount of the initial apportionment that could be reapportioned. As stated earlier, it is unlikely that PSC would be reapportioned from CVs to CPs, because in years that one sector would have been constrained by the PSC, the other sector would have been close to its limit as well. Based on recent data, it is unlikely that the Rockfish Program CV sector would require additional Chinook salmon PSC in most years. As such, it is reasonable to assume that in years during which PSC could be reapportioned from the non-pollock sectors, those Chinook PSC would likely be made available to the pollock fishery.

Table 22 Reapportionment limits of 10%, 20%, or 30% of the non-pollock Non-Rockfish Program CV Sector Chinook salmon PSC limit

Non-pollock fisheries				Rockfish
	CV	CP	Total	Program
Status Quo Limits	2,700	3,600	6,300	1,200
10% reapportionment limit	270	360	630	
20% reapportionment limit	540	720	1,260	
30% reapportionment limit	810	1,080	1,890	

There are two ways to consider the purpose of the capping the amount of an initial PSC limit that can be reapportioned. The first conceivable purpose is to provide some level of protection for the sector that received in the initial apportionment, and would see some of its Chinook salmon PSC made available to another sector. Limiting the amount of Chinook salmon that may be reapportioned to another sector could provide some protection against reapportioning too much PSC early in the year, and not having enough Chinook salmon PSC available at the end of the year. That potential negative outcome should be mitigated through NMFS's flexibility to reapportion Chinook back to the original sector. It is assumed that NMFS would take a precautionary approach when determining the needs of a sector to avoid this problem. However, the uncertain nature of Chinook salmon PSC makes reapportionments difficult to determine with a high degree of certainty. NMFS staff have indicated that they foresee several sequential reapportionments of small PSC amounts taking place, thus reducing the likelihood of large reapportionments flowing out of, and back into, a given sector. Small apportionments will allow NMFS staff to gather more information regarding the characteristics of that year's fishery, as it becomes

available to managers. The characteristics of both sectors involved in a reapportionment are likely to change over the course of the season, as projected effort levels and the amount TAC remaining decline. The second conceivable purpose would be to limit the maximum amount of PSC that a sector may receive. Allowing large reapportionments to one sector might undermine the Council's intent in capping that sector at a certain level in the first place. Even with a 10% reapportionment limit, the non-pollock Non-Rockfish Program CV sector could receive over 3,000 Chinook salmon PSC from all other sectors, combined; that would more than double the sector's annual PSC limit. The Council may wish to express to the Regional Administrator whether there is a maximum reapportionment amount that can flow to any one sector. That maximum amount could be expressed in terms of either Chinook salmon PSC (number of fish), or a proportion of the sector's initial annual apportionment. NMFS could make reapportionment decisions on a case-by-case basis, considering how much flexibility the Council intends each sector to have. In the limit, allowing maximum reapportionments could undermine the fleet's incentive to maintain an aggregate PSC level of fewer than 32,500 Chinook salmon.

Option 3 would prohibit the reapportionment of Chinook salmon PSC from any CV sector to the non-pollock Non-Rockfish Program CP sector. (This assumes that, for the purpose of this action, the Council considers the GOA pollock fishery as a CV fishery.²⁰) The principal impact of this option would be to limit the reapportionment of Chinook salmon PSC from pollock fishery to the non-pollock CP sector. A secondary impact would be the limitation Chinook PSC reapportionments from the non-pollock Non-Rockfish Program CV sector to the CP sector. As stated above, based on historical data, excess Chinook salmon PSC is not typically available in years during which the CP sector would need to access more than its base-limit of 3,600 Chinook salmon.

