INITIAL REVIEW DRAFT

Regulatory Impact Review/ Initial Regulatory Flexibility Analysis/ Environmental Assessment for a Proposed Regulatory Amendment

Halibut Charter Recreational Quota Entity and Charter Halibut Permit Recency Action

December 2015

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Abstract: This Regulatory Impact Review/Initial Regulatory Flexibility Analysis/ Environmental Assessment examines proposed changes to the management of the Pacific halibut (*Hippoglossus stenolepis)* charter fisheries and commercial setline fisheries in International Pacific Halibut Commission (IPHC) Regulatory Areas 2C and 3A in the Gulf of Alaska. The two measures under consideration seek to promote long-term planning and greater stability in the charter halibut fishery. The first alternative under consideration would allow a recreational quota entity (RQE) (or entities) be established to represent the common pool of charter anglers in each IPHC regulatory Area 2C and 3A for the potential compensated reallocation of commercial halibut QS. Any halibut QS purchased by an RQE would augment the pounds of halibut for the charter catch limit for that area in that year. Underlying allocations to the charter and commercial halibut sectors would not change. The second alternative under consideration is a recency action that would retire Charter Halibut Permits that have been latent according to one of two proposed thresholds. These actions are not mutually exclusive.

List of Acronyms and Abbreviations

ABC	acceptable biological catch
ACA	Alaska Charter Association
ADF&G	Alaska Department of Fish and Game
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
AKFIN	Alaska Fisheries Information Network
Area 2C	Southeast Alaska (IPHC management area)
Area 3A	Central Gulf of Alaska (IPHC management area)
Area 3B	Western Gulf of Alaska (IPHC management area)
Area 4	Bering Sea and Aleutian Islands (IPHC management area)
BSAI	Bering Sea and Aleutian Islands
CATCH	Catch Accountability Through Compensated Halibut
CCL	Combined Catch Limit
CE	Choice experiments (economic)
CEQ	Council on Environmental Quality
CEY	Constant Exploitation Yield
CFEC	Commercial Fisheries Entry Commission (State of Alaska)
CFR	Code of Federal Regulations
CHLAP	Charter Halibut Limited Access Program
CHP	Charter Halibut Permit
Council	North Pacific Fishery Management Council
CPUE	Catch per unit effort
CQE	Community Quota Entity
CSP	Catch Sharing Plan (Pacific Halibut)
CV	catcher vessel
DMV	Department of Motor Vehicles
E.O.	Executive Order
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
F	Fishing intensity
FCEY	Fishery Constant Exploitation Yield
FMP	fishery management plan
FR	*Federal Register*
GAF	Guided Angler Fish
GHL	guideline harvest level
GOA	Gulf of Alaska
IFQ	Individual fishing quota
I/O	Input-Output model (economic)
IPHC	International Pacific Halibut Commission
IRFA	Initial Regulatory Flexibility Analysis
LAPP	Limited access privilege program
LLP	license limitation program
LOA	length overall (vessel)
MRA	Maximum retainable amount
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSY	Maximum sustainable yield
Mlb	Million pounds
mt	metric ton
MWR	U.S. Military Morale, Welfare, and Recreation Program
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
O26	Over 26 inches (fish length)
OFL	Overfishing limit
OMB	Office of Management and Budget
PA	Preferred alternative
PPA	Preliminary preferred alternative
PRA	Paperwork Reduction Act
PSEIS	Programmatic Supplemental Environmental Impact Statement
PWS	Prince William Sound
QS	Quota share
RAM	Restricted Access Management (Program)
RARA	Report of Assessment and Research Activities (IPHC)
RFA	Regulatory Flexibility Act
RFFA	reasonably foreseeable future action
RIR	Regulatory Impact Review
RQE	Recreational Quota Entity
SAFE	Stock Assessment and Fishery Evaluation
SAM	Social accounting matrix (economic)
SBA	Small Business Act
SEAGO	Southeast Alaska Guides Organization
Secretary	Secretary of Commerce
TAC	total allowable catch
TCEY	Total Constant Exploitation Yield
U26	Under 26 inches (fish length)
U.S.	United States
U.S.C.	United States Code
USCG	United States Coast Guard
WPUE	Weight per unit effort
WTP	Willingness to pay

Table of Contents

List of Tables

List of Figures

1 Executive Summary

This document analyzes proposed management measures that would apply exclusively to the guided angler sport (charter) halibut fisheries and commercial halibut setline fisheries in International Pacific Halibut Commission (IPHC) Regulatory Areas 2C and 3A in the Gulf of Alaska (GOA). The measures under consideration would allow a recreational quota entity (RQE) (or entities) to be established to represent the charter sector in the acquisition of commercial halibut quota share (QS), which could augment management measures annually recommended by the Council, approved by the IPHC, and implemented by NMFS through federal regulations. The second alternative under consideration is a recency action that would retire Charter Halibut Permits (CHPs) that have been latent according to one of two proposed thresholds. These actions are not mutually exclusive.

Purpose and Need

In October 2014 the Council developed the following purpose and need:

> *Alaska's guided halibut anglers have seen recent increases in regulatory restrictions due to declining halibut stocks and guided recreational allocations. There is currently no sector-wide mechanism to shift allocation between the commercial and guided recreational sectors. The current provision provided under the Catch Sharing Plan to temporarily transfer allocation known as GAF (Guided Angler Fish), may not be sufficient to ensure long-term planning and stability in regulations for all guided anglers. A market-based mechanism for the guided halibut recreational sector may be an effective means to supplement their annual allocations. Allowing an RQE (Recreational Quota Entity) to hold commercial halibut QS on behalf of guided recreational halibut anglers under a "willing seller and willing buyer" approach may result in less restrictive annual harvest measures for guided recreational anglers, while complying with total halibut removals under the guided halibut catch limits determined by the International Pacific Halibut Commission. The guided recreational halibut allocation under the Halibut Catch Sharing Plan would be combined with the halibut quota share held by the RQE to determine the annually adjusted total guided halibut allocation. The total allocation would be the basis for the determination of appropriate management measures for the guided halibut sector each year.*

Alternatives

The alternatives that are analyzed in this package were adopted by the Council in October 2014. These alternatives are listed here and described in detail in Sections 3.1 through 3.3. The alternatives propose management measures that would apply exclusively to the charter and commercial setline fisheries in IPHC Regulatory Areas 2C (Southeast Alaska) and 3A (Southcenteral Alaska).

Alternative 1. No Action

Alternative 2. Establish a Recreational Quota Entity (RQE) as a qualified entity to purchase and hold commercial halibut QS for use by the guided halibut sector

Element 1. Number of entities

- **Option 1.** Two entities, one for each IPHC Regulatory Area 2C and 3A
- **Option 2.** One entity with two area quota pools, Area 2C and Area 3A

Element 2. Restrictions on transfers. Two-way transfers are allowed. Quota class and block designation is retained if the quota is transferred back to the commercial sector.

(Options below are not mutually exclusive)

Option 1. No restrictions

Option 2. Annual limit on transfers to the RQE in each regulatory area (Area 2C and 3A)

Sub-option 1. 30% – 50% of the average amount of commercial QS transferred in each area during the previous five years (*e.g., the Area 2C transfer limit is based on 30% – 50% of the average amount of commercial QS transferred in Area 2C in the previous five years*).

Sub-option 2. 1% - 5% of commercial QS in each area based on a five-year average

Option 3. Total (cumulative) limit on amount held by RQE by regulatory area (Area 2C and 3A)

Sub-option 1. 10% - 40% of any commercial QS based on five-year average

Sub-option 2. 10% - 40% of each class of QS based on five-year average

Sub-option 3. Transfers to mirror current GAF limits by area: 10% (Area 2C) and 15% (Area 3A) of area QS holdings each year.

Option 4. Prohibit purchase of D class commercial quota share by the RQE.

Element 3. Setting of annual charter management measures. Use RQE quota share holdings as of October 1 each year as the basis to estimate IFQ pounds to add to the estimated guided recreational allocation under the catch sharing plan for the upcoming year. This amount must be maintained for the following fishing year. This estimated combined allocation would be used to recommend the guided recreational harvest measures for the following year. The procedural process and timeline would remain unchanged.

Alternative 3. Retirement of "latent" Charter Halibut Permits. Threshold for determining a latent CHP:

Option 1. The CHP has been fished less than 50 angler days in the previous 5 years.

Option 2. A CHP that has not been used by the CHP holder in the previous 3 years.

Regulatory Impact Review

The Regulatory Impact Review (RIR) examines the benefits and costs of a proposed regulatory amendment to establish an RQE to represent the charter sector in the acquisition of commercial halibut QS. Additionally, this analysis considers impacts on the retirement of latent CHPs.

Before describing the expected social and economic effects from **Alternative 2,** this section first highlights and analyzes the proposed components of the RQE program, for which the Council would need to make decision about. These components include the:

1) Formation and internal management of a non-profit entity

The Council may wish to leave the details of the structure of an RQE up to the stakeholders; however, this proposal considers the implications of non-profit entity which represents charter anglers in common for each IPHC regulatory area separately (Area 2C and Area 3A).

2) Transfer provisions and restrictions

The proposed program would provide a structure for two-way transfers to occur, should an RQE acquire QS and choose to sell it back to a participant in the commercial fishery. This is an important element because it is expected that there would be variability from year to year in the amount of QS an RQE would be interested in using. This section of the analysis also considers options under Alternative 2, Element 2, several different types of transfer restrictions. This section highlights the intent behind each proposed restriction and relative level of IFQ pounds the transfers would be limited to (either on an annual or cumulative basis).

3) Leasing of QS from the RQE to Commercial Participants

An important consideration for the proposed program is whether an RQE that was successfully able to acquire halibut QS would be permitted to temporarily transfer (i.e. lease) it back to the commercial sector. If not, the Council would need to consider what would become of any surplus QS once the least strict management measures for each regulatory area were met.

4) Additional IFQ and Community Quota Entity (CQE) Program Elements and Restrictions

There are a number of program components for the IQE and the CQE Programs not specifically addressed in previous Council rule-making. The Council may want to clarify if and how these elements may be incorporated. For example, an overage-underage program that exists in in the commercial halibut fishing for IFQ participants. Charter stakeholders have indicated the desire to retain that flexibility for the charter sector if an RQE were to form. At a previous Council meeting, IPHC staff had spoken to the challenges of applying the overage-underage provision that exists in the commercial halibut IFQ fishery to the charter sector. He emphasized the difference in pounds between a ten percent overage of an individual IFQ holder and a whole halibut charter sector for one regulatory area. In addition to the overage-underage provisions this section discusses cost recovery, and program reviews.

5) Funding Considered by the Charter Groups

Similar to the implementation of the CQE Program, the Council does not have jurisdiction over the potential avenues considered for funding sources by charter stakeholders. Therefore the current analysis does not propose or analyze funding sources for a potential RQE to use in order to permanently transfer quota for use in the charter sector. This scoping decision was a deliberate choice by the Council in order to focus analytical effort toward how an RQE may be structured, and impacts under the assumption that an RQE would have the means to acquire QS. Two of the top funding options, as suggested by a stakeholder proposal, are briefly described in this section.

Economic and social effects are considered for Alternative 2, and Element 2 of Alternative 2. (Element 1 and 3 represent more structural and management decisions for program design.) Effects are considered for the halibut charter sector, the commercial halibut IFQ sector, as well as subsistence/ personal use fishing, non-guide recreational fishing and communities. Effect to these halibut user groups and communities are evaluated by considering three scopes of economic efficiency and overall net benefits: 1) the net benefits for individuals at the transaction level (individual IFQ holder and RQE) 2) the net benefits at the sector level (commercial halibut sector and halibut charter sector), and finally at an even broader scope, 3) considering the potential net benefits to the Nation. Discussing economic values at these different levels can highlight some of the distributional effects that are often not revealed when just considering an action's net benefits to the Nation.

An analysis of the **effects on the charter fishing sector** discusses the first and second scope of economic efficiency. In a world of perfect information, the option of compensated reallocation would be expected to

increase economic efficiency between the commercial QS holder and the charter halibut sector. Overall, between these two halibut user groups, entities would be expected to act in their own best interest and net benefits would be maximized.

While the RQE would be seeking to maximize net benefits for the sectors, there may be some specific individuals related to the charter sector that are not benefited. Even if in aggregate, charter anglers are willing to pay the amount it requires to purchase QS and relax annual management measures (in a scenario where costs are passed on to the angler), there will most likely be some anglers that will not meet that threshold. Even if in aggregate, charter operators benefit from increased angler demand or increased prices from relaxed management measures, there will most likely some charter operators who's clients are too sensitive to changes in prices, or who operates to close to the margin, to remain in business. These represent distributional effects. In terms of strict economic efficiency, the cost associated with these losses would be balanced by the greater amount of benefits realized through the transfers.

Presumably, an RQE would be striving to benefit the charter sector as a whole in that regulatory area, and this entity would be considering QS acquisitions based on an understanding of angler demand, angler willingness-to-pay for relaxed management measures, and its distributional impact on the charter operators.

Understanding the amount of desired QS could help the Council understand the impacts of the proposed RQE and whether the transfer restrictions are appropriate. If reallocation came at no cost, the halibut charter sectors would operate at the least strict management measures that would be available currently: a daily bag limit of two halibut of any size (or possibly a daily bag limit of one fish of any size in Area 2C, at times of low halibut abundance). This represents the halibut regulations by non-guided anglers for each sector (i.e., two fish of any size bag limit).

However, QS transfer to an RQE would have many implications of "cost". Depending on a number of market factors, an RQE may not identify the least strict management measures as the most economically efficient place to operate. It may be that purchasing a smaller amount of QS from individuals in the commercial sector, relaxing certain management measures, but not others, could provide the greatest net benefit to the charter sector.

Therefore it is worthwhile to consider the amount of QS it could take to make some incremental changes in management measures as well. The analysis highlights some examples of transfer goals for Area 2C and 3A using the ADF&G analysis of annual management measures for based on the 2015 IPHC blue line charter halibut allocation. An important caveat to using the methods traditionally relied on to project the impacts of annual management measures, is the increasing uncertainty of using past behavior to predict future harvest and effort. These estimates are not expected to explain an RQE's needs for QS in perpetuity. Moreover, the changing management measures would be expected to change angler demand, and consequently levels angler effort. Additional the stability of any QS transfer goals would be significantly affected by the abundance of halibut.

Effects on the commercial halibut IFQ sector is framed around the first and second scope of economic efficiency. Focusing on the individual halibut QS holder choosing to transfer QS to an RQE presents a story of distributional positive effects. If an individual QS holder would not benefit from engaging in a QS transaction with the RQE, they would not be required to participate in the exchange. QS holders are expected to act in their best interest and maximize their own net benefits. Several scenarios are highlighted in which an individual QS holder may benefit from this new buyer, potential willing to pay a premium price for QS.

Considering economic efficiency at the sector level conveys a different story. While an individual with QS would be expected to act in their own best interest when deciding whether and at what price to sell their QS, this decision may not necessarily maximize the net benefits from a sector-level perspective. Commercial sector-level concerns are discussed in terms of potential consolidation, and its impact on vessel owners, captains, crew, processors, and support sectors. Additionally movement of QS could further limit entry opportunities for new participants in the commercial fishery.

The different types of transfer restrictions could be one way to mitigate negative impacts to stakeholders of this sector. In this Initial Review Draft effects on the commercial halibut sector and QS market are discussed qualitatively, however, there is opportunity in future drafts to more rigorously tease out the magnitude of some of these effects, given for example, different total QS transfer caps.

Because authorized **subsistence/ personal use and non-guided halibut fishing** effort is not directly linked to the harvest intensity of the charter sector, a shift in harvest intensity from the commercial sector to the charter sector does not affect how these user groups are managed. However, in many regions these halibut users tend to concentrate effort in around the same general area close to a port or public access. A shift in relative harvest intensity from the commercial halibut sector to the charter halibut sector could concentrate angler activity further, also potentially increasing vessel traffic. This could impact subsistence and non-guided sport users to the extent that any localized depletions may occur.

Communities could be impacted in both positive and negative ways from the development of an RQE program. Both commercial and charter fishing can have a significant economic impact in Alaskan communities. Commercial fishing relies on inputs from a multitude of support sectors: fuel, bait, vessel parts and maintenance, food, ice, labor, etcetera. It prompts activity from intermediate demand sectors like seafood dealers and processors. This economic activity can create local employment opportunity.

Similarly, the charter sector instigates economic activity for a community as a tourist industry; by catering to resident and non-resident visitors. The charter sector relies on some of the same input industries: fuel, bait, vessel parts and maintenance, food, labor, etcetera. While charter fishing does require the same intermediate demand sectors such as processing, as a tourist industry, it also encourages other types of non-fisheries economic activity among retail business, restaurants, and accommodations services that benefit from the presence of non-resident (and non-local) charter anglers visiting their community. It would be inappropriate to contribute all tourism-related economic activity in a community to halibut charter fishing, as there are often many other substitute activities. There are type some economic analysis that specialize in estimating overall economic impact. This analysis discusses these potential impacts in a qualitative way.

Safety conditions are expected to be consistent with the status quo, as neither commercial nor charter sectors would be expected to change the way they catch fish or run their operations.

The effects of **Alternative 3**, a CHP recency action, are also considered in the RIR. Two options have been proposed by the Council to measure the threshold of latency. This action was proposed for this package, as either a compliment or an alternative to the action of allowing the formation of an RQE. Alternatives 2 and 3 are not mutually exclusive.

Advocates of Alternative 3 may see this action as another way to "ensure long-term planning and stability in regulations for all guided anglers", an issue highlighted in the purpose and need statement of this package. More specifically, some halibut users from both the charter and the commercial sectors have expressed concern with the capacity potential of the charter fishery. Management measure analyzed by ADF&G representatives annually are based on historical effort, using average weight, angler days, and

the charter allocation established for that year by the IPHC. Therefore, a sudden increase in participation by current CHP holders, with used or underutilized CHP capacity, could push the charter sector over their projected harvest, theoretically exceeding this catch limit.

The first recency option under consideration would define latency as those CHPs that have been fished less than 50 angler days in the previous five years. Table 4-42 demonstrates that 80 percent of CHPs in Area 2C have conducted charter fishing which was associated with a CHP and twenty percent would be considered "latent" by the definition under Option 1. For Area 3A, 79 percent of the CHP would be considered active, and 21 percent of CHP would be considered latent.

Table 1-1 Count of CHP that have fished less than 50 days from 2011 to 2014

Area	Latent CHPs (0-49 trips)	Active CHPs (≥ 50 trips)	Total CHPs	Percent latent
2C	108	428	536	20%
3A	95	350	445	21%
Total	203	778	981	21%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: This option indicates using 5 years to determine this latency threshold. However, CHP first existed in 2011 and final estimates for CHP are not yet available. Therefore this table only represents 4 years of activity.
Table does not include Community Quota Entity permits or U.S. Military Morale, Welfare and Recreation Program permits.

Option 2 proposes retirement of latent CHP that have not been used in the previous three years. For the purpose of this assessment, 2012, 2013, and 2014 are considered. Keeping in mind the caveats listed in this section, Table 4-43 demonstrates that far fewer CHP holders would be impacted by this threshold; only three percent of CHP holders in Area 2C and four percent in Area 3A.

Table 1-2 Count of CHP associated with at least one trip from 2012 through 2014

Area	Latent CHPs (0 trips)	Active CHPs (At least 1 trip)	Total CHPs	Percent latent
2C	29	507	536	5%
3A	32	413	445	7%
Total	61	920	981	6%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN

There are several important things to note with regards to the latency data used to create these tables, which leads to some Council decision points on how latency is defined. More details on this are included in the analysis.

Community impacts are expected for such an action although it is difficult to say precisely where and how these impacts would be felt. It is unknown exactly why these CHP holders have not chosen to participate. Fewer available CHPs at potentially higher price, would likely be a barrier to entry for residents interested in starting a charter halibut business. In contrast, it may provide current operations one factor of stability, potentially positivity impacting a community in this way.

Environmental Assessment

The purpose of the Environmental Assessment (EA) is to analyze the environmental impacts of **Alternative 2**, the proposed federal action to allow a representative entity hold commercial halibut QS for a guided angler common pool in Area 2C and Area 3A, and to provide sufficient evidence to determine the level of significance of any potential impacts.

Alternative 3 would not expand an existing fishery: this alternative would retire latent CHPs based one of two proposed sets of criteria. Under this alternative no combination of the elements and options would change the annual combined catch limit set by the IPHC for the charter and commercial sectors. This alternative is socio-economic in nature. Therefore this alternative is not expected to impact any of the environmental components.

Alternative 2 in this analysis discusses a resource allocation issue: whether or not to allow an entity to be developed on behalf of charter halibut anglers, with the opportunity to purchase commercial halibut QS. No combination of the elements and options under Alternative 2 would influence the annual combined catch limit set by the IPHC for the charter and commercial sectors. Both sectors would still be constrained by the total catch limits set for each regulatory area based on halibut abundance. As both types of fishing occur under the status quo, the footprint of the fishery and relative timing of the fisheries would be expected to remain the same; as would regulations around seasons and gear type. The primary change that would occur would be an opportunity to shift in harvest intensity and size selectivity from the commercial halibut IFQ fishery in Area 2C and Area 3A to the charter halibut fishery in the corresponding area. The level of harvest intensity shifting sectors will depend on many factors, including the elements and options under Alternative 2. Along with the change in relative intensity of halibut harvest by each sector, there could be a possible change in the intensity halibut is harvested in specific locations (e.g., nearshore versus further off-shore).

No effects are expected on ecosystems, benthic community, sea bird, groundfish, and marine mammal components of the environment from the proposed Alternative 2 (including its elements and options). No effects are presumed for these components because, as mentioned, the current manner in which the fish are harvested would remain unchanged from the status quo.

However, given the potential movement of halibut harvest opportunity between user groups within a regulatory area under Alternative 2, it is important to consider the effects that changes in the distribution and selectivity of fishing may have on the halibut stock.

Under Alternative 2, the primary environmental consideration with regards to the sustainability of the halibut resource includes the consideration of what could result from the opportunity to shift some harvest intensity from the commercial halibut IFQ fishery the charter halibut fishery. **Will there be effects on the spatial or temporal distribution of the halibut stock? Will there be localized depletion?**

This is a challenging impact to assess, because there are some pieces of information that are unavailable. This includes halibut biomass estimates for sub-areas and migratory patterns of halibut by sub-area.

While biomass information is not available at a localized level, creel sampling occurs at the major ports, so harvest-per-unit effort can be understood in terms of number of retained halibut (harvest) and angler-days (effort). As part of the assessment of annual management measure ADF&F often produces this type of information on harvest, effort, and harvest-per-unit effort in sub-areas of 2C and 3A. This continuous monitoring can aid management in tracking significant changes in number of fish, average weight of halibut, number of angler days, and overall effort relative to the management measures set each year.