The trawl CPs that operate in the GOA are, for the most part, Amendment 80 vessels.²¹ With one exception, these vessels fish within a cooperative structure, and have the opportunity to share information and implement fishing plans to harvest within GOA sideboard and PSC limits. Participation in flatfish fisheries is limited to the F/V Golden Fleece and Amendment 80 vessels that are "flatfish exempt" (meaning that they are permitted to target GOA flatfish based on their participation levels prior to the implementation of Amendment 80). The F/V Golden Fleece "may not be used for directed groundfish fishing for northern rockfish, pelagic shelf rockfish, pollock, Pacific cod, or Pacific ocean perch in the GOA and in adjacent waters open by the State of Alaska for which it adopts a Federal fishing season" (§679.92(d)(1)(i)). In recent years, four CPs have harvested Central GOA flatfish (Table 13). These Amendment 80 vessels are members of the same cooperative, and have the opportunity to coordinate their fishing activity. Because these vessels have the opportunity to work within a cooperative structure to minimize Chinook salmon PSC, they are in a better position to stay within their PSC limit than the CVs that fish under a limited access system. In addition to the flatfish CPs, seven other CPs fish for rockfish in the Western GOA (outside of the Rockfish Program). These vessels are also members of Amendment 80 cooperatives, and have the ability to coordinate their fishing activities to avoid Chinook salmon PSC. Given these factors, restricting Chinook salmon PSC reapportionments from the CV sector to the CP sector is not expected to have a significant impact on the ability of CPs to harvest the available TAC.

²⁰ While this is generally true, as discussed in Section 3.5.2, there have been six CPs that have reported minimal landings in the inshore pollock fishery since 2010.

²¹ The F/V Golden Fleece qualified as an Amendment 80 vessel, but opted out of the BSAI program because it primarily prosecutes GOA fisheries.

3.8 Summation of the Alternatives with Respect to Net Benefit to the Nation

This section does not attempt to calculate annual estimates of net benefits to the Nation for each Alternative and Option. Net economic benefits are the estimated difference in the sum of net present values of producer and consumer surpluses for each alternative, relative to the No Action Alternative. By that definition, net benefits to the Nation would not change under the No Action alternative. Sectors would be closed to directed fishing when they reach their Chinook salmon PSC limit. The only reapportionment that could occur is from the Rockfish Program Catcher Vessel Sector on or after October 1, if sufficient Chinook salmon PSC is available.

Alternative 2 would provide NMFS with greater flexibility to reapportion the existing GOA Chinook salmon PSC limit of 32,500 fish between sectors. The responsibility to reapportion Chinook salmon will require the Regional Administrator to consider the costs and benefits of each reapportionment on a case-by-case basis, using the best available data on projected effort, PSC rates, and remaining TAC. NMFS's rationale for the 2015 Emergency Rule included an estimated forgone gross revenue in the non-pollock Non-Rockfish Program CV sector of approximately \$4.6 million in ex-vessel value and \$11.3 million in gross first wholesale value. Those values are not intended to represent producer surplus. However the increase in gross revenue for those fisheries is likely to translate to increased net benefits for the groundfish harvesting and processor sectors. Consumer surplus is not estimated, but to the extent that marginally more products from these fisheries are sold to U.S. consumers, as a result of allowing PSC reapportionments, the action alternative is expected to increase net U.S. consumer surplus. These benefits would be somewhat mitigated by losses to directed Chinook salmon harvesters and processors²², as well as stakeholders in the commercial, recreational, and subsistence Chinook salmon fisheries. In summation, NMFS's ability to make inseason reapportionments of Chinook salmon is anticipated to increase total net benefits to the Nation.

²² Note that, in some cases, the harvesters and processors of groundfish and Chinook salmon are one and the same.

4 Initial Regulatory Flexibility Analysis

The analytical portions of the Initial Regulatory Flexibility Analysis will be completed for the full review document, which will be presented at the next Council meeting when this action is scheduled on the agenda. In several cases, RFA guidance instructs the preparers to use the decision-maker's preferred alternative as a baseline against which to compare other considered alternatives. This is not possible until the Council has indicated its preliminary intentions.