In addition, the IPHC has conducted general research on localized depletion of halibut. These studies have not realized the effects of localized depletion. However catch rates and migration may be confounded in these studies. Relatively speaking, the fishing effort applied in the example studies is quite small compared with a season-long effort of multi-year localized fishing such as might happen in some sport fisheries.

Most importantly, based on research around the migratory nature of the adult halibut, the IPHC considers Pacific halibut to be a single stock, and assesses it as such. Therefore, it can be concluded **that Alternative 2 is unlikely to affect the distribution of harvested stock either spatially or temporally such that it has an effect on the ability of the stock to sustain itself.**

This is not to say that there could not be localized effects under Alternative 2. The Council has received numerous public comments in the past on the perceived impact or expected impacts of localized depletion. Depending on the type of charter operation (lodge versus day trips), vessel operators typically do not travel more than two to three hours from a home port. In many sub-areas for both Area 2C and 3A, the footprint of the halibut charter fishery overlaps with the footprint of the other halibut user groups, such as non-guided sport anglers and subsistence users. [1] Any potential localized depletion resulting from a shift in harvest intensity to more nearshore areas could impact these user groups. Given the importance of the resources, this could also be an important area of future research.

It should also be noted that one effect not analyzed here is the different size compositions that the commercially harvested halibut IFQ and recreationally harvested halibut may have. Depending on the amount transferred, effects of this difference might be evident. Particularly if there were annual transfer limits in place, this type of effect may be noted early on the program's development.

[1] This is a prime motivator for the Sitka Sound Local Area Management Plan (LAMP). This LAMP restricts commercial fishing vessels and charter vessels from halibut fishing in Sitka Sound to allow personal use fishermen and non-guided sport fishermen greater opportunity to catch halibut in waters near Sitka.

2 INTRODUCTION

This document analyzes two proposed management actions that would apply exclusively to the guided angler sport (charter) halibut fisheries and commercial halibut setline fisheries in International Pacific Halibut Commission (IPHC) Regulatory Areas 2C and 3A in the Gulf of Alaska (GOA). The two measures under consideration seek to promote long-term planning and greater stability in the charter halibut fishery. The first alternative under consideration would allow a recreational quota entity (RQE) (or entities) be established to represent the common pool of charter anglers in each IPHC regulatory Area 2C and 3A for the potential compensated reallocation of commercial halibut QS. Any halibut QS purchased by an RQE would augment the pounds of halibut for the charter allocation for that area in that year. Underlying allocations to the charter and commercial halibut sectors would not change. The second alternative under consideration is a recency action that would retire Charter Halibut Permits (CHPs) that have been latent according to one of two proposed thresholds. These actions are not mutually exclusive.

This document is a Regulatory Impact Review/Initial Regulatory Flexibility Analysis/ Environmental Assessment (RIR/IRFA/EA). An RIR/IRFA/EA provides assessments of the economic benefits and costs of the action alternatives, as well as their distribution (the RIR), the impacts of the action on directly regulated small entities (the IRFA), and the environmental impacts of an action and its reasonable alternatives (the EA). This RIR/IRFA/EA addresses the statutory requirements of the Magnuson Stevens Fishery Conservation and Management Act, the National Environmental Policy Act, Presidential Executive Order 12866, and the Regulatory Flexibility Act. An RIR/IRFA/EA is a standard document produced by the North Pacific Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS) Alaska Region to provide the analytical background for decision-making.

2.1 Purpose and Need for Action

In October 2014 the Council developed the following purpose and need:

> *Alaska's guided halibut anglers have seen recent increases in regulatory restrictions due to declining halibut stocks and guided recreational allocations. There is currently no sector-wide mechanism to shift allocation between the commercial and guided recreational sectors. The current provision provided under the Catch Sharing Plan to temporarily transfer allocation known as GAF (Guided Angler Fish), may not be sufficient to ensure long-term planning and stability in regulations for all guided anglers. A market-based mechanism for the guided halibut recreational sector may be an effective means to supplement their annual allocations. Allowing an RQE (Recreational Quota Entity) to hold commercial halibut QS on behalf of guided recreational halibut anglers under a "willing seller and willing buyer" approach may result in less restrictive annual harvest measures for guided recreational anglers, while complying with total halibut removals under the guided halibut catch limits determined by the International Pacific Halibut Commission. The guided recreational halibut allocation under the Halibut Catch Sharing Plan would be combined with the halibut quota share held by the RQE to determine the annually adjusted total guided halibut allocation. The total allocation would be the basis for the determination of appropriate management measures for the guided halibut sector each year.*

2.2 History of this Action

In 2007, the Council considered a program that would facilitate both setting a catch sharing initial allocation between the commercial and the charter halibut user groups, as well as establishing a compensated reallocation opportunity (NPFMC 2007). After an Initial Review analysis, it was determined that Council attention would be focused on establishing a charter allocation to include sector accountability for discard mortality. The Council considered this an interim solution at the time. They moved the compensated reallocation component to the Council's Charter Stakeholder Committee to flesh out in more detail as a more "long-term" solution; however, the initial allocation discussion became the Council priority.

In October 2012, the Council took final action to establish the Catch Sharing Plan (CSP) for two halibut users groups: the charter sector and commercial setline sector (78 FR 75844, published December 12, 2013 for 2014 implementation). This management strategy was developed in order to resolve conservation and allocation concerns that have resulted from increased harvest in the charter halibut fishery in both Area 2C as well as 3A, and decreased catch limits in the commercial setline fisheries. The CSP established a process for determining the annual management measures for each regulatory charter area based on an annual Combined Catch Limit (CCL) for both the charter and commercial sectors in each area.

The CSP details provisions for the annual transfer (lease) of individual fishing quota (IFQ) from the commercial sector into what is known as guided angler fish (GAF), for use by individual charter permit holders in the charter sector. This provision is intended to provide charter anglers additional opportunity to harvest halibut above the established annual management measures and up to the limits in place for unguided anglers (two fish daily bag limit). The CSP does not allow for the permanent transfer of halibut quota share (QS) from the commercial sector to the charter sector; unused GAF is transferred back to the commercial sector as IFQ pounds two weeks before the end of the commercial halibut fishing season.

During the development stages of the CSP, representative organizations from the charter sector testified that their members did not believe the GAF component of the CSP would provide sufficient harvesting opportunities for charter anglers to retain traditional charter sector daily bag limits. During the same meeting of final action on the CSP (October 2012, during Staff Tasking), the Council also requested a discussion paper from staff investigating how an entity might be formed that could administer a compensated reallocation component to the CSP. The intent of this discussion paper was to understand how to begin and the challenges that would emerge in the development of such an entity. Additionally, this discussion paper would evaluate whether the Community Quota Entity (CQE) program was the appropriate model for entity that could manage this common pool reallocation.

Prior to the development of this paper, two representative organizations, Alaska Charter Association (ACA) and the Southeast Alaska Guides Organization (SEAGO), informed the Council of their intent to explore and design a recommended amendment to the CSP on their Fown, which would add a new compensated reallocation component for both areas. These representative organizations received a grant from National Fisheries and Wildlife Foundation which they used to establish the Catch Accountability Through Compensated Halibut (CATCH) Project. In February 2014, contributors to this project presented a summary report to the Council detailing how a compensated reallocation component may be integrated in the current CSP (Yamada & Flumerflet 2014). They also presented highlights from a complementary economic report, also funded by the CATCH project, which examined the economic implications of

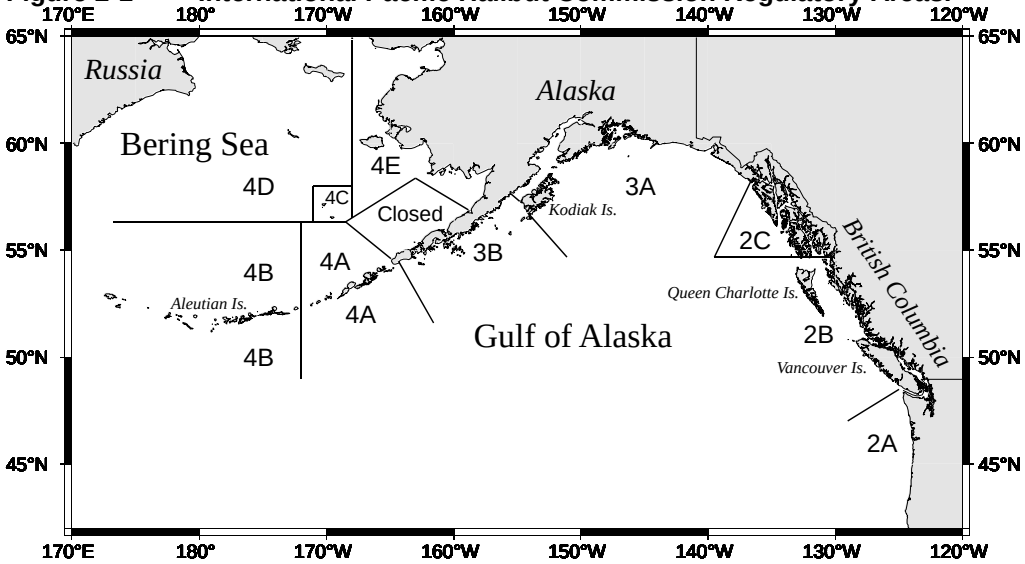
purchasing commercial halibut quota for a recreational guided angler common pool (Davis, Sylvia, & Cusak 2013). Also at the February 2014 meeting, the Council heard from Gregg Williams, IPHC staff (retired), who presented some initial feedback from the perspective of the IPHC. The Council deferred establishing an actionable proposal to October 2014, requesting Council staff to work with CATCH contributors to highlight the areas of the proposal for Council decision-making.

In October 2014, the Council reviewed a discussion paper (NPFMC 2014) that presented and addressed a series of questions related to a CATCH project. The Council initiated an analysis of an action to allow an RQE to hold commercial halibut QS on behalf of charter anglers. The Council also established a committee workgroup consisting of charter operators, representatives from the commercial IFQ sector, and other knowledgeable stakeholders who can contribute to the development of a RQE program structure for analysis and review by the Council. The committee has convened once for an organizational meeting (see Appendix A. for Committee Minutes from April 2015).

2.3 Description of Action Area

The potential actions under consideration would directly affect IPHC halibut regulatory areas 2C (Southeast Alaska) and 3A (South Central Alaska). Direct effects would be expected to occur for charter participants and commercial halibut QS holders in these areas and potential spill-over effects for other halibut user groups particularly in 2C and 3A as well. Indirect spill-over effects could also occur for commercial halibut participants in other IPHC regulatory areas.

Figure 2-1 International Pacific Halibut Commission Regulatory Areas.



2.4 Relationship of this Action to Federal Law

The Pacific halibut fishery off Alaska is governed under the authority of the Northern Pacific Halibut Act of 1982 (Halibut Act, 16 U.S.C. 773-773k), in coordination with annual fishery management measures adopted by the IPHC. Section 7.1 details the authority of the Halibut Act and its relevance to the proposed action.

The IPHC promulgates regulations governing the halibut fishery; however, the Council may recommend regulations that are not in conflict with IPHC regulations. Council action must also be approved and implemented by the U.S. Secretary of Commerce (Secretary). While the proposed action would not be under the authority of the Magnuson-Stevens Fishery and Conservation Act (Magnuson-Stevens Act) (16 USC 1801, *et seq*.) and would therefore not include an amendment to a Fishery Management Plan, the proposed action would still require an amendment to U.S. Federal regulations.

The National Environmental Policy Act (NEPA) and the Regulatory Flexibility Act (RFA) are the primary laws directing the preparation of this document for a regulatory amendment. NEPA requires a description of the purpose and need for the proposed action, as well as a description of alternative action that may address the problem. The specific contents required to satisfy NEPA are integrated throughout the document, which incorporates additional information to more rigorously capture the impacts of the proposed action. The purpose and need for this action are addressed in Section 2.1 and the description of alternative actions are listed in Section 0 and with potential impacts examined in Sections 4.6 through 4.9.

Additional NEPA documents listed below provide detailed information on the halibut fishery, and on the natural resources, the economic and social activities, and the communities affected by those fisheries.

- Groundfish Programmatic Supplemental Environmental Impact Statement (PSEIS) (NOAA 2004);
- Essential Fish Habitat Environmental Impact Statement (EIS) (NOAA 2005);
- EIS for the Alaska groundfish harvest specifications (NOAA 2007).

3 DESCRIPTION OF THE ALTERNATIVES

The National Environmental Policy Act (NEPA) requires that an EA analyze a reasonable range of alternatives, consistent with the purpose and need for the proposed action. The alternatives in this chapter were designed to accomplish the stated purpose and need for the action. The development of an RQE would provide a market-based mechanism for the guided halibut recreational sector to supplement their annual allocations.

The alternatives that are analyzed in this package were adopted by the Council in October 2014. These alternatives are listed here and described in detail in Sections 3.1 through 3.3. The alternatives propose management measures that would apply exclusively to the charter and commercial setline fisheries in IPHC Regulatory Areas 2C (Southeast Alaska) and 3A (Southcenteral Alaska).

Alternative 1. No Action

Alternative 2. Establish a Recreational Quota Entity (RQE) as a qualified entity to purchase and hold commercial halibut QS for use by the guided halibut sector

Element 1. Number of entities

Option 1. Two entities, one for each IPHC Regulatory Area 2C and 3A

Option 2. One entity with two area quota pools, Area 2C and Area 3A

Element 2. Restrictions on transfers. Two-way transfers are allowed. Quota class and block designation is retained if the quota is transferred back to the commercial sector.

(Options below are not mutually exclusive)

Option 1. No restrictions

Option 2. Annual limit on transfers to the RQE in each regulatory area (Area 2C and 3A)

Sub-option 1. 30% – 50% of the average amount of commercial QS transferred in each area during the previous five years (*e.g., the Area 2C transfer limit is based on 30% – 50% of the average amount of commercial QS transferred in Area 2C in the previous five years*).

Sub-option 2. 1% - 5% of commercial QS in each area based on a five-year average

Option 3. Total (cumulative) limit on amount held by RQE by regulatory area (Area 2C and 3A)

Sub-option 1. 10% - 40% of any commercial QS based on five-year average

Sub-option 2. 10% - 40% of each class of QS based on five-year average

Sub-option 3. Transfers to mirror current GAF limits by area: 10% (Area 2C) and 15% (Area 3A) of area QS holdings each year.

Option 4. Prohibit purchase of D class commercial quota share by the RQE.

Element 3. Setting of annual charter management measures. Use RQE quota share holdings as of October 1 each year as the basis to estimate IFQ pounds to add to the estimated guided recreational allocation under the catch sharing plan for the upcoming year. This amount must be maintained for the following fishing year. This estimated combined allocation would be used to recommend the guided recreational harvest measures for the following year. The procedural process and timeline would remain unchanged.

Alternative 3. Retirement of "latent" Charter Halibut Permits. Threshold for determining a latent CHP:

Option 1. The CHP has been fished less than 50 angler days in the previous 5 years.

Option 2. A CHP that has not been used by the CHP holder in the previous 3 years.

3.1 Alternative 1, No Action

Under the no action alterative, status quo would be maintained. That is, the Charter Halibut Limited Access Program (CHLAP) and the Catch Sharing Plan (CSP) would still be in place for the halibut charter sector as described in Section 4.4.

Only qualified persons as defined in the current Federal regulations could hold and use commercial halibut QS in the GOA (50 CFR 679.40(a)(2)). Section 4.4.1 and 4.4.1.2 describe the elements of these management programs in more detail. Formation of an RQE would not be authorized to obtain QS to augment the charter catch limits.

3.2 Alternative 2, Establish a Recreational Quota Entity Program

Alternative 2 would allow a recreational quota entity (RQE) (or entities) to be established as an eligible entity to purchase commercial quota share (QS) in Area 2C and Area 3A, with limitations, for use by the halibut charter sector as a whole. Federal regulations would be amended to allow these entities to acquire QS, annually generating a designated poundage of IFQ. The additional IFQ pounds of halibut would be combined with the charter catch limit determined by the CSP to determine an adjusted catch limit for the year by area.

This alternative would not change the underlying allocations to the sectors or the total QS pool, and therefore the QS holders in the commercial fishery that did not transfer QS to the RQE would not have their IFQ pounds directly impacted by the transfer of other QS to the RQE. Annual charter management measures for Areas 2C and 3A would be analyzed and recommended to the IPHC for implementation based on this adjusted catch limit. This alternative includes a number of elements and options under consideration if the Council were to establish one or more RQEs.

The first element under Alternative 2 is an option of either establishing two RQEs, one each for IPHC Regulatory Area 2C and 3A, or establishing one RQE for both regulatory areas combined with a separate QS pool for each regulatory area, one for Area 2C and one for Area 3A. There is no option to establish multiple RQEs in each regulatory area.

The second element under Alternative 2 details a series of restrictions on transfers, similar to those restrictions in place under the CQE program. Two-way transfers of commercial QS could occur and QS characteristics would be retained if transferred back to the commercial sector (i.e., quota class and block designations). Except for an option to have no restrictions on transfers, the options under Element 2 are not mutually exclusive. These options could establish a restriction to facilitate only a gradual transfer of QS annually, a cap on the total amount of QS that could be

held by an RQE similar to a QS use cap, and finally an option to exclude Class D QS (the quota class associated with the smallest commercial vessels) from the QS market for an RQE.

Element 3 describes a date each year (October 1) that would be the basis for estimating IFQ pounds to add to the estimated guided recreational catch limit under the CSP for the upcoming year. An October 1 date would allow estimates of the supplemental pounds of IFQ for the charter catch limit to be considered when ADF&G analyzes proposed annual management measures for the charter sector for the upcoming year.

Alternative 2 and the current analysis do not discuss funding sources for a potential RQE to use in order to permanently transfer QS for use in the charter sector. This scoping decision was a deliberate choice by the Council in order to focus analytical effort toward how an RQE may be structured, and impacts under the assumption that an RQE would have the means to acquire QS. The analysis does not include a discussion of how successful a future RQE may be in acquiring QS.[2] Clearly, the practical ability of an RQE to acquire QS presents a difference in the assessment of the impacts from Council management decisions (e.g. on communities, on the QS market, on new commercial fishery entrants, etc.). However, the Council does not have jurisdiction over the potential avenues considered for funding sources by charter stakeholders.

In light of this inter-connected relationship between program structure and funding, the Council has requested this analytical scope, acknowledging that the ability of an RQE to generate funds, and sources of those funds, are important components to monitor throughout the analytical process. While the Council would not be establishing alternatives or options specific to a funding mechanism, if the draft analysis moves forward and regulatory issues are identified pertaining to the type of funding that may be employed, the Council might identify issues to be further analyzed.

3.3 Alternative 3, Retirement of Latent Charter Halibut Permits

Alternative 3 considers a recency action that would retire latent Charter Halibut Permits (CHP) using one of two different definitions of latency. Under the first proposed threshold, CHPs that have been used fewer than 50 days in the previous five years would be retired and not reissued. Under the second threshold, CHPs that have not been used at all between 2012 and 2014 would be retired and not reissued. The purpose of Alternative 3 would be to reduce the capacity of the charter fleet to enable better predictions of annual harvests. Alternative 3 is not mutually exclusive from Alternative 2 and the impacts may differ depending on the timing and relationship of this alternative compared to Alternative 2.

[2] Several previous Council documents and industry-led efforts have devoted time to considering funding opportunities for compensated charter reallocation (e.g., NPFMC 2007; Yamada & Flumerflet 2014; Davis, Sylvia, & Cusack 2013).

4 REGULATORY IMPACT REVIEW

This Regulatory Impact Review (RIR) examines the benefits and costs of a proposed regulatory amendment to establish a Recreational Quota Entity (RQE) to represent the charter sector in the acquisition of commercial halibut quota share (QS). Additionally, this document analyzes the retirement of latent Charter Halibut Permits (CHPs). Actions under consideration would apply exclusively to the guided angler sport (charter) fisheries and commercial setline fisheries in International Pacific Halibut Commission (IPHC) Regulatory Areas 2C and 3A in the Gulf of Alaska (GOA). This Federal regulatory amendment would augment management measures annually established by the IPHC.

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.

4.1 Purpose and Need for Action

In October 2014 the Council developed the following purpose and need statement:

> *Alaska's guided halibut anglers have seen recent increases in regulatory restrictions due to declining halibut stocks and guided recreational allocations. There is currently no sector-wide mechanism to shift allocation between the commercial and guided recreational sectors. The current provision provided under the Catch Sharing Plan to temporarily transfer allocation known as GAF (Guided Angler Fish), may not be sufficient to ensure long-term planning and stability in*

regulations for all guided anglers. A market-based mechanism for the guided halibut recreational sector may be an effective means to supplement their annual allocations. Allowing an RQE (Recreational Quota Entity) to hold commercial halibut QS on behalf of guided recreational halibut anglers under a "willing seller and willing buyer" approach may result in less restrictive annual harvest measures for guided recreational anglers, while complying with total halibut removals under the guided halibut catch limits determined by the International Pacific Halibut Commission. The guided recreational halibut allocation under the Halibut Catch Sharing Plan would be combined with the halibut quota share held by the RQE to determine the annually adjusted total guided halibut allocation. The total allocation would be the basis for the determination of appropriate management measures for the guided halibut sector each year.

4.2 Alternatives

The National Environmental Policy Act (NEPA) requires that an EA analyze a reasonable range of alternatives, consistent with the purpose and need for the proposed action. The alternatives in this chapter were designed to accomplish the stated purpose and need for the action. The development of an RQE would provide a market-based mechanism for the guided halibut recreational sector to supplement their annual allocations.

The alternatives that are analyzed in this package were adopted by the Council in October 2014. These alternatives are listed here and described in detail in Sections 3.1 through 3.3. The alternatives propose management measures that would apply exclusively to the charter and commercial setline fisheries in IPHC Regulatory Areas 2C (Southeast Alaska) and 3A (Southcenteral Alaska).

Alternative 1. No Action

Alternative 2. Establish a Recreational Quota Entity (RQE) as a qualified entity to purchase and hold commercial halibut QS for use by the guided halibut sector

Element 1. Number of entities

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Option 2. One entity with two area quota pools, Area 2C and Area 3A

Element 2. Restrictions on transfers. Two-way transfers are allowed. Quota class and block designation is retained if the quota is transferred back to the commercial sector.

(Options below are not mutually exclusive)

Option 1. No restrictions

Option 2. Annual limit on transfers to the RQE in each regulatory area (Area 2C and 3A)

Sub-option 1. 30% – 50% of the average amount of commercial QS transferred in each area during the previous five years (*e.g., the Area 2C transfer limit is based on 30% – 50% of the average amount of commercial QS transferred in Area 2C in the previous five years*).

Sub-option 2. 1% - 5% of commercial QS in each area based on a five-year average

Option 3. Total (cumulative) limit on amount held by RQE by regulatory area (Area 2C and 3A)

Sub-option 1. 10% - 40% of any commercial QS based on five-year average

Sub-option 2. 10% - 40% of each class of QS based on five-year average

Sub-option 3. Transfers to mirror current GAF limits by area: 10% (Area 2C) and 15% (Area 3A) of area QS holdings each year.

Option 4. Prohibit purchase of D class commercial quota share by the RQE.

Element 3. Setting of annual charter management measures. Use RQE quota share holdings as of October 1 each year as the basis to estimate IFQ pounds to add to the estimated guided recreational allocation under the catch sharing plan for the upcoming year. This amount must be maintained for the following fishing year. This estimated combined allocation would be used to recommend the guided recreational harvest measures for the following year. The procedural process and timeline would remain unchanged.

Alternative 3. Retirement of "latent" Charter Halibut Permits. Threshold for determining a latent CHP:

Option 1. The CHP has been fished less than 50 angler days in the previous 5 years.

Option 2. A CHP that has not been used by the CHP holder in the previous 3 years.

4.3 Methodology for analysis of impacts

This evaluation of impacts is designed to meet the requirements 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 1 with the action alternatives. The analyst then provides a qualitative assessment of the net benefit to the Nation of each alternative, compared to no action.

ADF&G Saltwater Charter Logbooks data were heavily relied on in this analysis of impacts. Since the mid-1980s, ADF&G has assumed responsibility for the collection of data from the recreational fishery in order to advise Federal management agencies such that decision could be made based upon the best available information (Meyer 2014). In addition to logbooks, this analysis was prepared using data from the ADF&G fish tickets, NMFS catch accounting system, Restricted Access Management (RAM) division reports, and IPHC catch and removal data.

4.4 Description of the Charter Halibut Fishery

This section details the current management of the charter halibut fishing in regulatory Areas 2C and 3A. It also contains a description of current operations in the fishery for these areas in which more than 99 percent of the charter halibut operations for the state of Alaska take place (ADF&G 2014).[3] For additional information on the management history of the charter sector (e.g., a history

[3] Halibut charter operations for Area 3B and Area 4 are not included in the CSP. According to 2013 ADF&G estimates, these operations represent less than 0.4 percent of the Alaska's charter/ non-charter recreational yield. For charter anglers in all IPHC regulatory areas in Alaska except Areas 2C and 3A, the regulations are the same as for unguided anglers.

of the Guideline Harvest Levels), the development of the Catch Sharing Plan, or charter sector harvest comparisons to non-guided and subsistence fisheries, see NPFMC (2013).

4.4.1 Management of Charter Halibut Fishing

Sport fishing activities for Pacific halibut in Areas 2C and 3A are subject to different regulations, depending on whether those activities are guided or unguided. Guided sport fishing for halibut is subject to charter restrictions under Federal regulations that are more restrictive than the regulations for unguided anglers. Charter regulations apply if a charter vessel guide is providing assistance, for compensation, to a person who is sport fishing, to take or attempt to take fish during any part of a charter vessel fishing trip. Unguided anglers typically use their own vessels and equipment, or they may rent a vessel and fish with no assistance from a guide.

The Council and NMFS developed specific management programs for the charter halibut fishery to achieve allocation and conservation objectives for the halibut fisheries. These management programs are also intended to maintain stability and economic viability in the charter fishery by establishing 1) limits on the number of participants, 2) allocations of halibut that vary with abundance, and 3) a process for determining annual charter angler harvest restrictions to limit charter fishery harvest to the established allocations. The charter halibut fisheries in Areas 2C and 3A are managed under the Charter Halibut Limited Access Program (CHLAP) and the Catch Sharing Plan (CSP). The CHLAP limits the number of operators in the charter fishery, while the CSP establishes annual allocations to the charter and commercial fisheries and describes a process for determining annual management measures to limit charter harvest to the allocations in each management area. The CHLAP and the CSP are summarized in the following sections.

4.4.1.1 Charter Halibut Limited Access Program and Charter Halibut Permits

The CHLAP was adopted by the Council in 2007 and NMFS published the final rule in January 2010 (75 FR 554, January 5, 2010). The CHLAP established Federal charter halibut permits (CHPs) for operators in the charter halibut fishery in Areas 2C and 3A. The program officially began in 2011, subsequent to the determination of eligibility and the issuance of permits for the 2011 season. NMFS implemented the CHLAP, based on recommendations by the Council, to meet allocation objectives in the charter halibut fishery. Specifically, this program provides stability in the fishery by limiting the number of charter vessels that may participate in Areas 2C and 3A. The CHLAP also issues a limited number of permits to non-profit corporations representing specified rural communities and to U.S. military morale programs for service members.

Since implementation of the CHLAP program in 2011, all vessel operators in Areas 2C and 3A with charter anglers on board must have an original, valid permit on board during every charter vessel fishing trip on which halibut are caught and retained. CHPs are endorsed for the appropriate regulatory area and the number of anglers that may catch and retain halibut on a charter vessel fishing trip, ranging from 4 to 38.

Vessel operators had to meet minimum participation requirements to receive an initial issuance of a CHP. NMFS initially issued charter halibut permits to qualified applicants who were licensed by ADF&G and who, according to the Official Record, had at least five logbook fishing trips recording halibut effort during one of the initial qualifying years (2004 or 2005) and the recent participation year (2008).

Complete regulations for the CHLAP are published at §§ 300.65, 300.66, and 300.67. Additional details on the development and rationale for the CHLAP can be found in the proposed rule implementing the program (74 FR 18178, April 21, 2009).

4.4.1.2 Catch Sharing Plan

The Catch Sharing Plan was adopted implemented by NMFS in January 2014 (78 FR 75844, December 12, 2013). The CSP replaced the Guideline Harvest Level program that was in place from 2004 through 2013 (68 FR 47256, August 8, 2003) as the method for setting pre-season specifications of acceptable annual harvests in the charter fisheries in Areas 2C and 3A. The CSP defines an annual process for allocating halibut between the charter and commercial halibut fisheries in Areas 2C and 3A. The CSP establishes sector allocations that vary proportionally with changing levels of annual halibut abundance and that balance the differing needs of the charter and commercial halibut fisheries over a wide range of halibut abundance in each area. The CSP describes a public process by which the Council develops recommendations to the IPHC for charter angler harvest restrictions that are intended to limit harvest to the annual charter halibut fishery catch limit in each area. This process is described in more detail in Section 4.4.1.2.2 below. Additional detail on the development and rationale for the CSP can be found in the proposed rule (78 FR 39136, June 28, 2013) and final rule implementing the program (78 FR 75844, December 12, 2013).

4.4.1.2.1 Combined Catch Limit and Sector Catch Limits

The process by which the IPHC sets annual catch limits is depicted in Figure 4-1. Each year, the IPHC estimates the exploitable biomass of halibut using a combination of harvest data from the commercial, sport, and subsistence fisheries, and information collected during scientific surveys and sampling of bycatch in other fisheries. The IPHC calculates the Total Constant Exploitation Yield (CEY), or the target level for total removals (in net lb) for that area in the coming year, by multiplying the estimate of exploitable biomass by the harvest rate in that area. The IPHC subtracts estimates of other removals from the Total CEY. Other removals include unguided sport harvest, subsistence harvest, and bycatch of halibut in non-target commercial fisheries. The remaining CEY, after the other removals are subtracted, is the Fishery CEY which is the basis for the IPHC's determination of the annual combined catch limit (CCL) for Areas 2C and 3A. The IPHC considers the combined commercial and charter halibut Fishery CEY, staff analysis, harvest policy, and stakeholder input when it specifies the Area 2C and Area 3A annual CCL in net pounds.

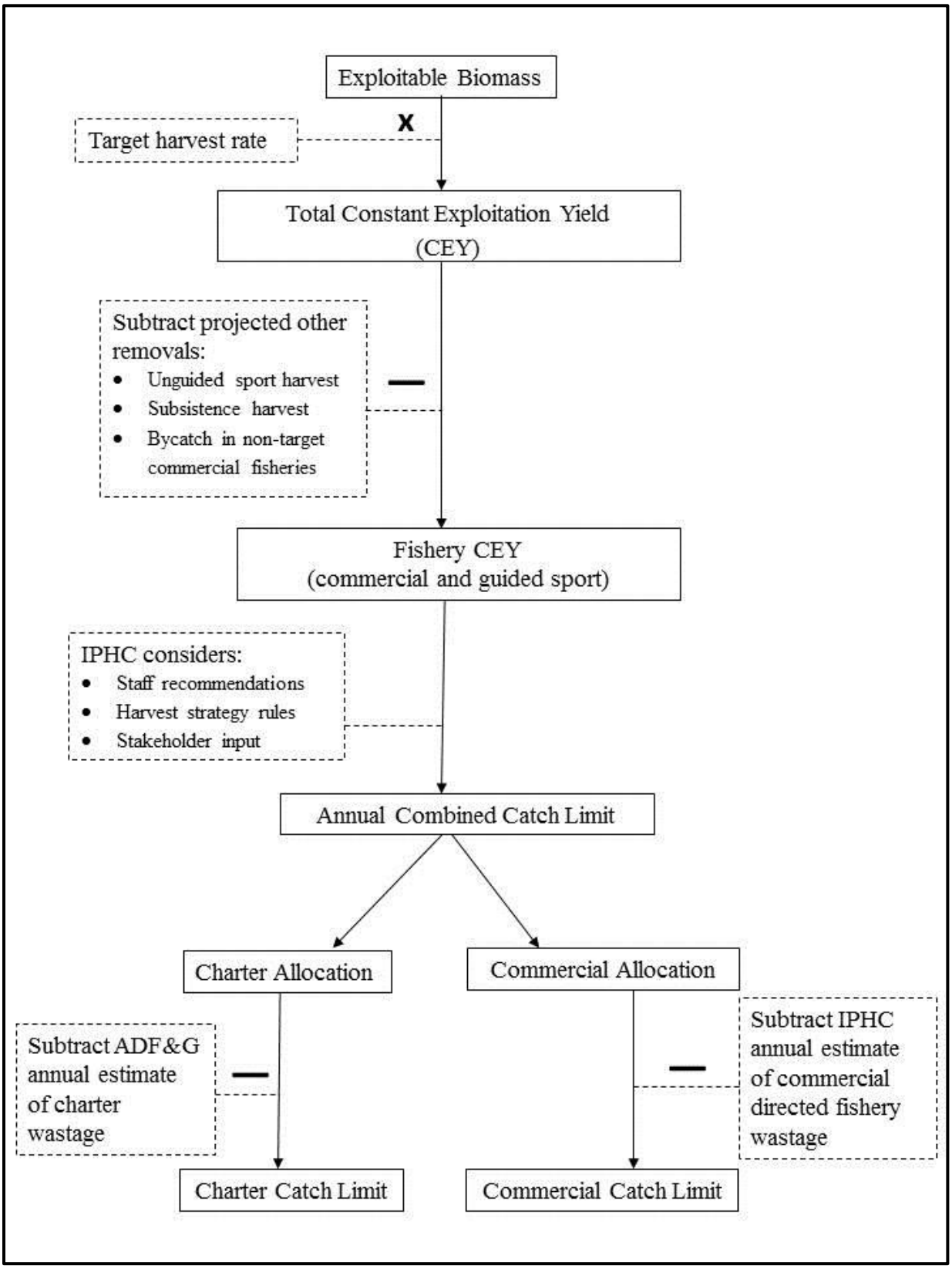
Under the CSP, the IPHC specifies a CCL for Area 2C and for Area 3A at its annual meeting in January. Each area's annual CCL in net lb is the total allowable halibut harvest for the directed commercial halibut fishery plus the total allowable halibut harvest for the charter halibut fishery under the CSP, including an estimate of each sector's wastage.

Each year, the IPHC divides the annual CCL into separate annual catch limits for the commercial and charter halibut fisheries pursuant to the CSP's allocation formulas. A fixed percentage of the annual CCL is allocated to each fishery at most levels of the CCL (Table 4-1 and Table 4-2). The fixed percentage allocation to each fishery varies with halibut abundance. The charter sector's relative share is higher when the CCL is lower, but lower when the CCL is higher. This means the charter sector receives a smaller negative shock in bad years and less of a windfall in the good years than the commercial sector. The charter halibut fishery receives a fixed poundage allocation at intermediate abundances to avoid a "vertical drop" in allocation as shown in Figure 4-2 and

Figure 4-3. The IPHC multiplies the CSP allocation percentages for each area by the annual CCL to calculate the commercial and charter halibut allocations in net pounds. Fishery-specific catch limits are calculated by deducting separate estimates of wastage from the commercial and charter halibut allocations (Figure 4-1). NMFS publishes the CCLs and associated allocations for the charter and commercial halibut fisheries in the *Federal Register* as part of the IPHC annual management measures pursuant to 50 CFR 300.62.

An overage by the charter or commercial sector in a year does not affect the other sector in that same year. An overage by any sector affects all users in the subsequent year by increasing fishery removals that result in a lower estimated initial biomass. The IPHC assessment considers an overage as a removal higher than the fishery's catch limit. That higher removal in a fishing year means that biomass is incrementally lower at the end of that year than it would be otherwise. Underages have a similar effect on biomass but in the opposite direction, i.e., biomass estimation for the subsequent year begins at a higher level than it would otherwise, and all sectors will benefit from this.

Figure 4-1 Process for Setting Annual Combined Catch Limits, Charter and Commercial Allocations, and Charter and Commercial Catch Limits for Area 2C and Area 3A Under the Catch Sharing Plan


Exploitable Biomass
X
Target harvest rate
Total Constant Exploitation Yield (CEY)
Subtract projected other removals:
• Unguided sport harvest
• Subsistence harvest
• Bycatch in non-target commercial fisheries
—
Fishery CEY (commercial and guided sport)
IPHC considers:
• Staff recommendations
• Harvest strategy rules
• Stakeholder input
Annual Combined Catch Limit
Charter Allocation
Commercial Allocation
Subtract ADF&G annual estimate of charter wastage
—
Subtract IPHC annual estimate of commercial directed fishery wastage
—
Charter Catch Limit
Commercial Catch Limit

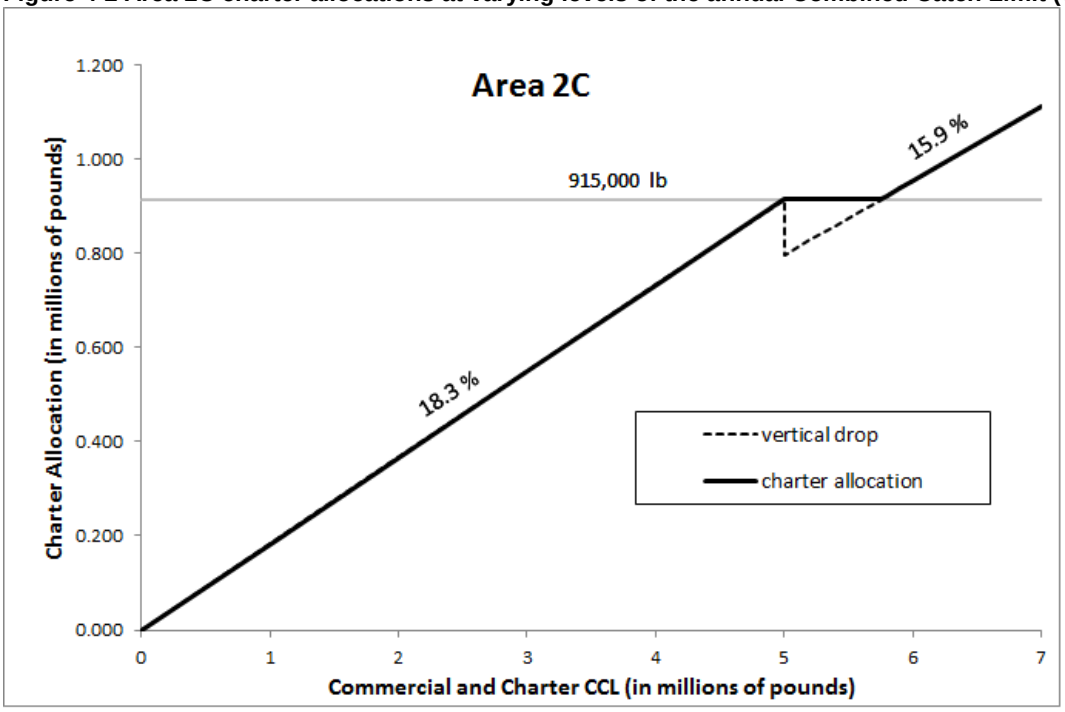
4.4.1.2.1.1 Area 2C Allocation

The CSP establishes three allocation tiers for Area 2C as shown in Table 4-1 and Figure 4-2 below.

Table 4-1 Area 2C Catch Sharing Plan (CSP) allocations to the charter and commercial halibut fisheries relative to the annual Combined Catch Limit (CCL)

Area 2C annual CCL for halibut in net lb.	Charter halibut fishery CSP allocation (% of annual CCL or net lb.)	Commercial halibut fishery CSP allocation (% of annual CCL or net lb.)
0 to 4,999,999	18.30%	81.70%
5,000,000 to 5,755,000	915,000 lb.	Area 2C CCL minus 915,000 lb.
5,755,001 and up	15.90%	84.10%

Figure 4-2 Area 2C charter allocations at varying levels of the annual Combined Catch Limit (CCL)



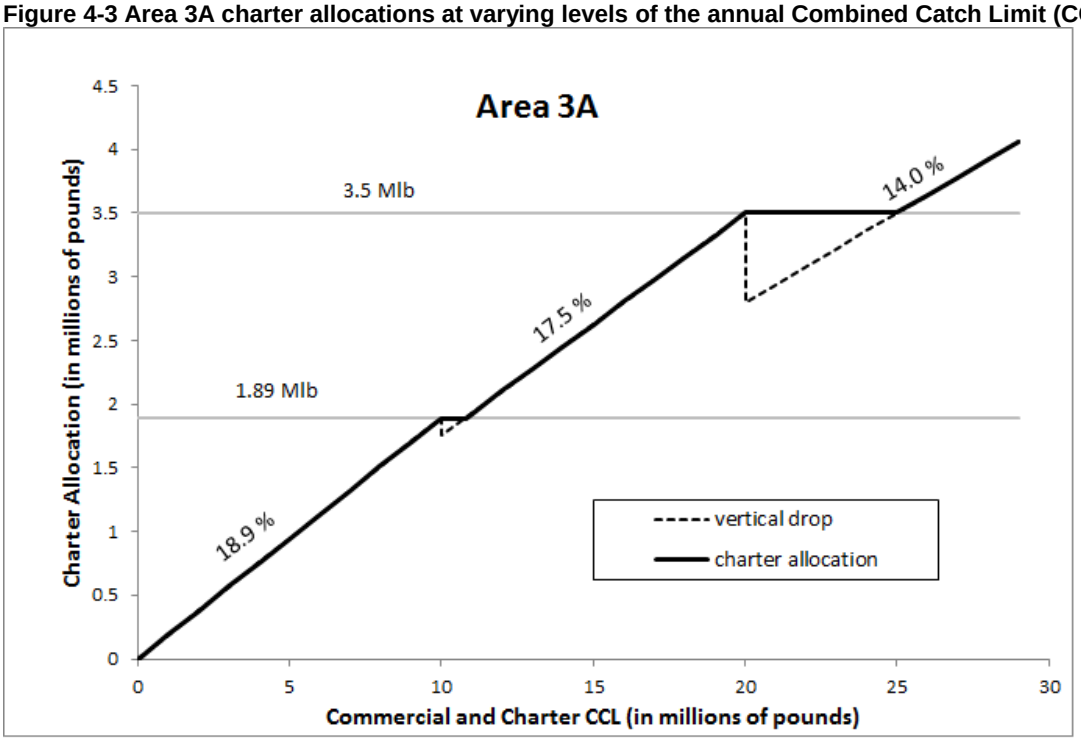
4.4.1.2.1.2 Area 3A Allocation

The CSP established five allocation tiers in Area 3A as shown in Table 4-2 and Figure 4-3 below.

Table 4-2 Area 3A Catch Sharing Plan (CSP) allocations to the charter and commercial halibut fisheries relative to the annual Combined Catch Limit (CCL)

Area 3A annual CCL for halibut in net lb.	Charter halibut fishery CSP allocation (% of annual CCL or net lb.)	Commercial halibut fishery CSP allocation (% of annual CCL or net lb.)
0 to 9,999,999	18.90%	81.10%
10,000,000 to 10,800,000	1,890,000 lb.	Area 3A CCL minus 1,890,000 lb.
10,800,001 to 20,000,000	17.50%	82.50%
20,000,001 to 25,000,000	3,500,000 lb.	Area 3A CCL minus 3,500,000 lb.
25,000,001 and up	14.00%	86.00%

Figure 4-3 Area 3A charter allocations at varying levels of the annual Combined Catch Limit (CCL)



4.4.1.2.2 Annual Process for Setting Charter Management Measures

Prior to 2012, charter management measures were recommended by the Council and implemented by NMFS through proposed and final rulemaking or implemented by the IPHC without specific recommendation from the Council. The CSP provides a more systematic, timely, and responsive process to address harvest overages or underages, using the best available and most recent data. Annual management measures for implementation in the Area 2C and Area 3A charter halibut fishery are set each year through a public process.

Each October, the Council's Charter Halibut Management Implementation Committee meets to review harvest in the current year in relation to the charter catch limit, and to discuss and make recommendations from a number of management measures for Areas 2C and 3A to be analyzed for the coming year. ADF&G staff then does an analysis to predict harvest under single alternatives and combinations of measures. There are a variety of management measures that have been used or considered in the past to manage the charter and other recreational halibut fisheries. Some of these measures directly restrict the number or size of fish allowed to be retained.[4] Examples include regulating:

- the number of halibut taken by an angler in a calendar day ("bag limit");
- the number of trips a charter operator may take in a calendar day ("trip limit");
- the number of halibut taken by an angler in a calendar year ("annual limit");
- the maximum size limit of halibut taken on a trip (for example, "U45", meaning a halibut must be under 45 inches);
- the minimum size limit of halibut taken on a trip (for example, "O68", meaning a halibut must be over 68 inches);
- a specified maximum/ minimum size limit halibut must fall outside of in order to be retained "reverse slot limit");

Some of these measures indirectly restrict in the number of halibut able to be retained by enforcing:

- a prohibition on charter fishing during selected day(s) of the week ("day of the week closure");
- a prohibition on skipper/ crew harvest (default under the CSP);

The Charter Halibut Management Implementation Committee considers combinations of these and possibly other measures and works with ADF&G to understand the projected impact given charter halibut trends as indicated in the logbook and port sampling data. Because regulations restricting the number or size of halibut taken could apply to either some or all of the halibut taken during a trip or season, there are many combinations of possible alternatives. In December each year, prior to Council consideration, ADF&G presents an analysis based on the combinations of management measures requested by the Committee. This analysis is based on a forecast of the upcoming year's harvest under the current year ("status quo") regulations and observed effects of various measures in past years. Projected harvests under alternative management measures are compared to the charter allocation associated with the IPHC's "blue line" [5] CCL for commercial and charter fisheries. The charter allocation is defined in

[4] A list of current and historical combinations of measures are detailed in Figure 4-2 and Figure 4-3 and further discussed in Section 4.4.1.2.