4.1 Introduction

This Initial Regulatory Flexibility Analysis (IRFA) addresses the statutory requirements of the Regulatory Flexibility Act (RFA) of 1980, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (5 U.S.C. 601-612). This IRFA evaluates the potential adverse economic impacts on small entities directly regulated by the proposed action.

The RFA, first enacted in 1980, was designed to place the burden on the government to review all regulations to ensure that, while accomplishing their intended purposes, they do not unduly inhibit the ability of small entities to compete. The RFA recognizes that the size of a business, unit of government, or nonprofit organization frequently has a bearing on its ability to comply with a federal regulation. Major goals of the RFA are: (1) to increase agency awareness and understanding of the impact of their regulations on small business, (2) to require that agencies communicate and explain their findings to the public, and (3) to encourage agencies to use flexibility and to provide regulatory relief to small entities.

The RFA emphasizes predicting significant adverse economic impacts on small entities as a group distinct from other entities, and on the consideration of alternatives that may minimize adverse economic impacts, while still achieving the stated objective of the action. When an agency publishes a proposed rule, it must either 'certify' that the action will not have a significant adverse economic impact on a substantial number of small entities, and support that certification with the 'factual basis' upon which the decision is based; or it must prepare and make available for public review an IRFA. When an agency publishes a final rule, it must prepare a Final Regulatory Flexibility Analysis, unless, based on public comment, it chooses to certify the action.

In determining the scope, or 'universe', of the entities to be considered in an IRFA, NMFS generally includes only those entities that are directly regulated by the proposed action. If the effects of the rule fall primarily on a distinct segment, or portion thereof, of the industry (e.g., user group, gear type, geographic area), that segment would be considered the universe for the purpose of this analysis.

4.2 IRFA Requirements

Until the North Pacific Fishery Management Council (Council) makes a final decision on a preferred alternative, a definitive assessment of the proposed management alternatives cannot be conducted. In order to allow the agency to make a certification decision, or to satisfy the requirements of an IRFA of the

preferred alternative, this section addresses the requirements for an IRFA. Under 5 U.S.C., section 603(b) of the RFA, each IRFA is required to contain:

- A description of the reasons why action by the agency is being considered;
- A succinct statement of the objectives of, and the legal basis for, the proposed rule;
- A description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply (including a profile of the industry divided into industry segments, if appropriate);
- A description of the projected reporting, record keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities that will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;
- An identification, to the extent practicable, of all relevant federal rules that may duplicate, overlap, or conflict with the proposed rule;
- A description of any significant alternatives to the proposed rule that accomplish the stated objectives of the proposed action, consistent with applicable statutes, and that would minimize any significant economic impact of the proposed rule on small entities. Consistent with the stated objectives of applicable statutes, the analysis shall discuss significant alternatives, such as:
 1. The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
 2. The clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
 3. The use of performance rather than design standards;
 4. An exemption from coverage of the rule, or any part thereof, for such small entities.

In preparing an IRFA, an agency may provide either a quantifiable or numerical description of the effects of a proposed action (and alternatives to the proposed action), or more general descriptive statements, if quantification is not practicable or reliable.

4.3 Definition of a Small Entity

The RFA recognizes and defines three kinds of small entities: (1) small businesses, (2) small non-profit organizations, and (3) small government jurisdictions.

Small businesses. Section 601(3) of the RFA defines a ‘small business’ as having the same meaning as ‘small business concern’, which is defined under Section 3 of the Small Business Act (SBA). ‘Small business’ or ‘small business concern’ includes any firm that is independently owned and operated and not dominant in its field of operation. The SBA has further defined a “small business concern” as one “organized for profit, with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor...A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that where the firm is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture.”