[5] The "blue line" is a proposed combined catch limit (CCL) for the commercial and charter sectors, based on the application of the current IPHC harvest policy results. The blue line catch limit is not the same as an overfishing limit (OFL) or acceptable biological catch (ABC) in the Alaska groundfish context. These are both biologically-based harvest limits that are not to be exceeded, within which the Council recommends annual TACs. The blue line represents a target level of removals from the application of the IPHC harvest policy, but the policy is not binding on

relation to the magnitude of this combined catch limit. Management measures are not modified mid-season, therefore the Council recommends management measures intended to keep charter harvest within the charter sector allocation in each area.

Given the diversity in charter operations and business structure, this suite of management measures can create disparate adverse economic impacts among operators. For instance, some charter businesses cater to anglers coming from a cruise ship, and thus, their demand is centered on the cruise ship schedule. A day of the week closure may provide greater economic burden on these businesses than on charter operations with a different client base. This diversity of operations is particularly evident between the two regulatory areas, Area 2C and 3A, and therefore representatives of each area work within the suite of management measures and area allocations to balance the impacts among all types of operations.

Additionally, these measures provide different management and enforcement considerations. For example, some of the measures proposed by Committee members and practical to implement may be very impractical to analyze with available data. The more difficult it is to predict angler behavior, given a set of constraints, the more risk and uncertainty associated maintaining the catch limit for a season. Likewise, some measures may have a high expectation of effectiveness, but present serious enforcement challenges. If measures cannot be properly enforced, this adds a component of uncertainty to both the projected effectiveness of measures and to the retrospective understanding of their effectiveness.

In December, the Council also reviews the ADF&G analysis of the expected outcome from the potential charter management measures for Area 2C and Area 3A charter halibut fisheries for the upcoming fishing year. It is the Council's discretion how to balance Charter Management Implementation Committee recommendations, with possible enforcement or analytical challenges. The Council considers these recommendations, as well as those from its other advisory bodies. The Council then identifies the charter halibut management measures to recommend to the IPHC at its annual meeting that will most likely constrain charter halibut harvest for each area to its catch limit, while considering economic impacts on charter operations.

The IPHC takes into account Council recommendations, along with the analyses on which those recommendations were based, and input from its stakeholders and staff. The IPHC then adopts charter halibut management measures designed to keep charter harvest in Area 2C and Area 3A to the catch limits specified under the CSP given the adopted CCL. Once accepted by the Secretary of State with the concurrence of the Secretary of Commerce, NMFS publishes in the *Federal Register* the charter halibut management measures for each area as part of the IPHC annual management measures. This process provides many opportunities for public input along the way.

4.4.1.2.3 Catch Monitoring and Estimation in the Sport Halibut Fisheries

As part of implementation of the CSP, the Council recommended using the ADF&G Saltwater Charter Logbook (i.e., logbook) as the primary data collection method for monitoring and managing the charter harvest. ADF&G developed the logbook program in 1998 to provide information on participation and harvest by individual vessels and businesses in charter fisheries for halibut as well as other state-managed species. Logbook data are compiled to show where fishing occurs, the extent of participation, and the species and the numbers of fish caught and retained by individual charter anglers. This information is essential to estimate harvest for regulation and management of the charter halibut fisheries in Areas 2C and 3A.

Commissioners and is only one element of the staff advice. Therefore while the blue line estimate for a season is made public at the IPHC interim meeting, this number could change when the IPHC sets the CCL in January of the following year.

ADF&G estimates charter yield using reported logbook harvest combined with estimates of average weight from creel sampling. Fishery creel sampling occurs through onsite fishery monitoring programs in Southeast and Southcentral Alaska. Harvested halibut are measured and net weight is estimated from weights predicted for each fish using the IPHC length-weight relationship. This allows for estimates of average weight by sector and port (Meyer 2014).

4.4.1.2.4 Guided Angler Fish (GAF) Program

In 2014, also as part of the CSP, NMFS implemented the Guided Angler Fish (GAF) Program to authorize limited annual transfers of commercial halibut IFQ as GAF to qualified charter halibut permit holders to provide additional harvest opportunities by charter vessel anglers in excess of the annual charter allocation to the common pool (NPFMC 2013).[6] Using GAF, qualified charter halibut permit holders may offer charter vessel anglers the opportunity to retain halibut up to the limit for unguided anglers when the charter management measure in place limits charter vessel anglers to a more restrictive harvest limit. Participation in this program is voluntary.

NMFS issues GAF in numbers of halibut based on a conversion factor from IFQ pounds. In 2014, the first year of the GAF program, the conversion factors for each area were the average weight of all charter halibut harvested by area in the most recent year without a size limit in effect (Table 4-3). For 2015 and beyond, the conversion factors are the average net weights of GAF harvested in each area during the previous year. Average weights are determined from data that guides report directly to NMFS. These data are compared to those recorded from ADF&G creel sampling, but creel sampling is not used in the calculation. Guides must report the length of every GAF harvested and that is compared to the IPHC length-weight table. Because the conversion factor was the average of all charter halibut harvested in 2014, and on the average of only GAF halibut harvested in 2015 and thereafter, it is not surprising that the GAF conversion increased dramatically between the first and second years of the program. The conversion factors were similar between 2015 and the estimated 2016 values. The 2015 conversion factors were 67.3 lb IFQ per GAF in Area 2C and 38.4 lb IFQ per GAF in Area 3A.

Table 4-3 IFQ to GAF conversion factors

Year	(IFQ lb/GAF)	
	Area 2C	Area 3A
2014	26.4	12.8
2015	67.3	38.4
2016*	65.1	36.1

*estimated conversion factor

In a simple example, a CHP holder could lease 100 lb of commercial IFQ. NMFS would then convert the IFQ into GAF using the average weight of GAF fish (i.e., the conversion factor) from the previous year in that regulatory area. For example, if the conversion factor is 20 lb, then the 100 lb of IFQ could be transferred to the CHP holder as 5 GAF (i.e., 5 halibut). If charter halibut regulations specify that each angler's daily bag limit is one fish of any size, while an unguided angler may harvest two fish of any size, then the CHP holder can use one GAF to allow one charter angler to harvest two fish of any size. That is, the GAF would be used to allow a charter angler to harvest halibut under the same regulations in place for unguided anglers, regardless of the management measure in place for charter anglers fishing in the common pool (e.g., one fish, one fish with a slot limit, or two fish with one of any size and the other with

[6] For a more detailed description of the GAF Program, its provisions, and the associated rationale behind the provisions see NPMFC (2014). In addition, NOAA NMFS AK Region responds to "frequently asked questions" about this program on its website http://alaskafisheries.noaa.gov.

a size restriction). If the unguided bag limit were one fish of any size and the charter angler bag limit were one fish of any size, there would be no reason to use GAF.

GAF is necessary for a charter angler to harvest a halibut that would be legal for an unguided angler to harvest, but not a charter angler in that year. If there is a size limit imposed on the charter sector and those regulations do not exist for the unguided angler, the charter operator/charter angler could use a GAF to harvest a halibut that falls outside the size limit. Depending on the structure of the payment, it could increase the total cost to the charter operator, the charter angler, or both.

GAF transfers can be done through separate entities or as a self-transfer if the CHP also holds IFQ. Transfers of IFQ to GAF may be agreed upon directly between halibut QS holders and CHP holders or facilitated through a broker.[7] However, a transfer of IFQ to GAF is not valid until NMFS has approved the application for transfer. In order to receive GAF, the IFQ holder and CHP holder receiving GAF must submit an application to NMFS, RAM Program, for review and approval. Upon approval of the transfer application, NMFS will issue a GAF permit to the holder of the CHP. At that point, the GAF permit holder may offer additional GAF harvest opportunities to anglers on board the vessel on which the operator's GAF permit and the assigned charter halibut permit are used. Once GAF is transferred to a CHP holder and assigned to a specific CHP, it may not be transferred to another charter halibut permit holder (i.e., no sub-leasing of GAF). Transfers cannot take place after fish have been harvested.

There are specific dates associated with transfers of GAF and the return transfer of unused GAF that were implemented with the program for practical reasons. Returns of unused GAF from the charter sector back to the commercial sector can occur in one of two methods:

1) a voluntary return of unused GAF from the GAF/CHP holder back to the IFQ holder,[8] or
2) a mandatory automatic return of GAF from the GAF/CHP holder back to the IFQ holder.

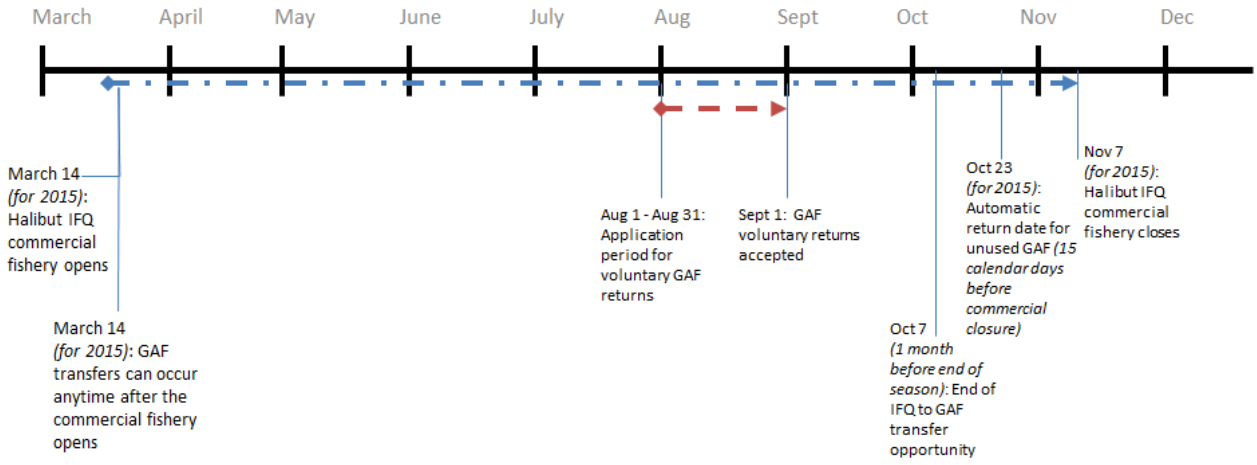
Voluntary returns of unused GAF can be arranged during the month of August (NMFS must receive application between August 1 through August 31). Returns will be processed on or after September 1. By this date the majority of the charter season is complete and it allows the IFQ holder sufficient time to harvest that IFQ before the end of the season (usually in mid-November).

The automatic return date of unused GAF occurs 15 calendar days prior to the end of the commercial halibut season. Figure 4-4 shows an example of this timeline for the year 2015. Some of these dates could change annually because they depend on the commercial IFQ season dates established by the IPHC.

Applications for transfers of IFQ to GAF will be accepted as soon as IFQ has been issued for the year and the conversion factor has been posted on NMFS' website until one month prior to the end of the commercial fishing season, to ensure that all GAF transactions are completed before the automatic return date.

[7] A list of both halibut QS holding entities as well as CHP holders are available on NMFS website.
[8] This transfer might be for compensation or not. Terms of these arrangements are private transactions between the GAF permit/ CHP holder and the commercial IFQ holders.

Figure 4-4 GAF Transfer Schedule Using 2015 as an Example



4.4.1.2.4.1 GAF Reporting Requirements

There are several unique Federal reporting and handling requirements associated with the use of GAF. Charter guides are required to mark retained GAF by removing the tips of the upper and lower lobes of the caudal fin. Additionally, charter vessel guides are required to retain the carcass showing the caudal fin clips until the halibut fillets are offloaded so that enforcement agents can verify the length and that the fish was retained and recorded as GAF.

The logbook is the primary reporting method for operators in the charter halibut fishery for GAF. In addition to general charter reporting requirements, vessel guides are required to report the GAF permit number and number of GAF retained in the logbook. For each halibut retained as GAF, charter vessel guides are also required to immediately record on the GAF permit log (on the back of the GAF permit), the date and total halibut length in inches. There are also requirements to enter GAF information into a NMFS-approved electronic reporting system by the end of the calendar day on the last day of a charter fishing trip in which a charter angler retained GAF. Complete reporting requirements can be found at 50 CFR 300.65(d)(4)(ii).

4.4.1.2.4.2 GAF Transfer Limits

Three restrictions on GAF transfers were implemented with the program. The restrictions on transfers of GAF are intended to prevent a particular individual, corporation, or other entity from acquiring an excessive share of halibut fishing privileges as GAF.

First, IFQ holders in Area 2C are limited to transferring up to 1,500 lb or 10 percent, whichever is greater, of their initially issued annual halibut IFQ for use as GAF. In Area 3A, IFQ holders may transfer up to 1,500 lb or 15 percent, whichever is greater, of their initially issued annual halibut IFQ for use as GAF. This restriction was intended to further the Council and the IFQ program's goal for an owner-on board IFQ fishery. IFQ holders in Area 3A are able to transfer up to 15 percent of their IFQ as GAF because IFQ holdings are generally larger in Area 3A than in Area 2C, and restricting Area 3A IFQ holders to leasing up to 10 percent of their IFQ holdings could limit the amount of IFQ available for lease as GAF.

The other transfer restrictions are intended to balance the GAF needs of different types of charter operations to maximize the opportunity for all charter operators to acquire GAF. Because holders of charter halibut permits endorsed for more than six anglers are likely to be larger charter operations, the

Council was concerned these larger charter operations would have more financial resources to acquire GAF than smaller operations unless a limit was placed on the number of GAF that could be assigned to a charter halibut permit. Depending on the supply of IFQ available to be transferred as GAF, this program could put different charter operations in direct competition with each other for GAF. These restrictions promote opportunity for charter operations of different types. Therefore the second restriction for GAF transfers is that no more than a total of 400 GAF will be assigned during one year to a GAF permit assigned to a CHP that is endorsed for six or fewer anglers. The third restriction states that no more than a total of 600 GAF will be assigned during one year to a GAF permit assigned to a CHP endorsed for more than six anglers. This rule does not limit the amount of GAF transfers for military charter halibut permits. CQEs that hold quota share are allowed to transfer IFQ as GAF. The limits on these transfers depend on whether the GAF permit holder is a CQE, an eligible community resident, or a non-resident.

Details and rationale for GAF transfer restrictions are further described in the proposed rule for the CSP (78 FR 39122, July 25, 2013).

4.4.1.2.4.3 Cost Recovery for GAF

NMFS' costs associated with management, data collection, and enforcement of the GAF Program are recoverable through IFQ Program Cost Recovery fees. NMFS does not track fees associated with GAF separately from other IFQ Program fees. Even with the additional costs to develop and implement the GAF Program, total NMFS costs associated with the IFQ Program were less in 2014 than in 2013. NMFS collected cost information for the development of the database and electronic reporting systems for the GAF Program. These costs totaled $78,700 across multiple years and were subject to IFQ Program Cost Recovery fees.

4.4.1.2.5 Separate Accountability for Wastage

The CSP also includes a process of separate accountability for the commercial and charter halibut fishery wastage. Separate accountability means that each sector's wastage is included in their allocation.

Commercial wastage is considered the mortality of released sublegal fish, fish that die on lost or abandoned gear, and fish that die after being released for other regulatory reasons (e.g., exceeding a trip limit). Bycatch and wastage are estimated separately for halibut ≥26 (O26) and halibut <26 inches in length (U26). Prior to the CSP, this wastage estimate was accounted for in the 'other removals' category in the IPHC process. This estimate was deducted from the Total CEY, which ultimately could have impacted both commercial and charter sector allocations under the CSP structure, if the Council had not adopted separate accountability measures (see the flowchart in Figure 4-1). Under separate accountability in the CSP, commercial fishery wastage is estimated by the IPHC and O26 wastage is deducted specifically from the commercial allocation of the CCL, resulting in the commercial catch limit.

Until 2014, halibut discard mortality was not routinely estimated for the sport fishery or factored into the Fishery CEY or GHL. Release mortality in recreational fisheries has not historically been documented due to the lack of information on mortality rates and sizes of released fish. In March 2012, the IPHC asked all agencies that provide estimates of recreational halibut harvest coastwide to implement data collection programs that would allow estimation of release mortality. The IPHC began incorporating estimates of sport fishery release mortality in total halibut removals for purposes of stock assessment in 2014. Each fall, ADF&G provides the IPHC with final estimates of release mortality in the sport fishery (guided and unguided) for the previous year and preliminary estimates for the current year.

ADF&G first undertook estimation of sport fishery release mortality in 2007 (Meyer 2007), using available Statewide Harvest Survey estimates of the numbers of released fish, an assumed mortality rate based on hook use data, and modeling of the size distribution of released fish. Meyer provides a detailed

discussion of the methods that have been used to generate discard mortality rate estimates (2007; 2014). The CSP established the ADF&G charter logbook as the preferred accounting method for charter harvest. Based on this guidance, the numbers of released fish are currently estimated using logbook data (as of 2014). Discard mortality rates for guided and unguided recreational fisheries are consistent with previous estimation methods (Meyer 2007), and are dependent on the hook type (circle versus other) that is used. The rates were derived as weighted estimates, with 3.5 percent mortality rate for halibut released on circle hooks and a 10 percent mortality rate for halibut released on all other hook types, weighted by the proportions of released fish caught on each hook type. Finally, in order to calculate estimated pounds of released mortality from the charter sector, an average weight of released fish is estimated by modeling the size distribution of released fish using creel sampling data on the size distribution of harvest and information from other fisheries (Meyer 2014). All calculations are done for multiple subareas within Areas 2C and 3A and then summed.

There is not a wastage estimate specifically for GAF; only a single wastage estimate for the charter halibut fishery in each area. ADF&G requires that charter vessel guides record the number of halibut kept and the number of halibut released in the logbook. Under the CSP, guides are also required to record in the logbook the number of GAF harvested. The number of halibut released in pursuit of GAF are not differentiated from the number of halibut released in pursuit of non-GAF halibut kept by charter vessel anglers.

4.4.1 Current Charter Operations

This section presents current information about charter operations; with a focus in areas that may prove relevant to the proposed alternatives. Charter capacity and activity are highlighted in this section, as understood through CHP holdings and transfers. Active participation, as proposed by Alternative 3, is investigated in Section 4.9. The present section also describes historical catch limits, management measures, historical charter halibut harvest, GAF transfers and harvest under the recently implemented CSP, as well as a brief description of communities involved in charter activities.

4.4.1.1 CHP holdings and Transfer Prices

One way to consider capacity and activity in the charter fishery is through evaluation of the CHP holdings and market.

Table 4-4 shows the current number of CHPs, CHP holders, and angler endorsements by fishing area and type of CHP. The total number of CHPs has changed since initial allocation. A number of CHPs were considered "interim"; some of which were later revoked upon completion of an appeals process. Additionally the number of CHP holders continually changes as permits are transferred. An individual CHP holder may hold more than one CHP in more than one regulatory area.

Additionally Community Quota Entity (CQE) and U.S. Military Morale, Welfare and Recreation Program (MWR) permits have been issued as part of the program. Community Charter Halibut Permits (CCHPs) are issued at no cost to a CQE representing communities that may not have a fully developed charter halibut fleet. A CQE may apply at any time through NMFS for CCHPs. A charter vessel operator who is using a CCHP is required to either begin or end the charter vessel fishing trip within the community designated on the permit. A CQE in Area 2C may receive a maximum of four CCHPs to provide to an ADF&G licensed charter vessel operator. The operator must have a current ADF&G Saltwater Logbook in possession. A CQE in Area 3A may receive a maximum of 7 CCHPs (Appendix B demonstrates the CCHPs cap by community). All CCHPs issued to a CQE are non-transferable, designated for either Area 2C or 3A, and be endorsed for 6 anglers. CQEs may also receive CHPs (non-community designated CHPs) by transfer, but may not hold more than 8 permits in Area 2C and 14 permits in Area 3A.

Military Charter Halibut Permits are for any MWR program in Alaska operating a halibut charter vessel. The program must obtain a permit, which may be applied for through NMFS at any time at no cost. These permits are non-transferable, issued without angler endorsements, and may be used only in the regulatory area designated on the permit. NMFS reserves the right to limit the number of these permits. The holding entities for MWR permits tend to be military entities, e.g. Eielson Air Force Base. Both CQE permits and MWR permits are subject to the same annual management measures as CHP holders.

As shown in Table 4-4, 270 unique entities currently hold 535 unique CHPs in Area 2C, and 307 unique entities currently hold 439 CHPs in Area 3A. For this calculation, all CHP holders were counted once per area, even if he or she holds multiple permits. Across both areas, over 6,637 angler endorsements have been issued on CHPs (including community CHPs), suggesting this number is the maximum number of anglers that legally may charter fish for halibut each day.[9] However, unless annual management measure state otherwise, multiple charter trips per day per CHP may occur, increasing that maximum potential.[10] Conversely, not every angler endorsement on a CHP will be used each trip. Section 4.9 discusses active CHP use versus the used or underutilized CHPs based on two thresholds.

Table 4-4 Distinct CHP Holders, Permits, and Anglers as of August 25, 2015

Area	Permit Type	Count of unique permit holders	Count of unique permits	Largest number of permits per holder	Total angler endorsements	Average angler endorsement
2C	CHP	270	535	15	2746	5.1
	CQE	12	48	4	288	6
	MWR	1	1	1	not applicable	not applicable
3A	CHP	307	439	6	3225	7.3
	CQE	9	63	7	378	6
	MWR	3	6	4	not applicable	not applicable

Source: RAM Division, NMFS sourced through AKFIN
Table Notes: CHP=Charter halibut permit with angler endorsements, CQE=community quota entity permits, and MWR=U.S. Military Morale, Welfare and Recreation Program permits.
An individual CHP holder may hold more than one CHP in more than one regulatory area.