The Small Business Administration (SBA) has established size standards for all major industry sectors in the U.S., including commercial finfish harvesters (NAICS code 114111), commercial shellfish harvesters (NAICS code 114112), other commercial marine harvesters (NAICS code 114119), for-hire businesses (NAICS code 487210), marinas (NAICS code 713930), seafood dealers/wholesalers (NAICS code 424460), and seafood processors (NAICS code 311710). A business primarily involved in finfish harvesting is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual gross receipts not in excess of \$20.5 million, for all its affiliated operations worldwide. For commercial shellfish harvesters, the same qualifiers apply, except the combined annual gross receipts threshold is \$5.5 million. For other commercial marine harvesters, for-hire fishing businesses, and marinas, the same qualifiers apply, except the combined annual gross receipts threshold is \$7.5 million.

A business primarily involved in seafood processing is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual employment, counting all individuals employed on a full-time, part-time, or other basis, not in excess of 500 employees²³ for all its affiliated operations worldwide. For seafood dealers/wholesalers, the same qualifiers apply, except the employment threshold is 100 employees.

The SBA has established “principles of affiliation” to determine whether a business concern is “independently owned and operated.” In general, business concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. The SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern’s size. However, business concerns owned and controlled by Indian Tribes, Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601), Native Hawaiian Organizations, or Community Development Corporations authorized by 42 U.S.C. 9805 are not considered affiliates of such entities, or with other concerns owned by these entities solely because of their common ownership.

Affiliation may be based on stock ownership when (1) a person is an affiliate of a concern if the person owns or controls, or has the power to control 50 percent or more of its voting stock, or a block of stock

²³ In determining a concern's number of employees, SBA counts all individuals employed on a full-time, part-time, or other basis. This includes employees obtained from a temporary employee agency, professional employee organization, or leasing concern. SBA will consider the totality of the circumstances, including criteria used by the IRS for Federal income tax purposes, in determining whether individuals are employees of a concern. Volunteers (*i.e.*, individuals who receive no compensation, including no in-kind compensation, for work performed) are not considered employees. Where the size standard is number of employees, the method for determining a concern's size includes the following principles: (1) the average number of employees of the concern is used (including the employees of its domestic and foreign affiliates) based upon numbers of employees for each of the pay periods for the preceding completed 12 calendar months; (2) Part-time and temporary employees are counted the same as full-time employees. [PART 121—SMALL BUSINESS SIZE REGULATIONS §121.106]

which affords control because it is large compared to other outstanding blocks of stock, or (2) if two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, with minority holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

Affiliation may be based on common management or joint venture arrangements. Affiliation arises where one or more officers, directors, or general partners, controls the board of directors and/or the management of another concern. Parties to a joint venture also may be affiliates. A contractor and subcontractor are treated as joint ventures if the ostensible subcontractor will perform primary and vital requirements of a contract or if the prime contractor is unusually reliant upon the ostensible subcontractor. All requirements of the contract are considered in reviewing such relationship, including contract management, technical responsibilities, and the percentage of subcontracted work.

Small organizations. The RFA defines “small organizations” as any not-for-profit enterprise that is independently owned and operated, and is not dominant in its field.

Small governmental jurisdictions. The RFA defines “small governmental jurisdictions” as governments of cities, counties, towns, townships, villages, school districts, or special districts with populations of fewer than 50,000.

4.4 Reason for Considering the Proposed Action

The Council adopted the following purpose and need statement at its June 2015 meeting:

Regulations establish a Chinook salmon prohibited species catch (PSC) limits of 32,500 Chinook in the Central and Western Gulf of Alaska (GOA) trawl fisheries. Chinook salmon PSC limits are managed under two separate programs; one that allocates 25,000 Chinook to the catcher vessels in the pollock trawl fishery (Amendment 93 to the GOA FMP), and another that allocates 7,500 Chinook to three sectors in the non-pollock trawl fisheries: the catcher/processor (3,600), Rockfish Program catcher vessel (1,200), and the non-Rockfish Program catcher vessel (2,700) sectors (Amendment 97 to the GOA FMP). Closures could occur under the existing Chinook salmon PSC limits.