The determination of a "transferable" or "non-transferable" CHP is based on more stringent participation requirements than general CHP qualification requirements (See §300.67(d)(1)). Ownership for a CHP designated as transferable may be transferred through private acquisitions. In Area 2C, 70 percent of the CHPs are transferable. In Area 3A, 78 percent are transferable. All CHP holders may allow others to use their permits without permanently transferring them. NMFS does not track temporary loans of CHPs. CQE and MWR permits are non-transferable.

Table 4-5 illustrates CHP transfer counts and associated prices throughout the lifetime of the CHLAP. In reading Table 4-5 is it important to understand that there can be joint ownership of a CHP. For example one individual may sell a CHP to three joint investors. This example would represent one seller and three buyers. The number of transactions listed is the largest count of numbers listed because it will include these as three separate transactions.

The greatest number of CHP transfers took place in 2011, following CHLAP implementation. That year 33 CHPs in Area 2C and 48 CHPs in Area 3A were transferred. The seller to buyer count (Table 4-5) also demonstrates some consolidation among ownership in that first year.

[9] The active use of these permits is discussed in detail and by several definition of "active" in Section 4.9.
[10] This is the case, for example in Area 3A for 2014 and 2015, where charter operators were limited to one trip per day.

As can also be seen in the table there is a price differentiation based on area endorsement. Typically, CHPs endorsed for Area 3A are 50 to 80 percent more expensive than those for Area 2C (when considering median transaction prices). Additionally, not represented here, there is also a price differentiation based on angler endorsement number. This value is intuitive, typically the greater the angler endorsement on the CHP, the greater the transaction price.

Table 4-5: CHP transfer prices in Area 2C and 3A from 2011 through 2015

Area	Year	Transaction Count	Permit Count	Minimum Transaction Price	Maximum Transaction Price	Average Transaction Price	Median Transaction Price	Seller Count	Buyer Count
2C	2011	41	33	$ 10,000	$ 165,000	$ 26,817	$ 28,000	29	27
	2012	14	14	$ 20,000	$ 200,000	$ 40,214	$ 29,500	14	12
	2013	10	10	$ 14,000	$ 39,000	$ 19,650	$ 21,250	9	10
	2014	17	16	$ 20,000	$ 120,000	$ 28,735	$ 25,000	16	17
	2015	13	13	$ 20,000	$ 125,000	$ 37,538	$ 29,000	11	12
Total for 2C		95	80	$ 10,000	$ 200,000	$ 29,847	$ 28,000	72	76
3A	2011	49	48	$ 9,000	$ 230,000	$ 57,023	$ 60,000	47	38
	2012	24	22	$ 25,000	$ 140,000	$ 42,654	$ 41,500	23	22
	2013	21	20	$ 15,000	$ 50,000	$ 31,721	$ 32,000	19	21
	2014	24	23	$ 1	$ 126,500	$ 28,354	$ 30,000	23	17
	2015	14	14	$ 20,000	$ 115,000	$ 54,679	$ 40,500	12	12
Total for 3A		132	110	$ 1	$ 230,000	$ 44,924	$ 40,000	121	97

Source: NOAA RAM Division, sourced through AKFIN

Table notes: Data from 2015 is current as of 9/10/2015. Three questionable outliers were removed from the dataset (with transfer prices at or greater than $1,000,000). Minimum price is listed as the lowest price that is not $0. Transfer prices listed as $0 are still included in the calculation of average and median transaction price. Transfer prices of $0 are assumed to be loans, trades, inter-business transfers, or gifts.

It is also relevant to illustrate the overlap between individuals (or businesses/ entities) that hold both a CHP as well as commercial IFQ. These statistics are important in understanding the interaction of these user groups. Diversification for the charter fleet is difficult to quantify due to a lack of revenue information. Table 4-6 and Table 4-7 demonstrate some of the diversification potential charter fishery participants may have in commercial operations. These statistics can also highlight the pool of entities that could have the option to self-transfer commercial quota for use as GAF.

Specifically, by linking NMFS ID for persons, Table 4-6 demonstrates the number of unique CHP holders that have access to IFQ. In some cases one holder will hold multiple CHPs. Additionally, some CHPs are linked to groups of holders. For purposes of Table 4-6, the group would still be considered one "individual". If any of those individuals are linked to IFQ, that group is counted under "individual also holds IFQ". This table demonstrates that about 15 percent of CHP holding "individuals" are also associated with commercial IFQ for Area 2C and 11 percent of CHP holding individuals are associated with commercial IFQ for Area 3A.

Table 4-6 Individuals that hold at least one CHP that also hold IFQ; listed by IPHC regulatory area

Area	Individuals that hold at least 1 CHP		
	Total individuals (count)	Individual also holds IFQ (count)	Individual also holds IFQ (%)
2C	368	43	12%
3A	416	37	9%
Total	784	80	10%

Source: NOAA RAM Division, sourced through AKR chp_owner chp_permit and ifq_permit tables
Table notes: "Individuals" in this table means individual person or business.
This table does not make the distinction of whether the IFQ the CHP holder has access to is in the same regulatory area or not.

Since some CHP holders hold more than one CHP, another way to consider the interaction between user groups is illustrated by counting the number of permits (rather than the number of individuals) associated with IFQ. Table 4-7 demonstrates the count and percentage of permits that could have access to IFQ through the holder. A comparison of these two tables exhibits the difference in the "total individuals" column from Table 4-6 and "total CHP" column from Table 4-7 validating that some CHP holders hold multiple CHPs. Since some CHP are held by multiple holders, Table 4-7 considers that CHP associated with IFQ if *any* of the holders in the group also have IFQ.

Table 4-7 Number of CHP held by individuals with IFQ; listed by IPHC regulatory area

Area	Total CHP (count)	CHP held by an individual with IFQ (count)	CHP held by an individual with IFQ (%)
2C	535	54	10%
3A	439	52	12%
Total	974	106	11%

Source: NOAA RAM Division, sourced through AKR chp_owner chp_permit and ifq_permit tables
Table notes: "Individuals" in this table means individual person or business.

Despite lack of revenue data, diversification can also be shown by linking vessels that participate in the charter fishery with other commercial fisheries they may take part in. Individuals that hold both a CHP and commercial halibut IFQ are prohibited from fishing for commercial and charter halibut on the same vessel during the same day in Area 2C and Area 3A. This provision is in place to facilitate enforcement, as different regulations apply to charter caught and commercially caught halibut. However, some individuals that participate in charter fishing operations may participate in commercial fishing using the same vessel during other parts of the year.

This vessel diversification is illustrated in Table 4-8 by linking valid Department of Motor Vehicle (DMV) numbers in the logbook, through NOAA RAM's vessel list, and then to ADF&G Fish Tickets.[11] Out of 574 charter vessels that were able to be verified by DVM number, Table 4-8 illustrates the types of commercial fishing operations these vessels may also have been a part of in 2014.[12] This table demonstrates that in 2014, 75 commercial fishing vessels also participated in charter operations. This represents 51 unique vessels over all these seven types of fisheries for 2014. Of the vessels used in charter operations in 2014, a verified 97 unique vessels had been used in commercial fisheries in the past five years.

[11] It is important to note that considering vessel diversification may not necessarily represent diversification of the individuals that participate in the charter operations. Conversely, individuals that participate in charter operations may be diversified in other commercial fisheries using a different vessel.
[12] Vessel counts reported in this table and section are expected to be an underestimate due to the level of assumed error in properly self-reporting vessel ID number in a charter logbook.

Table 4-8 Count of vessels that participated in both charter halibut and commercial fishing operations in 2014

Commercial Fishery	Vessels in this fishery that are also used in charter fishery (count)
Salmon	24
Other	16
Halibut	13
Groundfish	10
Shellfish	7
Other crab	3
Sablefish	2

Source: ADF&G fish tickets and Charter Halibut Saltwater Logbook, sourced through AKFIN
Table notes: Numbers are expected to be an underestimate due misreported vessel ID number. These are not unique vessel counts.

4.4.1.2 Historic Catch Limits, Regulations, and Harvest in the Charter Fishery

In recognition of the growing halibut charter sector, since the early 1990s, the Council has been developing proposals to limit harvests and establish a timely and accountable management regime for the charter halibut fisheries in Area 2C and Area 3A. Charter operators in both areas were subject to a GHL that identified a harvest limit for the sector based on the total constant exploitation yield (TCEY). Management measures in the fisheries were intended to maintain charter harvests at the GHL.

In Area 2C, charter anglers have only been allowed to harvest a one halibut per person, per day bag limit, since June 5, 2009 (Table 4-9). This rule transpired after a sequence of years in which charter harvest exceeded the GHL in Area 2C (from 2004 through 2008). Implementation of a one-halibut daily bag limit was intended to keep the harvest of charter vessel anglers to approximately the GHL.

Also beginning in 2009, charter captains and crew were prohibited from retaining fish in Area 2C. This prohibition was considered by the Council and NMFS, in working with stakeholder groups, as a preferred first tool for restricting harvest in the guided fishery. It was determined that captains, guides, and crew are on guided charter vessels in their commercial capacity to operate the charter vessel and to direct charter vessel anglers on fishing expeditions, and their commercial status was fundamentally different from other individuals doing non-guided sport fishing. These individuals are not considered charter anglers under current Federal regulations. In a NMFS final rule submitted in 2009 (74 FR 21194, May 6, 2009), NMFS said that it was not appropriate for halibut harvested by these persons to be counted toward the charter halibut fishery harvest. Additionally, halibut harvested by charter operators, guides, and crew are difficult for enforcement agents to distinguish from halibut caught by charter clients. Therefore, along with other restrictions,[13] a prohibition on operator, guide, and crew retention of halibut in Area 2C was established and has persisted after the implementation of the CSP in recent years.

In addition to the implementation of these management measures (i.e., one-fish bag limit, prohibition against halibut retention for charter captains and crew, and line limits), the GHL for Area 2C dropped in 2009 from 0.931 Mlb to 0.788 Mlb. Area 2C continued to exceed the GHL in 2009 and 2010 (Table 4-9).

[13] The final rule (74 FR 21194, May 6, 2009), includes the one-fish limit for anglers in 2C as well as a line limit.

In 2011, a maximum size limit of 37 inches was added to the one-fish bag limit. This became first year the charter sector's harvest was within their GHL since 2004, but the limit proved to be overly constraining and the charter sector harvest was well below the GHL.

In 2012, a "reverse slot limit" (or "protected slot") was implemented as an annual management measure for Area 2C that limited the size of the retained halibut to less than or equal to 45 inches, or greater than or equal to 68 inches in length. This rule provided anglers with an opportunity to retain a trophy fish – a halibut larger than 68 inches in this case. The Charter Halibut Management Implementation Committee and charter fishery participants recommended the reverse slot limit to keep total harvests in Area 2C charter fisheries within the IPHC's 2012 recommended GHL of 931,000 lb, while providing a reasonable charter fishing opportunity. The Area 2C charter fleet maintained harvest under their limit in 2012, and in 2013 the same management measures were proposed.

In 2014, the first year of the CSP, the Council maintained the one fish daily bag limit in Area 2C. In addition, the reverse slot limit was modified to require that the retained halibut must be less than or equal to 44 inches or greater than or equal to 76 inches in length. In 2015, the slot increased several inches on either side, requiring retained halibut to be either less than or equal to 42 inches or greater than or equal to 80 inches. This reverse slot limit translates into a halibut less than approximately 26 pounds and greater than 208 pounds, after the head and guts have been removed. Preliminary estimates of 2015 charter harvest demonstrate that Area 2C was 3,000 lb under the harvest limit.

Table 4-9 Charter management measures and halibut harvest for Area 2C, 1995 through 2015

Area 2C					
Year	Mgmt Type	Charter Regulation	Harvest Limit (Mlb.)	Guided Harvest (Mlb.)	Guided Harvest (% of harvest limit)
1995	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	0.986	NA
1996	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	1.187	NA
1997	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	1.034	NA
1998	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	1.584	NA
1999	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	0.939	NA
2000	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	1.13	NA
2001	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	1.202	NA
2002	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	1.275	NA
2003	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	1.432	1.412	99
2004	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	1.432	1.75	122
2005	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	1.432	1.952	136
2006	GHL	Two-fish bag limit (no size limit); state EO prohibiting crew harvest 5/26-12/31	1.432	1.804	126
2007	GHL	Two-fish bag limit (1 U32 inches, effective June 1); no crew retention 5/1-12/31 (State EO and Federal Rule)	1.432	1.918	134
2008	GHL	Two-fish bag limit (1 U32 inches); except one-fish bag limit Jun 1-10 (halted by injunction)	0.931	1.999	215
2009	GHL	One fish (no size limit); no harvest by skipper & crew; line limit (effective 6/5)	0.788	1.249	158
2010	GHL	One fish (no size limit); no harvest by skipper & crew; line limit	0.788	1.086	138
2011	GHL	One fish with a maximum of 37 inches; no harvest by skipper and crew; line limit	0.788	0.344	44
2012	GHL	One fish U45 inches or O68 inches; no harvest by skipper and crew; line limit	0.931	0.605	65
2013	GHL	One fish U45 inches or O68 inches; no harvest by skipper and crew; line limit	0.788	0.762	97
2014	CSP	One fish U44 inches or O76 inches; no harvest by skipper and crew; line limit	0.761	0.827	109
2015	CSP	One fish U42 inches or O80 inches; no harvest by skipper and crew; line limit	0.851	*0.848*	*0*

Source: From NPFMC (2014) and ADF&G (2015).
Table notes: All pounds are in net weight. The guided harvest removal for 2015 is based on preliminary estimates from ADF&G (2015). Harvest limit and guided harvest include discard mortality associated with O26 halibut released beginning with the CSP in 2014.

For Area 3A, charter anglers fished under the same two-fish of any size bag limit as unguided anglers from 1995 until 2013 (Table 4-10). The GHL was set at 3.56 Mlb from 2003 through 2012. During years in which Area 3A operated under a GHL, they were able to stay below of near the GHL in all years with a maximum overage of 10 percent in one year.

The only management measures in Area 3A that changed between 1995 to 2014, was a prohibition of crew retention of halibut on a charter trip. A State Emergency Order was in effect for parts of the 2007, 2008, and 2009 that limited charter crew retention of halibut after the early part of the fishing year. This restriction was lifted in 2009 and implemented again in 2014, with the inception of the CSP.

In 2014, under the first year of the CSP, the catch limit fell for Area 3A by almost one million pounds. Consistent with the CSP-specified process, the Charter Halibut Management Implementation Committee recommended, and the Council and IPHC supported, modifications to Area 3A management measures. While many 3A stakeholders maintained that the two-fish bag limit was vital to their operations, management measures in 2014 included a size restriction for one of the two halibut. In addition, the Federal regulations established a one-trip per calendar day limit for vessels and a prohibition against halibut retention by charter captain and crew.

Estimates show that Area 3A decreased their overall yield from 2013 to 2014 by 15 percent; however, it still exceeded the charter allocation set for 2014 by 20 percent. Is it expected the restrictive measures were responsible for decline; however, and the non-guided halibut sport sector harvest remained consistent with the previous years. ADF&G reported that fewer fish were landed in 2014, but they were larger than expected. Thus, average weight was higher than what was projected, which is one factor used to calculated total charter yield. This might not necessarily indicate that halibut available were larger, if fewer anglers decided to retain a second fish, than they may have high-graded their first fish, which did not have a size limit.

In 2015, despite a small increase in Area 3A charter allocation, the Council approved stricter management measures because the analysis projected that 2015 charter harvest would increase slightly under the status quo management measures (2014 measures) and exceed the allocation. In 2015, an additional measure was established that would prohibit all halibut charter fishing activity on Thursdays during a specified time period, and an annual limit of five fish a person. Preliminary estimates from 2015 demonstrate an overage of nine percent in Area 3A.

Table 4-10 Charter management measures and halibut harvest for Area 3A, 1995 through 2015

Area 3A					
Year	Mgmt Type	Charter Regulation	Harvest Limit (Mlb.)	Guided Harvest (Mlb.)	Guided Harvest (% of harvest
1995	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	2.845	NA
1996	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	2.822	NA
1997	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	3.413	NA
1998	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	2.985	NA
1999	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	2.533	NA
2000	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	3.14	NA
2001	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	3.132	NA
2002	No GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	NA	2.724	NA
2003	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	3.65	3.382	NA
2004	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	3.65	3.668	100
2005	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	3.65	3.689	101
2006	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	3.65	3.664	100
2007	GHL	Two-fish bag limit (no size restrictions); state EO prohibiting crew harvest 5/1-12/31.	3.65	4.002	110
2008	GHL	Two-fish bag limit (no size restrictions); state EO prohibiting crew harvest 5/24-9/1.	3.65	3.378	93
2009	GHL	Two-fish bag limit (no size restrictions); state EO prohibiting crew harvest 5/23-9/1.	3.65	2.734	75
2010	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	3.65	2.698	74
2011	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	3.65	2.793	77
2012	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	3.103	2.284	74
2013	GHL	Two-fish bag limit (no size restrictions); no limit on crew retention	2.734	2.514	92
2014	CSP	Two-fish bag limit (One fish U29 inches); one trip per day; no harvest by skipper and crew	1.78	2.066	116
2015	CSP	Two-fish bag limit (One fish U29 inches); one trip per day, five-fish annual limit; Thursday closure; no harvest by skipper and crew	1.89	*2.063*	*109*

Source: From NPFMC (2014) and ADF&G (2015).
Table notes: All pounds are in net weight. The guided harvest removal for 2015 is based on preliminary estimates from ADF&G (2015). Harvest limit and guided harvest include discard mortality associated with O26 halibut released beginning with the CSP in 2014.

4.4.1.3 GAF Transfers and Harvest

In 2014, the first year of the GAF Program, management measure for charter vessel anglers in Area 2C were limited to one halibut per day that was less than or equal to 44 inches or greater than or equal to 76 inches total length. In Area 3A, charter vessel anglers were allowed to keep two fish per day, one of which had to be less than or equal to 29 inches total length. Using GAF, charter vessel anglers were able to harvest up to two halibut of any size per day in either area, as is the current regulation for unguided anglers. The 2014 conversion factors were 26.4 net lb IFQ per GAF in Area 2C, and 12.8 net lb IFQ per GAF in Area 3A. This means that for each additional GAF a charter operator wishes to provide to an angler, they must transfer the product of that number times the conversion factor. Some limits to these transfers apply and are detailed in Section 4.4.1.2.4.1.

For 2015 and future years, the conversion factor was and will be based on the average net weight of GAF harvested by area. The average length of GAF harvested in 2014 was 55 inches in Area 2C and 45 inches in Area 3A (Table 4-12 and Figure 4-5). Using the IPHC halibut length weight conversion table, the estimated average net weights were 67.3 lb in Area 2C and 38.4 lb in Area 3A. These average net weights were the values used for the 2015 conversion factors (see Table 4-3).

In 2014, NMFS processed 111 transfers totaling 41,152 lb of IFQ to 43 different CHP holders. These transfers allowed the harvest of up to 2,027 additional halibut as GAF by charter vessel anglers (Table 4-11). Overall, nearly 20 percent of all GAF transfers were "self-transfers," i.e., the same person held both the IFQ and the CHP and transferred the IFQ to themselves (Table 4-11). In Area 3A, 47 percent of all transfers were self-transfers, while only 14 percent were self-transfers in Area 2C. No transfers of IFQ to GAF occurred after September 15.

Despite the large increase in the conversion factor from 2014 to 2015, 36,934 lb of IFQ were transferred to 548 GAF in Area 2C, and 10,337 lb of IFQ were transferred to 269 GAF in Area 3A (Table 4-11). In total across areas, NMFS processed 144 transfers totaling 47,271 lb of IFQ to 40 different CHP holders. These transfers allowed the harvest of up to 817 additional halibut as GAF by charter vessel anglers. The number of transfers and pounds of IFQ transferred increased compared to 2014; however, because the IFQ to GAF conversion factor increased from 2014 to 2015, the number of fish that GAF permit holders were allowed to harvest decreased in 2015. The number of CHP holders who obtained GAF permits decreased only slightly from 2014 to 2015, from 43 to 40.

The percentage of GAF transfers that were "self-transfers," i.e., the same person held both the IFQ and the CHP and transferred the IFQ to himself or herself, decreased from 20 percent in 2014 to 12 percent in 2015 (Table 4-11). In Area 3A, 40 percent of all transfers were self-transfers, while only 7 percent were self-transfers in Area 2C.

GAF participants are given the option of self-reporting cost information for GAF transfers. Of the transfers for which price information was reported, and excluding self-reported prices for self-transfers, lease prices averaged $5.62/lb in Area 2C and $4.66/lb in Area 3A (weighted averages) in 2015. The overall weighted average price per pound of IFQ leased was $5.48, about the same as in 2014 (Table 4-11).

Charter vessel anglers harvested 571 GAF (70 percent) in 2015, mostly in Area 2C (Table 4-12). In 2014 only 53 percent of available GAF were harvested. The increased cost of GAF in 2015 and increased familiarity with the program likely increased the percentage of GAF used because CHP holders only transferred as much as they thought they could use. The higher percentage of self-transfers in Area 3A may partially explain why a lower proportion of GAF were harvested in Area 3A. The GAF/IFQ holder

would still have an opportunity to harvest those pounds in the commercial fishery after the automatic return date. Twenty three voluntary returns of GAF to IFQ totaling 7,016 lb were processed in September 2015, compared to only 3 voluntary returns totaling 2,140 lb in 2014. Again, this is likely due to increased familiarity with the rules governing the program. Unused GAF were automatically returned to the IFQ account from which they originated on October 23, 2015. Approximately 3,855 lb of Area 2C IFQ and 2,194 lb of Area 3A IFQ were returned from the charter sector to the commercial sector under the automatic return provision.

The average length of GAF harvested in 2015 was 53.5 inches in Area 2C (Table 4-12 and **Figure** 2-1) and 44.5 inches in Area 3A (Table 4-12 and **Figure** 2-1). Using the IPHC halibut length weight conversion table, the estimated average net weights were 65.1 lb in Area 2C and 36.1 lb in Area 3A. The conversion factors are based on these average net weights and will therefore decrease slightly in 2016 compared to 2015. NMFS will announce the official GAF conversion factors early in 2016.

NMFS' costs associated with management, data collection, and enforcement of the GAF Program are recoverable through IFQ Program Cost Recovery fees. NMFS does not track fees associated with GAF separately from other IFQ Program fees.

Table 4-11 Summary of 2014 IFQ to GAF transfers

Area	Year	IFQ pounds transferred	Number of GAF transferred	Number of transfers (permits issued)	Weighted average price per pound	Percentage of self-transfers
2C	2014	29,498	1,117	92	$ 5.62	14
	2015	36,934	548	119	$ 5.62	7
3A	2014	11,654	910	19	$ 5.01	47
	2015	10,337	269	25	$ 4.66	40
Total 2014		41,152	2,027	111	$ 5.46	20
Total 2015		47,271	817	144	$ 5.48	12

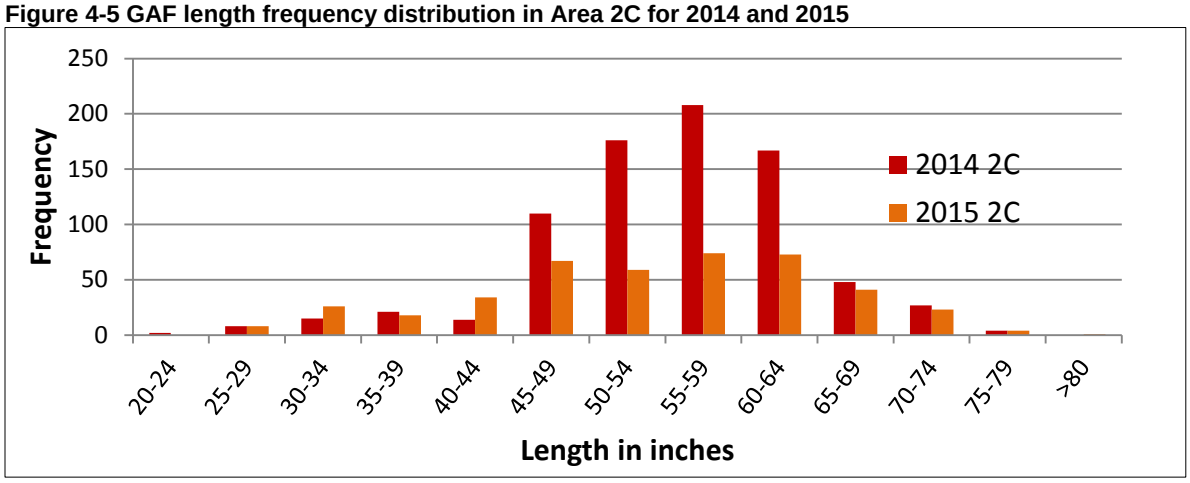
Source: NMFS GAF Program 2015 Annual Report
Table note: weighted average price per pound is only represents those transfers that voluntarily report price

Table 4-12 2014 GAF harvest summary

Area	Year	Number of GAF harvested	Percent of GAF harvested	Average Length in inches (range)
2C	2014	800	72%	55 (18-77)
	2015	269	30%	45 (30-75)
3A	2014	269	30%	45 (30-75)
	2015	143	53%	44.5 (31-84)
Total 2014		1069	53%	
Total 2015		571	70%	

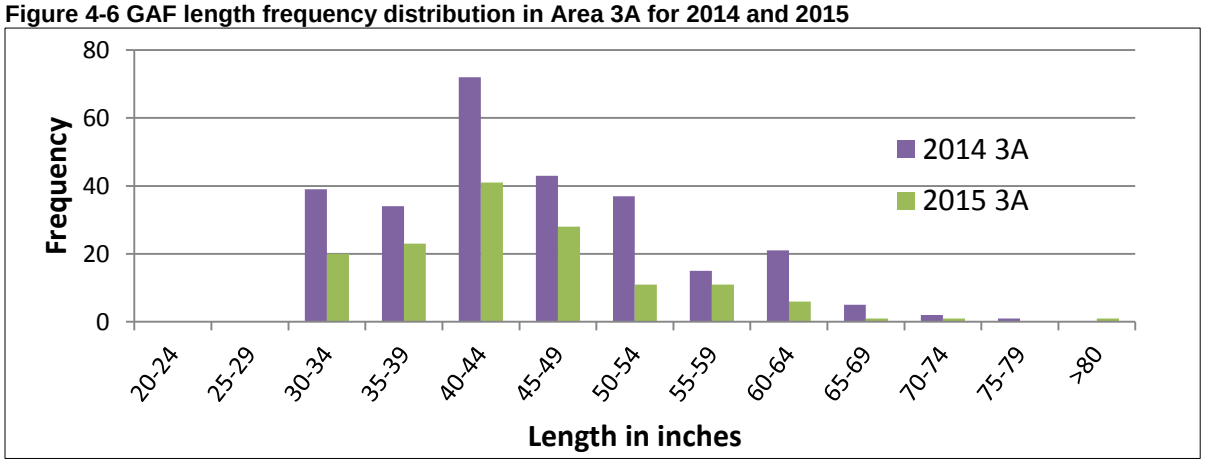
Source: NMFS GAF Program 2015 Annual Report

Figure 4-5 GAF length frequency distribution in Area 2C for 2014 and 2015



Source: NMFS GAF Program 2015 Annual Report

Figure 4-6 GAF length frequency distribution in Area 3A for 2014 and 2015



Source: NMFS GAF Program 2015 Annual Report

4.5 Description of Commercial Halibut Fishing

Particularly for the assessment of Alternative 2, the development of an RQE, it is important to provide some background information on the commercial halibut IFQ fishery. This section contains a description of the relevant elements of management for the commercial halibut IFQ fishery, as well as information on current commercial operations and participants, particularly in Area 2C and 3A. For more specific details on the creation of the program see NMFS' final rule implementing the IFQ Program (November 9, 1993; 58 FR 59375). For more information on current operations see NOAA RAM transfer report (NOAA 2015a) and the NOAA RAM Report to the Fleet (NOAA 2012).

4.5.1 Management of Commercial Halibut Fishing

The Council recommended a limited access system for the fixed gear halibut and sablefish fisheries off Alaska, in 1992. NMFS approved the halibut and sablefish IFQ program in January 1993, and implemented the program on November 9, 1993 (58 FR 59375). Fishing under the IFQ Program began on March 15, 1995. The IFQ Program applies to the management of the fixed gear sablefish and halibut

fisheries off of Alaska. For halibut, fixed gear was defined to include all fishing gear comprised of lines with hooks attached, including one or more stationary, buoyed, and anchored lines with hooks attached. Longlines, jigs, handlines, and troll gear are examples of halibut fixed gear.

The IFQ Program limits access to the commercial directed halibut and sablefish fisheries to those persons holding quota share (QS) in specific management areas. (An expanded discussion on how QS units apply is included in Section 4.8.). QS was assigned based on certain thresholds of historical participation in the fishery (see §679.40(a)). It includes a designation of species (either halibut or sablefish) and one of eight IPHC-established halibut management areas throughout the BSAI and GOA. It equates to individual harvesting privileges, given effect on an annual basis through the issuance of IFQ permits. An annual IFQ permit authorizes the holder to harvest a specified amount of an IFQ species in a designated IPHC regulatory area. The specific amount (in pounds) is determined by the number of QS units held for that species, the total number of QS units issued for that species in a specific regulatory area, and the total amount of the species allocated for IFQ fisheries in a particular year. If the abundance of halibut or sablefish decreases over time, the catch limit for that species will decrease and, subsequently, the number of pounds on a person's annual IFQ permit also will decrease. By ensuring access to a certain amount of the catch limit at the beginning of the season, and by extending the season over a longer period, QS holders may determine where and when to fish, how much gear to deploy, and how much overall investment to make in harvesting.

The Council and NMFS developed the IFQ Program to resolve the conservation and management problems commonly associated with open access fisheries, as well as to provide economic stability to the commercial halibut and sablefish fixed gear fisheries. The preamble to the proposed rule, published on December 3, 1992 (57 FR 57130), describes the issues leading to the Council's recommendation for the IFQ Program to the Secretary.

The Council and NMFS also intended the IFQ Program to improve the long-term productivity of halibut and sablefish fisheries, by further promoting the conservation and management objectives of the Magnuson-Stevens Act and the Halibut Act, while retaining the character and distribution of the fishing fleets, as much as possible. During the development of the IFQ Program, the Council built in several provisions to address concerns regarding transferability and the goal of preserving an owner-operated fleet. Among other things, the Council was concerned about consolidation of ownership and divestiture of QS by coastal Alaskans, removing small community access to and participation in the fisheries.

Ultimately, the Council provided a design which was intended to control transferability through: (1) limits on the amount of QS which could be owned or controlled by individuals and companies (QS use caps: Table 4-13); (2) establishment of vessel size categories (QS class: Table 4-15); (3) restrictions on who could purchase catcher vessel QS; and (4) limitations on leasing certain categories of QS (Pautzke & Oliver 1997). A report on the development of the program from Pautzke and Oliver states, "The primary intent of the Council in adopting these provisions was to maintain a diverse, owner-operated fleet and prevent a 'corporate', absentee ownership of the fisheries" (p. 14).

Provisions that encourage an owner-operated fleet include a **limitation on the transfer of QS,** or the IFQ resulting from it, to only persons who are IFQ crew members, or who were initially issued QS assigned to vessel categories B, C, or D (§679.41(g)). A **hired master** cannot be used to fish catcher vessel IFQ, if the corresponding QS was received by transfer, unless it is held by an initial issuee and was transferred before February 12, 2010 (79 FR 43679, July 28, 2014; resulting in regulations at §679.42(i) and (j)).

A **QS use cap** (also referred to as "ownership caps" in some programs) is applied to holders (individual or collective) of a long-term QS privilege. It limits the holder from exceeding a certain number of QS

units. QS use caps in the IFQ fisheries have been constant, based on the 1996 QS pool.[14] They are determined "individually and collectively;" that is, by QS held in an individual's name, plus the part of QS held by any entity in which the individual is an owner (collectively). Regulations at §679.42 (f) list the QS use caps are for halibut QS. Table 4-13 provides an example of the QS use caps applied to the halibut IFQ catch limits for 2015.

Table 4-13 Halibut QS use caps and corresponding pounds for 2015

QS Use Cap			
Applicable %	Size of relevant QS pool	QS Use Cap	In 2015 IFQ pounds[a]
1 % of Area 2C QS pool	59,979,977 QS units	599,799 QS units	37,101 lbs if all 2A QS
0.5% of Area 2C, 3A, and 3B QS pool	300,564,647 QS units	1,502,823 QS units	63,318 lbs if all 3A QS; or 73,476 lbs if all 3B QS
1.5% of all Area 4 QS pool	33,002,937 QS units	495,044 QS units	47,176 lbs if all 4A QS; 48,626 lbs if all 4B QS; 36,768 lbs if all 4C QS; or 41,696 lbs if all 4D QS

Source: NOAA, RAM Division, Quota Share Use Caps & Vessel IFQ Caps 2015; 2015 Quota Share Pools (QSPs) and Total Allowable Catches (TACs) for IFQ

[a] QS units are converted into IFQ pounds based on the annual QS/ IFQ ratio prescribed to each regulatory area. See Section 4.8 for a more detail description of this process and a list of the ratios over time and by area.

In addition to a cap on the individual QS holder, the IFQ program also includes a cap which applies to the vessels participating in the harvest of an IFQ species. The **vessel IFQ cap** (also referred to as "vessel cap" or "vessel use cap") restricts the amount of IFQ that can be consolidated and accounts for the IFQ species harvest on one vessel during a season. The vessel IFQ cap is specified as a percent of the annual catch limit. Regulations outline the specific vessel IFQ caps at §679.42(h)(1) for halibut. Table 4-14 demonstrates an example of the halibut vessel IFQ caps for 2015.

Table 4-14 Halibut vessel IFQ caps for 2015

Vessel IFQ Cap		
Vessel use cap %	Annual catch limit	Vessel use cap
1 % of halibut 2C catch limit	3,679,000 net pounds	36,790 net pounds
0.5% of halibut IFQ catch limit	17,136,920 net pounds	85,685 net pounds

Source: NOAA, RAM Division, Quota Share Use Caps & Vessel IFQ Caps 2015

Halibut QS is designated as one of four **QS classes** (also called "vessel category" or "size category" of QS). These classes include: freezer (catcher processor) category (Category A); greater than 60' LOA (Category B); 36' to 60' LOA (Category C); and 35' or less LOA (Category D). However, amendments to the IFQ Program allow an IFQ permit holder to "Fish up" or "Fish down" in some cases. "Fish up" and "Fish down" provisions allow an IFQ permit holder to harvest IFQ halibut or sablefish outside of the originally assigned QS vessel category. Table 4-15 demonstrates the use restrictions by share category and how "Fish up" and "Fish down" adds flexibility for QS/ IFQ holders.

[14] The total QS pool has changed slightly over the years based on the rare occurrence of newly created or revoked QS. However, the specific QS use caps have continued to be applied to the 1996 QS pool. This number of units is established in federal regulation at §679.42 (f).

Table 4-15 QS/ IFQ use restrictions by QS class

Class A	Authority to harvest and process **IFQ species** on a vessel of any length (freezer longliners)
Class B	Authority to harvest **IFQ species** on a vessel of any length
Class C	Authority to harvest **IFQ species** on a vessel ≤ 60-ft LOA
Class D*	Authority to harvest **IFQ halibut** on a vessel ≤ 35-ft LOA

*Under the "fish up" provision, halibut IFQ Category D shares are able to be used on vessel ≤ 60 ft LOA in Areas 3B, 4C, and 4B.

The QS initially issued was permanently transferable, with several **restrictions on leasing and permanent transfer**. As previously stated, the Council developed leasing and other restrictions in order to achieve some benefits associated with IFQ management, but also to retain the owner-operator nature of the fisheries and limit consolidation of quota share. To that end, the Council only allowed persons who were originally issued catcher vessel quota share (B, C, and D category) or who qualify as an IFQ crew member[15] to hold or purchase catcher vessel quota share. Thus, only individuals and initial recipients could hold catcher vessel quota share, and with few exceptions, they are required to be on the vessel (i.e., actively fish) the QS.

Halibut QS also has a **designation of "blocked" or "unblocked".** Any initial allocation of halibut or QS that translated into less than 20,000 pounds (based on the 1994 TAC) was identified as "blocked," meaning that it must be sold as a unit, and cannot be separated. No person, individually or collectively, may hold more than three blocks of halibut QS in any IFQ regulatory area. Allocations greater than or equal to 20,000 pounds were considered "unblocked". If that individual holds unblocked halibut QS, they may only hold one halibut QS block for that area.

The purpose of the QS block provision was to ensure that the smallest, most affordable QS would remain available to a part-time fleet of smaller operators in order to maintain some of the fleet diversity that existed under open access, and thereby make the IFQ program less disruptive to isolated Alaska fishing communities (CFEC 1999). A "sweep-up" provision allowed very small blocks to be combined into a more economically fishable amount if the total combined QS was less than a certain amount. The sweep-up consolidation limit was raised in 1996, and then again in 2004 and 2006 (see regulations at § 679.41(e)(2) and (e)(3)).

A final element of the halibut IFQ fishery, important for the present analysis, is the **overage/ underage adjustments** provided for an IFQ permit holder in regulations (§679.40(e)). These provisions provide for administrative adjustment of IFQ permits as a result of under- and overfishing the prior year up to a certain amount. If IFQ pounds remain unfished, a regulatory provision allows up to ten percent of the pounds remanding at the time of landing may be carried over to the following year. If a person exceeds an IFQ permit by some amount, not greater than ten percent, the next year the holder of the QS may see a deduction in their permit account. If the overage exceeds ten percent, this would require enforcement action without future administrative adjustment. NMFS applies administrative adjustments at the beginning of each fishing year when annual IFQ accounts are created and IFQ pounds are allocated to QS holders. Administrative adjustments "follow the QS" so that the adjustment is computed for the permit of the person who, at the beginning of a year, holds the QS associated with the IFQ that was under- or overfished the prior year.

For example, in 2014, 1,899 permit accounts (out of a total of 3,592 total halibut permits accounts) received underage adjustments totaling 623,293 pounds in all Alaska regulatory areas. In 2014, 633 permit accounts had overage adjustments totaling 142,425 pounds of IFQ (NOAA 2015b). This example

[15] IFQ crew member means any individual who has at least 150 days experience working as part of the harvesting crew in any U.S. commercial fishery, or any individual who receives an initial allocation of QS (50 CFR 679.2).

is consistent with every other year since the beginning of the program, in that adjustments from underages (including permits entirely unfished) have exceeded those from overages, resulting in net positive adjustments to IFQ permits.

4.5.2 The CQE program

Although the IFQ Program has resulted in significant benefits for many fishermen with historical participation in the fishery, like other limited entry programs, its implementation increased the cost of entry into or expansion in the commercial halibut and sablefish fisheries (NPFMC 2004; NPFMC 2010). Moreover, many QS holders in Alaska's smaller coastal communities have chosen to transfer their QS to others, for various reasons, or have moved out of these communities. Location, local conditions, and market forces were likely factors in the sale of QS originally held by residents of small communities. More specifically, some of these conditions and market influences include: the cost of access to markets is greater to fishermen landing fish in remote communities; fishermen based in remote communities tend to fish smaller amounts of QS using smaller, less efficient vessels, which result in lower profit margins than larger operations; fishing infrastructure in remote communities tends to be less complete; and residents tend to have less capital with which to purchase economically viable amounts of QS (McDowell Group 2005).

As a result of quota transfers, the total amount of quota held by residents of small, coastal communities and the number of IFQ holders, substantially declined since the inception of the IFQ Program. As this trend could have had a severe effect on unemployment and related social and economic impacts in rural communities, the Council took action in 2002 to attempt to alleviate this issue. Under Amendment 66 to the Fisheries Management Plan (FMP) for GOA groundfish, the Council revised the IFQ program to allow a distinct set of remote coastal communities with few economic alternatives to purchase and hold catcher vessel QS in Areas 2C, 3A, and 3B. This action was implemented in order to help ensure access to and sustain participation in the commercial halibut and sablefish fisheries. Eligible communities can form non-profit corporations called Community Quota Entities (CQEs) to purchase catcher vessel QS, and the IFQ resulting from the QS must be leased to community residents annually. Appendix B contains a list of eligible CQE communities, and details specifically what halibut/ sablefish QS, CHP, and LLP license allowances are provided.

In effect, the CQE remains the holder of the QS, creating a permanent asset for the community to use to benefit the community and its residents. The QS can only be sold in order to improve the community's position in the program, or to meet legal requirements, thus, the QS must remain with the CQE.[16] The CQE Program was also intended as a way to promote ownership by individual residents, as individuals can lease annual IFQ from the CQE and gradually be in a position to purchase their own QS. In effect, it was noted that both community and individually-held quota were important in terms of fishing access and economic health. This amendment was approved by the Secretary of Commerce and effective in June 2004 (69 FR 23681; April 30, 2004).

The CQE Program includes several elements which make CQEs subject to different constraints than individual quota shareholders in the IFQ program with regards to halibut.

1) Each eligible community may designate **only one CQE to hold QS on behalf of that community** at any one time (§679.41(l)(2)).

[16] If the CQE sells its QS for any other reason, NMFS will withhold annual IFQ permits on any remaining QS held, and will disqualify the CQE from holding QS on behalf of that community for three years. It also requires that the CQE divest itself of any remaining QS on behalf of that community.

2) There are restrictions on the **transferability of QS by area** (§679 Table 21 and Appendix B).

- A CQE in Area 2C can only hold halibut QS designated as Area 2C or 3A
- A CQE in Area 3A can only hold halibut QS designated as Area 3A and 3B
- A CQE in Area 3B can only hold halibut QS designated as Area 3A and 3B
- A CQE in Area 4B can only hold halibut QS designated as Area 4B QS

3) No CQE may hold halibut QS in the IFQ Regulatory Areas 4A, 4C, 4D, and 4E (§679.42(f)(3)).

4) There are restrictions on the **acquisition of QS by classes** (i.e., vessel category or size category) (§679 Table 21 and Appendix B).

- A CQE in Area 2C may not hold D class halibut QS in Area 2C or 3A (§679.41(g)(5) and (g)(5)(i)).
- A CQE in Area 3A does not have QS class restrictions in Area 3B.[17]
- A CQE in Area 3B may not hold D class halibut QS in 3A (§679.41(g)(5)(i)). Area 3B CQEs may hold D class halibut QS in 3B.
- A CQE in Area 4B does not have QS class restrictions in Area 4B.

5) **QS classes** do not apply to IFQ derived from QS held by a CQE while the QS is owned and leased by the community. IFQ derived from QS held by a CQE may be used to harvest IFQ species from a vessel of any length, with the exception of IFQ derived from QS in IFQ regulatory Areas 3A and 4B that are assigned to vessel class D QS (§679.42(a)(2)(iii)).

6) The only **QS use caps by QS class** stipulates that, in aggregate, a CQE may not hold D class halibut QS designated for Area 3A in excess of 1,233,740 QS units (§679.41(g)(5)(ii)).

7) **QS use caps** (i.e., ownership caps) **by area** prohibit the CQE from holding more than 599,799 QS units in Area 2C (one percent), and 1,502,823 QS units (0.5 percent) of the combined Area 2C, 3A, and 3B total halibut QS pool. Area 4B has a QS use cap of 1,392,716 QS units (§679.42(f)(2)).

8) Similar to **vessel IFQ caps**, no vessel may be used, during any fishing year, to harvest more than 50,000 lbs of IFQ halibut derived from quota share held by a CQE (§679. 42(h)(1)(ii)).[18]

9) **Cumulative QS use caps** limit communities in aggregate to 21 percent of the total QS in each regulatory area (§679.42(f)(5)(i)).[19]

10) CQE can purchase either **blocked or unblocked halibut QS**; however, communities are limited to holding, at any point in time, a maximum of 10 blocks of halibut QS in any IFQ regulatory

[17] GOA Amendment 94 modified the original CQE program to allow for the acquisition of class D QS by CQEs in Area 3A.

[18] GOA Groundfish Fisheries Management Plan Amendment 94 revised this restriction to dictate that only IFQ derived from CQE-held QS will count towards the vessel use cap. Prior to this amendment, the 50,000lb limit included both IFQ derived from a CQE as well as, (summed with) IFQ privately held (78 FR 33243, June 4, 2013).

[19] When implemented, the CQE program also contained a cumulative community use cap that limited the communities in a region as a whole from acquiring and using more than three percent of the Area 2C, 3A, or 3B halibut QS in the first seven years of the program.

area (§679.42(g)(1)(ii)). CQEs are unrestricted in minimum block size (§679.42(g)(ii)).[20] QS blocks cannot subdivided.

11) CQE's must produce an **annual report** (§679.5(t)) on CQE's administrative activities, business operation, and community fishing activities for each calendar year when it holds any of the following: community CHP, IFQ/QS, and/ or community Pacific cod endorsed non-trawl groundfish license limitation program (LLP) licenses.

12) Once held, there are **restrictions on the sale of its QS by CQE**. Communities may only sell their QS for the purpose of a) generating revenues to sustain, improve, or expand the program; or b) liquidating the entity's QS assets for reasons outside the program (§679.41(g)(7)). In that event, NMFS would not qualify that entity or another entity to hold QS for that community for a period of three years.