The 2,700 Chinook salmon PSC limit on the non-pollock/non-rockfish catcher vessel sector has resulted in a closure in that fishery. Currently, there is no ability for managers to reallocate unused Chinook salmon PSC between the pollock or non-pollock fisheries. Fishery closures could be avoided, or limited, by providing NMFS the authority to use inseason management to reallocate unused Chinook salmon PSC between the GOA pollock and non-pollock fisheries would provide increased management flexibility without exceeding the overall 32,500 Chinook salmon PSC limit, increase the likelihood that groundfish resources are more fully harvested, and minimize the adverse socioeconomic impacts of the fishery closures on harvesters, processors, and communities.

4.5 Objectives of Proposed Action and its Legal Basis

The objective of the FMP amendment and proposed regulations is to give NMFS inseason managers the ability to reallocate unused amounts of previously established Chinook salmon PSC limits between sectors of the GOA trawl fleet. In some cases, this action might allow NMFS to avoid closing directed fisheries without permitting an increase in the total number of GOA Chinook salmon PSC that can be taken under current regulations (32,500). The Council's purpose and need statement notes that the action could increase the likelihood that groundfish resources are more fully harvested, and decrease the likelihood that harvesters, processors, and communities are adversely affected by fishery closures. Those objectives are consistent with MSA National Standards 1, 5, 6, 8, and 9 (see Section 5.1).

Under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Secretary of Commerce (NMFS Alaska Regional Office) and the North Pacific Fishery Management Council have the responsibility to prepare fishery management plans and associated regulations for the marine resources found to require conservation and management. NMFS is charged with carrying out the Federal mandates of the Department of Commerce with regard to marine fish, including the publication of Federal regulations. The Alaska Regional Office of NMFS, and Alaska Fisheries Science Center, research, draft, and support the management actions recommended by the Council. The GOA groundfish fisheries are managed under the Fishery Management Plan for Groundfish of the GOA Management Area. The proposed action represents an amendment to the Fishery Management Plan and to associated Federal regulations, as required.

4.6 Number and Description of Directly Regulated Small Entities

The NMFS guidance for preparing an IRFA states that, in order for an entity to be considered small under the guidelines of the RFA, the entity must meet the revenue threshold defined in Section 4.3, be directly regulated in a manner that requires some affirmative action to be taken, *and* the entity must be adversely affected. Once the Council has developed a preferred (or preliminary preferred) alternative, the analysts will revisit this section to identify the number of directly regulated entities are considered small.

The estimate of directly regulated small entities might be an overstatement (and conversely, the number of non-small entities would be understated). The RFA requires consideration of affiliations between entities for the purpose of assessing whether or not an entity is small. The estimates in this section do not take into account all affiliations between entities, because some business affiliations' are not captured in data that are available to the analysts. There is not a strict one-to-one correlation between vessels and entities; many persons and firms are known to have ownership interests in more than one vessel, and many of these vessels with different ownership, are otherwise affiliated with each other. For example, vessels in a Central GOA Rockfish Program catcher vessel cooperative might be categorized as "large entities" for the purpose of the RFA under the principles of affiliation. However, vessels that have other types of affiliations that are not tracked in available data (i.e. ownership of multiple vessel or affiliation with processors) might be misclassified as a small entity.

Information on the GOA trawl fleet is presented in Section 3.5.2. The reader is referred to that section of the RIR for general information on the entire GOA trawl fleet. Based on 2013 data, the number of

groundfish vessels that caught or caught and processed less than \$20.5 million ex-vessel value or product value of groundfish and other species were 32 catcher vessels and 1 catcher/processor. The average ex-vessel value of these catcher vessels was about \$1.6 million in 2013. Information cannot be reported for the 1 catcher/processor because of confidentiality requirements.

Neither processors nor other stakeholders are directly regulated by this action, because they are not apportioned Chinook salmon PSC. The processors take deliveries of trawl caught GOA groundfish and other stakeholders not directly regulated by this action are therefore excluded from this IRFA analysis.

4.7 Recordkeeping and Reporting Requirements

To be completed once a preferred alternative has been selected.

4.8 Federal Rules that may Duplicate, Overlap, or Conflict with Proposed Action

To date, analysis has not revealed any other Federal rules that would duplicate, overlap, or conflict with this proposed action. This conclusion will be revisited once a preferred alternative has been selected.

4.9 Description of Significant Alternatives to the Proposed Action that Minimize Economic Impacts on Small Entities

To be completed once a preferred alternative has been selected.

5 Magnuson-Stevens Act and FMP Considerations

5.1 Magnuson-Stevens Act National Standards

Below are the 10 National Standards as contained in the Magnuson-Stevens Fishery and Conservation Act (Magnuson-Stevens Act). In recommending a preferred alternative, the Council must consider how to balance the national standards. After initial review, and potentially after the Council has identified a preferred (or preliminary preferred) alternative, the analysts will provide a brief description of how each alternative is consistent with the National Standards, where applicable.

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

The alternatives and options included in this amendment package do not increase the amount of Chinook salmon that may be taken as PSC in the GOA trawl fisheries. The considered action simply provides the Regional Administrator the flexibility to reapportion Chinook salmon PSC that is projected to be unused on one sector to a sector that would be closed to directed fishing before OY can be achieved.

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

The information presented in this RIR/IRFA is based on the analysts' knowledge of the best and most recent scientific information available.

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.

This proposed amendment does not change how the Chinook salmon resource is managed as a unit throughout its range.

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 U.S. 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 does not discriminate between residents of different states. Chinook salmon PSC would be reapportioned between sectors that have members that are residents of Alaska as well other states. The Regional Administrator will be tasked with ensuring that any reapportionments are fair and equitable to all fishermen, calculated to promote conservation, and carried out so that no particular individual, corporation, or other entity acquires an excessive share of the GOA trawl fisheries.

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 proposed amendment meets this National Standard.

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

The flexibility to reapportion GOA Chinook salmon PSC is designed to account for variations among fisheries, fishery resources, and catches.

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

This action is designed to avoid unnecessary duplication of costs by providing the Regional Administrator the authority to reapportion GOA Chinook salmon PSC. This action does not include any unnecessary duplication of management and conservation measures.

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 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 purpose of this action is to avoid situations where the GOA trawl groundfish fisheries are prematurely closed to directed fishing. The importance of the GOA trawl fisheries and the fishery resources to the GOA fishing communities, especially Kodiak, are taken into account. The flexibility to reapportion Chinook salmon PSC is intended to provide sustained participation by these communities and minimize adverse economic impacts that would result from premature closures.

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 does not change the Chinook salmon PSC limit that was set under Amendment 93 and Amendment 97 to the GOA Groundfish FMP. The action does recognize that fishing conditions change annually and those changes impact how practical it is for a sector to stay under its Chinook salmon PCS limit. Providing the Regional Administrator the flexibility to reapportion PSC between sectors recognizes the difficulty in avoiding Chinook salmon PSC under certain conditions while not increasing the overall limit.

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

Safety of human life at sea is a primary concern in the North Pacific. This action does not change the regulations that promote safety at sea.

5.2 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 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/IRFA prepared for this plan amendment constitutes the fishery impact statement. The likely effects of the proposed action, including effects on fishery participants and fishing communities, are analyzed and described throughout the RIR/IRFA. The effects of the proposed action on safety of human life at sea are evaluated in Section 5.1, under National Standard 10. 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.

5.3 Executive Order 12866

Based on the criteria defined in E.O. 12866 this is not considered “significant regulatory action”. The inseason reapportionment of GOA Chinook salmon PSC is not expected 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, 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 this Executive Order.

6 Preparers and Persons Consulted

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