For more details on the structure of the program and the rationale behind these decision points, see the final analysis (NPFMC 2004) or the program review (NPFMC 2010).

In some cases, the CQE is subject to the same limitations as individual users in the IFQ program, as if the CQE is simply another category of eligible person. For example, an individual CQE is held to the same QS use cap (i.e., ownership caps) as an individual holder. In other cases, the CQE is subject to less restrictive measures, in order to provide for the differing purpose and use of the QS when held by communities. For example, the vessel size classes do not apply to QS when held by CQEs.[21] In yet other cases, the CQE is subject to more restrictive measures than individuals, in part to protect existing holders and preserve entry-level opportunities for fishermen residing in other (non-eligible) fishery-dependent communities. For example, CQEs cannot purchase D category halibut QS in Area 2C. In addition, there are caps on the amount of QS that all CQEs combined can purchase, and CQEs cannot lease more than 50,000 lb of halibut to an individual resident.

Although fundamentally different in intent, the Council can and has used considered the structure of the CQE program in the development of an RQE program. Some of these elements could be applicable to an RQE and some are not. Section 4.8.1.3 considers this restrictions and elements in the context of Alternative 2; the proposed RQE.

To be determined eligible as a CQE, each community must have met the following criteria: fewer than 1,500 people; documented historical participation (at least one landing) of halibut or sablefish; direct access to saltwater on the GOA coast; no road access to a larger community; and listed in Federal regulation. A set of 42 remote coastal communities were determined eligible at program implementation. Amendment 94 later added three eligible communities in the GOA[22] and Amendment 102 expanded the program to include one community in Area 4B of the BSAI.[23]

Three communities have successfully acquired QS: Old Harbor, Ouzinkie, and Adak. These communities have exclusively purchased B and C class QS, despite recent amendment to permit the acquisition of D

[20] Amendment 96 modified the CQE program to relax the minimum block size held by CQE groups in 2C and 3A from 33,320 QS units and 46, 520 QS units, respectively, to unrestricted (79 FR 46241, August 7, 2014).
[21] With the exception of D class QS in Area 3A.
[22] Amendment 94 of the GOA Groundfish Fisheries Management Plan added three communities to the list of communities eligible to form CQEs: Game Creek, Naukati Bay, and Cold Bay (78 FR 33243, June 4, 2013).
[23] In 2014, Amendment 102 for the Groundfish Fisheries Management Plan in the BS/AI expanded the program to include eligible communities in Area 4B, which currently includes Adak (79 FR 8870, February 14, 2014).

shares in some circumstances. See Table 4-16 for the amount of QS units transferred. Acquisition of funding has been cited as one of the primary obstacles in purchasing QS.

Table 4-16 Current CQE QS holdings

Entity	Representing	Area	Total QS units	2015 QS:IFQ ratio	Pounds of IFQ (2015)
Adak Community Development Corporation	Adak	4B	615,956	10.1807	60,502
Cape Barnabas, Inc.	Old Harbor	3A	43,362	23.4347	1,850
		3B	151,234	20.4533	7,394
Ouzinkie Community Holding Corporation	Ouzinkie	3A	281,593	23.4347	12,016

Source: NOAA, RAM Division

4.5.3 Current Commercial Operations

The following section provides a wide range of relevant information on the commercial halibut IFQ fishery, particularly in Area 2C and 3A. The following information was specifically identified to be of interest to later discussions of impacts under the action alternatives. However, significantly more information is available on the current operations of the commercial fishery. For additional information, refer to NOAA RAM division transfer report (NOAA 2015a) or the NMFS report to the fleet (NOAA 2012).

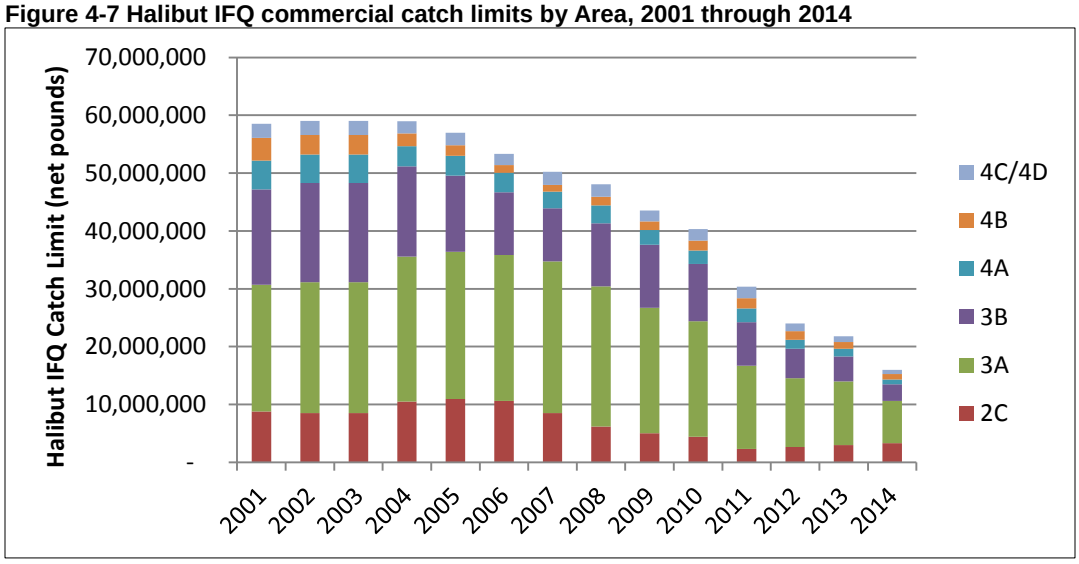
4.5.3.1 IFQ seasons and seasonal harvest

Under the authority of the Halibut Act, the IPHC establishes season dates for the commercial IFQ and CDQ halibut fisheries. Historically, the commercial halibut IFQ season runs from about March 15 to November 15. In 2015, the commercial season ended on November 7. While the season is open most of the year, the actually prosecution of the commercial fishery can be truncated due to many factors such as weather and ocean conditions, markets, processor availability, opportunity cost of other fisheries, as well as when the full amount of IFQ is caught.

4.5.3.2 Total Catch Limits

In 2014, Area 3A alone made up 47 percent of total commercial halibut IFQ harvest off Alaska, and Areas 3A, 3B, and 2C combined made up 85 percent of the total commercial halibut IFQ harvest off Alaska. As clearly illustrated in Figure 4-7, the total catch limit for halibut IFQ has declined dramatically in Alaska from 2004 to 2014. More discussion on the health of the Pacific halibut stock is discussed in the EA (Section 6.1).

Figure 4-7 Halibut IFQ commercial catch limits by Area, 2001 through 2014



Source: NOAA RAM Division, 2014 Report to Fleet, (NOAA 2015a)

4.5.3.3 QS Holdings and QS/ IFQ Ratio

Each year, the amount of QS in an area's pool as of January 31 and the catch limit allocated to the area's IFQ fishery determines the basic **QS/ IFQ ratio** that will be used in each management area for the year. Table 4-17 illustrates the QS pool, catch limit, and the ratio set for that year that allow for conversion between the two. The QS pool and QS/ IFQ ratio over time may be useful in considering different transfer restrictions in other sections of the analysis.

Table 4-17 Area 2C and 3A QS pool, QS to IFQ ratio, and annual IFQ, from 1995 through 2015

Year	Area 2C			Area 3A		
	QS Pool (units)	IFQ (net pounds)	Ratio of QS/ IFQ	QS Pool (units)	IFQ (net pounds)	Ratio of QS/ IFQ
1995	59,853,126	9,000,000	6.65	185,818,173	20,000,000	9.29
1996	59,979,977	9,000,000	6.66	186,079,384	20,000,000	9.30
1997	59,100,570	10,000,000	5.91	184,935,642	25,000,000	7.40
1998	59,551,075	10,500,000	5.67	184,924,431	26,000,000	7.11
1999	59,551,257	10,490,000	5.68	184,907,401	24,670,000	7.50
2000	59,555,379	8,400,000	7.09	184,920,851	18,310,000	10.10
2001	59,633,843	8,780,000	6.79	184,902,586	21,890,000	8.45
2002	59,633,843	8,500,000	7.02	184,873,475	22,630,000	8.17
2003	59,635,055	8,500,000	7.02	184,930,966	22,630,000	8.17
2004	59,556,591	10,500,000	5.67	184,930,966	25,060,000	7.38
2005	59,556,591	10,930,000	5.45	184,910,103	25,470,000	7.26
2006	59,552,039	10,630,000	5.60	184,911,315	25,200,000	7.34
2007	59,552,039	8,510,000	7.00	184,911,315	26,200,000	7.06
2008	59,552,039	6,210,000	9.59	184,911,315	24,220,000	7.63
2009	59,552,039	5,020,000	11.86	184,911,315	21,700,000	8.52
2010	59,552,039	4,400,000	13.53	184,911,315	19,990,000	9.25
2011	59,552,039	2,330,000	25.56	184,911,315	14,360,000	12.88
2012	59,552,039	2,624,000	22.70	184,911,315	11,918,000	15.52
2013	59,536,185	2,970,000	20.05	184,893,008	11,030,000	16.76
2014	59,536,185	3,318,720	17.94	184,893,008	7,317,730	25.27
2015	59,477,396	3,679,000	16.17	184,893,008	7,790,000	23.73

Source: NMFS Alaska Region RAM data provided by AKFIN

Table 4-18 Year-end 2014 QS and QS holders by area and QS class

Area	QS vessel class	2014 number of QS holders	2014 percent of area QS holders	2104 amount of QS (QS units)	2014 percent of area QS	Average QS holdings (QS units)
2C	Catcher/ Processor	27	2.50%	1,249,141	2.10%	46,264
	GT 60 ft.	66	6.10%	2,655,243	4.50%	40,231
	36-60 ft.	632	58.50%	46,677,536	78.50%	73,857
	LE 35 ft.	355	32.90%	8,895,476	15.00%	25,223
2C Total		1080	100%	59,477,396	100.10%	46,394
3A	Catcher/ Processor	33	2.30%	4,773,918	2.60%	144,664
	GT 60 ft.	271	18.70%	68,568,976	37.10%	253,022
	36-60 ft.	775	53.30%	98,876,488	53.50%	127,583
	LE 35 ft.	374	25.70%	12,673,626	6.90%	33,887
3A Total		1453	100%	184,893,008	100.10%	139,789

Source: NMFS RAM Division, QS Transfer Report, 2015
Table notes: GT=greater than, LE=less than or equal to

4.5.3.4 Harvesting Vessels and Harvest Rates

Prior to implementation of the IFQ program, "overages", or catches that exceeded the catch limits, were common (NOAA 2015a). The program did an effective job of reducing catch below the catch limits. Since program implementation Area 2C and 3A have consistently stayed within the upper 80 to 100 percent of the catch limit. Harvest rates have been particularly close to the catch limits more recent years, given the declining pounds of halibut able to be harvested. Table 4-19 demonstrates that by the end of the 2014 season, halibut permits had been used by IFQ holders to report 3,558 landings over all eight regulatory areas. Area 2C had less than half the halibut IFQ harvest that Area 3A landed; however, they had only one sixth less vessel landings. This is indicative of an overall fleet made up of smaller vessels in Area 2C compared to Area 3A. Area 2C harvested 97 percent of the available pounds and Area 3A harvested up to its limit

Table 4-19 Halibut IFQ allocation and landings for 2014

Area	Vessel Landings (count)	Area IFQ catch limit (pounds)	Total Harvest (pounds)	Percent Harvested
2C	1,280	3,318,720	3,215,413	97%
3A	1,475	7,317,730	7,353,833	100%
3B	461	2,840,000	2,823,737	99%
4A	145	850,000	827,075	97%
4B	93	912,000	864,227	95%
4C/4D	104	715,920	688,225	96%
Total	3,558	15,954,370	15,772,510	99%

Source: NOAA RAM Division, 2014 Report to Fleet, Available at:
http://alaskafisheries.noaa.gov/ram/ifq/14ifqland.pdf
Notes: Vessel landings include the number of reported landings by participating vessel by IFQ regulatory area; each landing may include harvest from multiple permit holders. At sea discards are excluded and confiscations are included in this table. Halibut weights are reported in net (headed and gutted) pounds. Due to over- or under harvest of catch limit, percentages may not total 100 percent. Permit holders may fish IFQ designated for Area 4C in either Areas 4C or 4D.

Table 4-20 provides additional information on the number of harvesting vessels and the number of unique persons with IFQ identifiers that reported landings. These persons may be QS owners, hired skippers, or persons leasing QS. This table demonstrates both consolidation among vessels as well as consolidation of QS among individuals.

Before the IFQ program began in 1995, it was not uncommon for more than one CFEC permit holder to make landings off one vessel in the halibut fishery. After the IFQ fisheries were implemented, two or more IFQ permit holders might join together to fish their IFQ off one vessel. The ratio of the number of unique persons with landings to the number of unique vessels has risen in Area 2C and 3A substantially over the 1990-1994 average, which provides some evidence that the practice of multiple persons recording landings off a single vessel has increased since inception of the program in parts of Alaska.

Table 4-20 Halibut IFQ harvest and participation for Area 2C and 3A, 1995 through 2014

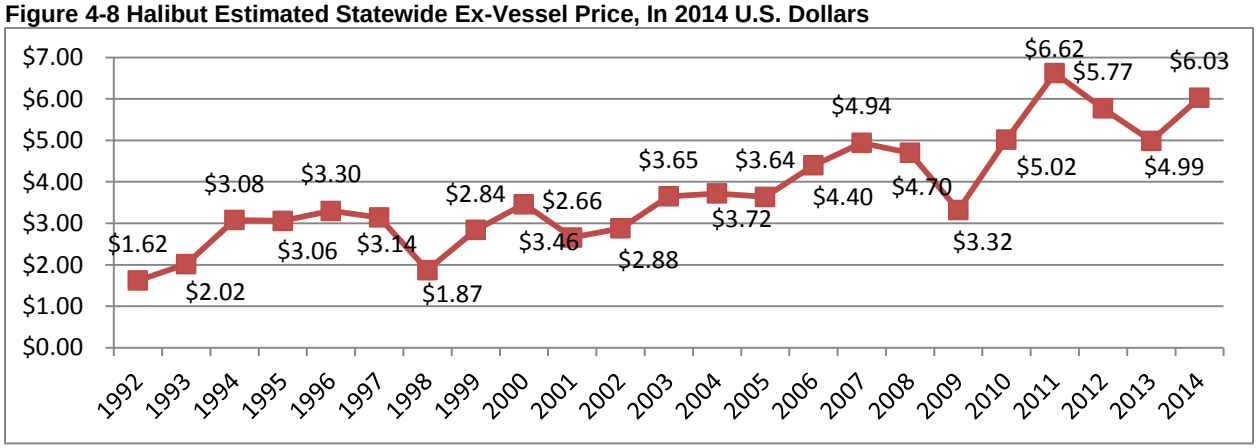
2C						3A					
Year	Total harvest (pounds)	Persons with landings	Vessels with landings	Pounds per vessel	Person per vessel	Year	Total harvest (pounds)	Persons with landings	Vessels with landings	Pounds per vessel	Person per vessel
1995	7,787,475	1,319	1,105	7,047	1.19	1995	17,978,081	1,537	1,145	15,701	1.34
1996	8,533,743	1,321	1,024	8,334	1.29	1996	19,365,600	1,553	1,101	17,589	1.41
1997	9,637,918	1,275	989	9,745	1.29	1997	24,276,533	1,501	1,072	22,646	1.4
1998	9,528,878	1,116	826	11,536	1.35	1998	24,519,052	1,314	891	27,519	1.47
1999	9,896,079	1,107	826	11,981	1.34	1999	24,310,879	1,309	890	27,316	1.47
2000	8,191,769	1,142	864	9,481	1.32	2000	18,066,096	1,400	992	18,212	1.41
2001	8,170,172	1,076	790	10,342	1.36	2001	21,071,467	1,358	958	21,995	1.42
2002	8,432,413	1,114	784	10,756	1.42	2002	22,560,168	1,383	904	24,956	1.53
2003	8,242,583	1,110	789	10,447	1.41	2003	22,281,887	1,362	867	25,700	1.57
2004	10,088,931	1,101	749	13,470	1.47	2004	24,601,516	1,332	870	28,278	1.53
2005	10,459,446	1,064	745	14,040	1.43	2005	25,053,063	1,326	838	29,896	1.58
2006	10,339,799	1,069	749	13,805	1.43	2006	24,953,482	1,325	818	30,505	1.62
2007	8,304,159	1,051	731	11,360	1.44	2007	25,957,340	1,311	805	32,245	1.63
2008	6,106,851	987	695	8,787	1.42	2008	24,020,377	1,293	783	30,677	1.65
2009	4,832,092	931	646	7,480	1.44	2009	21,354,893	1,254	752	28,397	1.67
2010	4,350,002	937	659	6,601	1.42	2010	20,092,309	1,234	723	27,790	1.71
2011	2,292,926	901	629	3,645	1.43	2011	14,268,030	1,209	742	19,229	1.63
2012	2,527,243	879	609	4,150	1.44	2012	11,688,285	1,175	710	16,462	1.65
2013	2,861,611	873	598	4,785	1.46	2013	10,824,476	1,093	680	15,918	1.61
2014	3,215,399	849	582	5,525	1.46	2014	7,353,550	1,075	647	11,366	1.66

Source: NMFS RAM Division, QS Transfer Report, 2015

4.5.3.5 Ex-vessel Value

The term "ex-vessel" refers to activities that occur when a commercial fishing vessel lands or offloads a catch. For example, the price received by a captain (at the point of landing) for the unprocessed catch is an *ex-vessel* price. Figure 4-8 demonstrates the trend in statewide ex-vessel halibut prices, which mirrors the recent trends in Area 2C and Area 3A halibut ex-vessel price. While general on the rise, there was a decline in 2008 and again in 2011, which lasted two years for both Area 2C and Area 3A. In 2014, ex-vessel price reached $6.07/ pound in Area 2C and $6.26/ pound in Area 3A (NOAA 2015a).

Figure 4-8 Halibut Estimated Statewide Ex-Vessel Price, In 2014 U.S. Dollars



Source: CFEC and AKFIN
Table notes: Estimated prices reflect weighted average ex-vessel prices reported for all fixed gear. Estimates reflect deliveries by catcher vessels to shore side processors. Estimates are for commercial catches only.

4.5.3.6 QS Transfer Rates

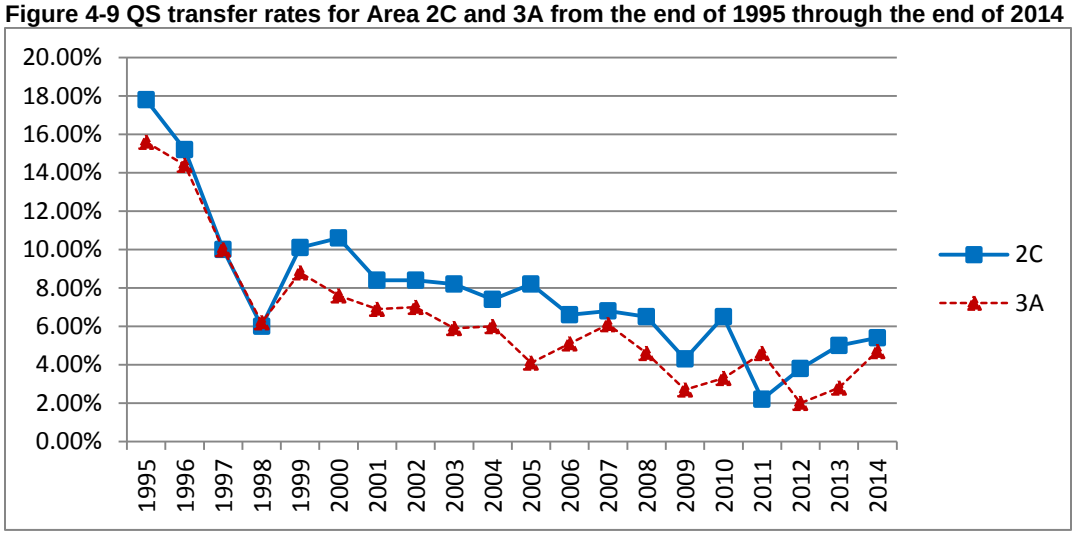
As demonstrated in Table 4-21 and illustrated more clearly in Figure 4-9, there has been a stark decreasing trend in transfers for both areas between 2000 and 2012, with a slight increase for both areas since 2011 (2C) and 2012 (3A).

Table 4-21 Halibut QS transfer rates by year for Area 2C and 3A

Year	2C			3A		
	Year-end total QS (QS units)	Year-end total QS Transferred (QS units)	QS Transfer Rate %	Year-end total QS (QS units)	Year-end total QS Transferred (QS units)	QS Transfer Rate %
1995	58,965,237	10,488,537	17.80%	182,683,910	28,557,489	15.60%
1996	59,025,567	8,970,321	15.20%	184,311,045	26,626,791	14.40%
1997	59,549,860	5,952,264	10.00%	184,740,655	18,560,798	10.00%
1998	59,551,257	3,602,291	6.00%	184,723,476	11,374,984	6.20%
1999	59,555,379	5,990,804	10.10%	184,806,828	16,247,898	8.80%
2000	59,633,843	6,293,229	10.60%	184,902,586	14,104,337	7.60%
2001	59,633,843	5,011,728	8.40%	184,873,475	12,824,496	6.90%
2002	59,635,055	4,983,251	8.40%	184,930,966	13,014,661	7.00%
2003	59,556,591	4,858,727	8.20%	184,930,966	10,957,094	5.90%
2004	59,556,591	4,419,506	7.40%	184,910,103	11,069,057	6.00%
2005	59,552,039	4,910,190	8.20%	184,911,315	7,631,332	4.10%
2006	59,552,039	3,939,219	6.60%	184,911,315	9,386,115	5.10%
2007	59,552,039	4,074,531	6.80%	184,911,315	11,330,694	6.10%
2008	59,552,039	3,889,590	6.50%	184,911,315	8,583,586	4.60%
2009	59,552,039	2,534,310	4.30%	184,911,315	5,081,707	2.70%
2010	59,552,039	3,882,076	6.50%	184,911,315	6,181,814	3.30%
2011	59,552,039	1,302,243	2.20%	184,911,315	8,430,949	4.60%
2012	59,536,185	2,238,095	3.80%	184,894,204	3,786,802	2.00%
2013	59,536,185	2,980,296	5.00%	184,893,008	5,202,286	2.80%
2014	59,477,396	3,198,620	5.40%	184,893,008	8,753,810	4.70%

Source: NMFS RAM Division, QS Transfer Report, 2015 (NOAA 2015a)

Figure 4-9 QS transfer rates for Area 2C and 3A from the end of 1995 through the end of 2014



Source: NMFS RAM Division, QS Transfer Report, 2015 (NOAA 2015a)

NMFS Transfer Reports document price of QS provided voluntarily to NMFS (NOAA 2015a). In both regulatory areas, reported QS price has held a fairly steady increase over the past decade, despite the fact that less IFQ pounds are associated with each QS unit. Typically, Area 2C and 3A has the most expensive QS. The average QS price for all areas was $26.34/ pound of IFQ in 2014.

Table 4-22 Annual prices for halibut QS and IFQ transfers in Area 2C, 2005 through 2014

Year	Mean Price $/IFQ	Standard Dev Price $/IFQ	Total IFQ transferred used for pricing	Mean Price $/QS	Standard Dev Price $/QS	Total QS transferred used for pricing	Number of transactions used for pricing
2005	18.06	5.01	311,907	3.31	0.92	1,699,765	72
2006	18.43	3.57	246,540	3.29	0.64	1,380,274	77
2007	19.62	4.95	183,297	2.8	0.71	1,282,693	76
2008	25.9	10.47	206,440	2.7	1.09	1,979,395	96
2009	20.14	4.94	75,636	1.7	0.42	897,261	30
2010	22.71	5.13	108,127	1.68	0.38	1,463,469	59
2011	32.42	13.42	11,562	1.27	0.53	295,435	27
2012	36.22	5.66	42,314	1.6	0.25	960,255	43
2013	41.46	4.47	64,525	2.07	0.22	1,293,594	43
2014	44.29	4.56	66,288	2.47	0.26	1,189,215	45

Source: NMFS RAM Division, QS Transfer Report, 2015 (NOAA 2015a)

Table 4-23 Annual prices for halibut QS and IFQ transfers in Area 3A, 2005 through 2014

Year	Mean Price $/IFQ	Standard Dev Price $/IFQ	Total IFQ transferred used for pricing	Mean Price $/QS	Standard Dev Price $/QS	Total QS transferred used for pricing	Number of transactions used for pricing
2005	18.07	4.83	385,893	2.49	0.66	2,803,054	96
2006	18.09	3.14	586,035	2.46	0.43	4,301,567	116
2007	20.53	6.72	814,949	2.91	0.95	5,750,520	169
2008	26.83	8.06	498,864	3.51	1.06	3,808,709	126
2009	24.47	8.34	244,224	2.87	0.97	2,081,104	71
2010	21.06	4.6	218,565	2.28	0.5	2,022,792	61
2011	32.46	6.73	250,484	2.52	0.52	3,225,433	72
2012	34.41	10.37	117,877	2.22	0.67	1,828,933	56
2013	30.99	4.65	79,112	1.85	0.28	1,326,640	30
2014	37.58	4.4	123,156	1.49	0.18	3,111,301	55

Source: NMFS RAM Division, QS Transfer Report, 2015 (NOAA 2015a)

The NMFS Transfer Reports also presents information of QS price by QS vessel class, however much of these data are confidential due to the limited number of transfers, particularly in recent years. Using 2011 information for Area 2C, the last year that did not include confidential data demonstrates that B shares are worth significantly more than other catcher vessel QS (an average of $42.94/ IFQ pound). Category C and D QS held about the same average price ($29.47/IFQ pound in C class, and $29.17/IFQ pound in D class QS). Using 2014 information for 3A, there is less variability in the price per IFQ pound. The average price per IFQ pound for class B QS was $38.15, for class C QS was $37.91, and for class D QS it was $34.59 (NOAA 2015a).

4.6 Background on Communities Involved in Charter and Commercial Fishing for Halibut

Many of the communities in Area 2C and 3A that are heavily involved in charter halibut fishing are also the communities heavily involved in commercial halibut fishing. Therefore this section is dedicated to describing the relationship of both sectors to the communities they are located in. There are a substantial amount of additional resources that provide information on community-level commercial harvest, and processing activities, as well as halibut charter activities.[24] The limited scope of background presented here is meant to frame available information that provides direct relevance to the proposed actions. Further analysis may expand this section if additional information is required for the Council to make decisions on the alternatives.

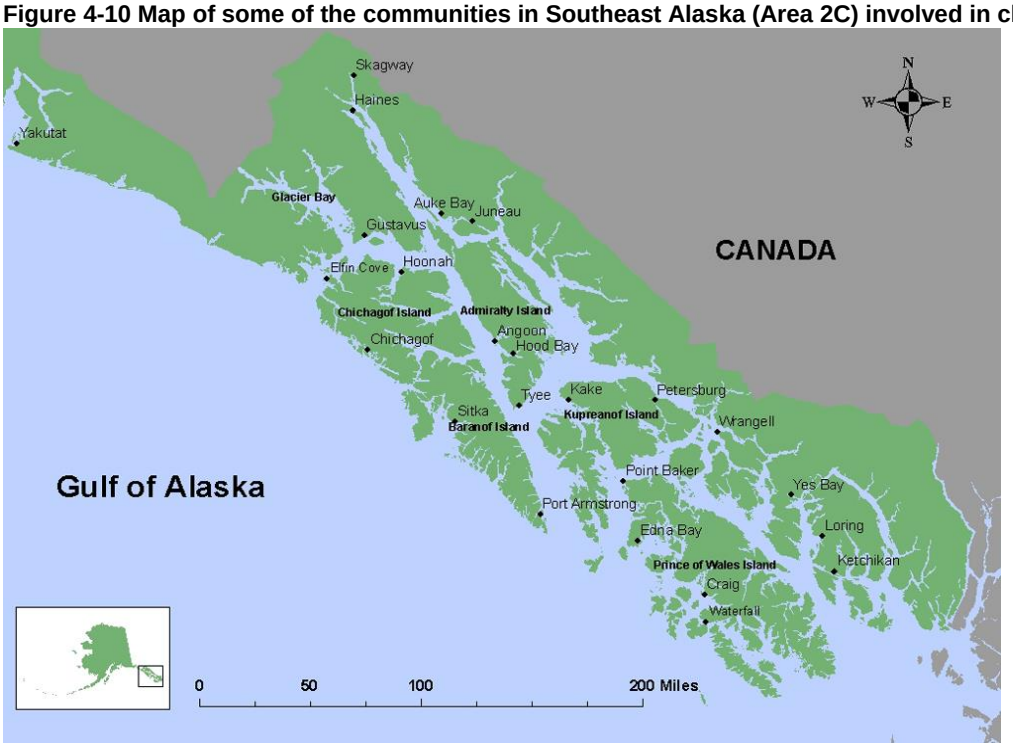
The impact of commercial and charter fishing activities on communities can be understood in many different ways. Typically impacts might be thought of in terms of where the harvesting or processing activities occur. However, the scope of communities under consideration expands extensively when also including the communities that QS or CHP holders live, the headquarters of a commercial or charter

[24] Examples include Appendix A to the EA/RIR/IRFA to the Catch Sharing Plan analysis (NPFMC 2013). This document includes community profiles on Anchorage, Homer, Ketchikan, Kodiak, Petersburg, and Sitka as well as some basic statistical information on QS and CHP holdings by state and community. Additional AFSC produces an interactive map for recreational and commercial fishing, as well as subsistence fishing activities in the state of Alaska (http://www.afsc.noaa.gov/REFM/Socioeconomics/Projects/CPU.php). The map displays statistics for on sportfishing licenses sold, sportfishing licenses held, charter guide licenses held, and active fishing business through 2011 (effort is current underway for an update of this information). This map links to individual community profiles produced by the science center. Detailed updated information on IFQ impacts on communities is planned for the IFQ Program review scheduled for either 2016 or 2017.

business, or even the communities that charter anglers are from. Community-level impacts may manifest in more than just coastal communities where which the involvement is generally more blatant.

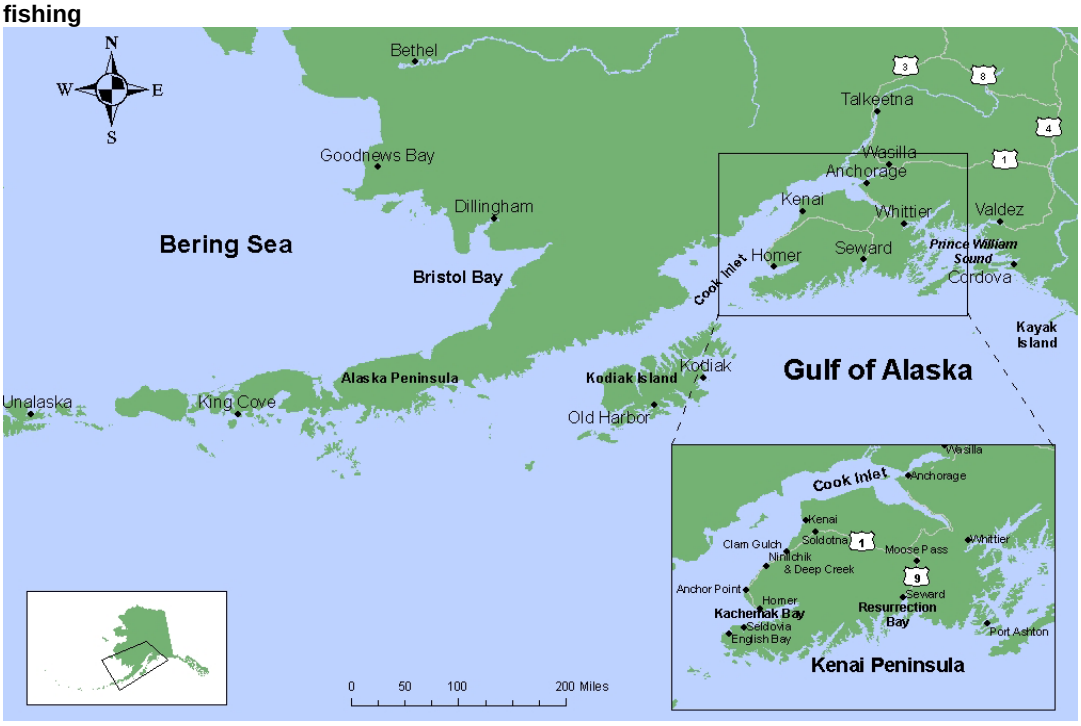
For example, Figure 4-10 and Figure 4-11 illustrate the location of many of the Alaskan communities that are involved in charter halibut fishing. Some of these communities, like Anchorage and Wasilla, could particularly be impacted by changes in the charter halibut fishery because, despite the fact there is no direct access to halibut fishing grounds from these communities, they are home to many charter halibut anglers, as well as captains and crew. In addition, communities like Anchorage and Wasilla offer a wide variety of support services for charter operators and anglers.

Figure 4-10 Map of some of the communities in Southeast Alaska (Area 2C) involved in charter halibut fishing



Source: Dan Lew, AFSC

Figure 4-11 Map of some of the communities in South central Alaska (Area 3A) involved in charter halibut fishing



Source: Dan Lew, AFSC

This example is also applicable to the commercial sector. QS holders, vessel owners, captains, crew, and support sectors are not always located in the community nearest harvesting activity or even port of landing. To demonstrate this difference Table 4-24, lists state and community of registered QS holder and Table 4-25 demonstrates port of landings. The locations in Table 4-24 loosely indicate residency of QS holder, although this is sometimes not the case.

Table 4-24 Area 2C and Area 3A QS holdings by registered state and community

State	Area 2C	
	QS Units	% of QS
AK	49,660,451	83.5%
AR	153,648	0.3%
AZ	252,419	0.4%
CA	213,854	0.4%
CO	24,814	0.0%
FL	132,472	0.2%
ID	321,707	0.5%
MA	5,019	0.0%
MI	164,597	0.3%
MO	56,773	0.1%
MS	96,158	0.2%
MT	92,988	0.2%
NV	168,705	0.3%
OR	878,868	1.5%
SD	84,168	0.1%
TX	59,510	0.1%
UT	142,418	0.2%
WA	6,957,067	11.7%
WI	11,760	0.0%
2C	59,477,396	100.0%

AK Community	Area 2C	
	QS Units	% of QS
ANCHOR POINT	115,929	0.2%
ANCHORAGE	27,374	0.1%
ANGOON	191,130	0.4%
AUKE BAY	429,873	0.9%
COFFMAN COVE	61,094	0.1%
CORDOVA	19,284	0.0%
CRAIG	1,701,607	3.4%
DILLINGHAM	91	0.0%
DOUGLAS	798,848	1.6%
EDNA BAY	163,377	0.3%
ELFIN COVE	857,929	1.7%
FAIRBANKS	135,070	0.3%
GUSTAVUS	298,837	0.6%
HAINES	1,897,456	3.8%
HOMER	34,813	0.1%
HOONAH	707,339	1.4%
HYDABURG	34,913	0.1%
HYDER	28,778	0.1%
JUNEAU	5,572,189	11.2%
KAKE	571,627	1.2%
KASILOF	2,394	0.0%
KETCHIKAN	2,854,773	5.7%
KLAWOCK	10,981	0.0%
KODIAK	1,969	0.0%
KOTZEBUE	56,858	0.1%
METLAKATLA	262,799	0.5%
MEYERS CHUCK	11,906	0.0%
NAKNEK	642	0.0%
PELICAN	683,302	1.4%
PETERSBURG	16,743,469	33.7%
PILOT POINT	305	0.0%
POINT BAKER	138,669	0.3%
PORT ALEXANDER	85,625	0.2%
ST GEORGE ISLAND	59	0.0%
ST PAUL ISLAND	15,836	0.0%
SEWARD	1,215	0.0%
SITKA	9,781,218	19.7%
SKAGWAY	27,892	0.1%
SOLDOTNA	910	0.0%
TENAKEE SPRINGS	463	0.0%
THORNE BAY	143,735	0.3%
TOGIAK	334	0.0%
TWIN HILLS	43	0.0%
WARD COVE	328,533	0.7%
WASILLA	73,184	0.1%
WRANGELL	4,784,693	9.6%
YAKUTAT	1,086	0.0%
2C	49,660,451	100.0%

State	Area 3A	
	QS Units	% of QS
No state listed	14,855	0.01%
AB	204,936	0.11%
AK	110,780,574	59.92%
AZ	722,478	0.39%
BC	13	0.00%
CA	3,535,742	1.91%
CO	1,129,332	0.61%
FL	11,940	0.01%
HI	1,028,982	0.56%
IA	201,208	0.11%
ID	88,138	0.05%
MA	93	0.00%
ME	498	0.00%
MI	82,580	0.04%
MN	624,636	0.34%
MS	817,231	0.44%
MT	1,037,862	0.56%
ND	24,500	0.01%
NH	2,527	0.00%
NM	302,062	0.16%
NV	145,659	0.08%
OK	476,043	0.26%
OR	15,793,069	8.54%
PA	1,991	0.00%
SD	261,825	0.14%
TX	183,128	0.10%
UT	450,619	0.24%
VA	25,756	0.01%
VI	1,414	0.00%
VT	32,447	0.02%
WA	46,881,636	25.36%
WY	20,075	0.01%
3A	184,883,849	100.00%

AK Community	Area 3A	
	QS Units	% of QS
ANCHOR PT	930,334	0.84%
ANCHORAGE	7,315,631	6.60%
ANDERSON	986	0.00%
AUKE BAY	160,678	0.15%
CENTRAL	28,495	0.03%
CHIGNIK LAGOON	319	0.00%
CHINIAK	211,566	0.19%
CHUGIAK	58,846	0.05%
CLAM GULCH	500,885	0.45%
CORDOVA	7,320,672	6.61%
DELTA JUNCTION	1,150,993	1.04%
DILLINGHAM	709,914	0.64%
DOUGLAS	1,117,568	1.01%
DUTCH HARBOR	9,891	0.01%
EAGLE RIVER	1,018,032	0.92%
ELFIN COVE	251,399	0.23%
FAIRBANKS	192,391	0.17%
FRITZ CREEK	481,689	0.43%
GIRDWOOD	80,480	0.07%
GUSTAVUS	59,371	0.05%
HAINES	819,534	0.74%
HALIBUT COVE	373,002	0.34%
HOMER	13,815,091	12.47%
HOONAH	242,267	0.22%
INDIAN	4,703	0.00%
JUNEAU	3,620,721	3.27%
KASILOF	559,994	0.51%
KENAI	2,652,701	2.39%
KETCHIKAN	771,286	0.70%
KLAWOCK	114,830	0.10%
KODIAK	28,874,322	26.06%
KOTZEBUE	286,198	0.26%
LARSEN BAY	73,403	0.07%
MEKORYUK	361,887	0.33%
METLAKATLA	82,675	0.07%
MOOSE PASS	374	0.00%
NAKNEK	1,318	0.00%
NIKISKI	245,553	0.22%
NIKOLAEVSK	660,959	0.60%
NINILCHIK	585,377	0.53%
NOME	174,731	0.16%
NORTH POLE	182,809	0.17%
OLD HARBOR	192,685	0.17%
OUZINKIE	249,865	0.23%
PALMER	410,476	0.37%
PELICAN	782,211	0.71%
PETERSBURG	12,131,464	10.95%
PORT ALEXANDER	78	0.00%
PORT GRAHAM	65,599	0.06%
PORT LIONS	77,810	0.07%
ST GEORGE ISLAND	183	0.00%
ST PAUL ISLAND	39,991	0.04%
SELDOVIA	2,085,799	1.88%
SEWARD	3,820,404	3.45%
SITKA	6,128,260	5.53%
SOLDOTNA	2,208,506	1.99%
STERLING	346,721	0.31%
TENAKEE SPRINGS	211,406	0.19%
TWIN HILLS	132	0.00%
VALDEZ	457,185	0.41%
WASILLA	1,849,845	1.67%
WILLOW	58,672	0.05%
WRANGELL	438,261	0.40%
YAKUTAT	3,121,146	2.82%
3A	110,780,574	100.00%

Source: NOAA, RAM Division

To get a clearer understanding of where halibut harvesting and processing may be occurring, Table 4-25 demonstrates the location of halibut IFQ deliveries.

Table 4-25 QS port of landings

Port of landing	Vessel Landings	Pounds Landed
WASHINGTON		
BELLINGHAM	25	490,014
SEATTLE	***	***
ALASKA		
ADAK	***	***
AKUTAN	***	***
ATKA	***	***
COFFMAN COVE	***	***
CORDOVA	83	423,165
CRAIG	60	55,024
DUTCH HBR/UNALASKA	107	934,505
FALSE PASS	***	***
HAINES	3	4,670
HOMER	386	2,762,345
HOONAH	***	***
HYDER	***	***
JUNEAU	***	***
KAKE	***	***
KENAI	10	25,777
KETCHIKAN	65	128,604
KING COVE	***	***
KODIAK	505	2,614,268
PETERSBURG	321	1,166,005
PORT ALEXANDER	***	***
PORT PROTECTION	***	***
SAND POINT	***	***
SEWARD	277	1,753,893
SITKA	***	***
ST GEORGE	***	***
ST PAUL	***	***
VALDEZ	***	***
WHITTIER	22	55,451
WRANGELL	***	***
YAKUTAT	216	510,497
Total for 2014	3,442	15,772,510

Source: NOAA, RAM Division
Table notes: Halibut weights are reported in headed and gutted pounds. Asterisks denote confidential data.

As discussed in Section 4.4.1.1 CQE's in Area 2C are able to receive up to four community CHPs to be used by their residents. Area 3A CQE's can hold up to seven community CHPs. Based on Table 4-4, 12 CQE's have acquired 48 community CHPs in Area 2C and nine CQEs in Area 3A have acquired 63 community CHPs.

Charter operations interact with the communities they take place in in different ways. Some operations begin in one location, and transport the angler to the location of launch. Lodges are often, but not always located outside of a community and can provide for multi-day recreational fishing opportunities. These types of business may still rely on the goods and services of nearby communities. In some communities with a large concentration of charter operations, prospective anglers can walk the docks to book a last

minute charter trip. Charter events can also draw anglers into communities, for example the Homer halibut derby.

To complement tables of registered location of QS holders, Table 4-26 and Table 4-27 lists the registered addresses of CHP holders.

Table 4-26 Area 2C CHP holdings by registered state and community

State	Area 2C		AK Community	Area 2C	
	CHPs	% of CHPs		CHPs	% of CHPs
AK	300	56.0%	ANCHORAGE	1	0.3%
AR	2	0.4%	ANGOON	10	3.3%
AZ	4	0.7%	AUKE BAY	9	3.0%
CA	4	0.7%	COFFMAN COVE	3	1.0%
DC	11	2.1%	CRAIG	21	7.0%
FL	1	0.2%	ELFIN COVE	8	2.7%
ID	2	0.4%	GUSTAVUS	3	1.0%
KY	1	0.2%	HAINES	2	0.7%
ME	1	0.2%	HOONAH	4	1.3%
MT	1	0.2%	JUNEAU	22	7.3%
NV	1	0.2%	KETCHIKAN	87	29.0%
OH	1	0.2%	KLAWOCK	10	3.3%
OR	1	0.2%	NAUKATI BAY	1	0.3%
PA	1	0.2%	PALMER	1	0.3%
UT	16	3.0%	PELICAN	4	1.3%
VA	1	0.2%	PETERSBURG	13	4.3%
WA	22	4.1%	PORT ALEXANDER	4	1.3%
No state listed	166	31.0%	SITKA	78	26.0%
Total	536	100.0%	SOLDOTNA	3	1.0%
			THORNE BAY	4	1.3%
			WARD COVE	8	2.7%
			WHALE PASS	2	0.7%
			WRANGELL	2	0.7%
			Total	300	100.0%

Source: NOAA, RAM Division

Table 4-27 Area 3A CHP holdings by registered state and community

State	Area 3A		City	Area 3A	
	CHPs	% of CHPs		CHPs	% of CHPs
AK	268	60.2%	ANCHOR POINT	9	3.4%
AZ	3	0.7%	ANCHORAGE	29	10.8%
CA	3	0.7%	ANIAK	1	0.4%
CO	2	0.4%	CHUGIAK	3	1.1%
ID	2	0.4%	CLAM GULCH	1	0.4%
MI	1	0.2%	CORDOVA	2	0.7%
MN	1	0.2%	EAGLE RIVER	4	1.5%
NE	1	0.2%	ELFIN COVE	5	1.9%
NV	1	0.2%	FAIRBANKS	1	0.4%
NY	1	0.2%	FRITZ CREEK	1	0.4%
OR	2	0.4%	GIRDWOOD	1	0.4%
TX	1	0.2%	HOMER	45	16.8%
UT	1	0.2%	JUNEAU	1	0.4%
WA	8	1.8%	KASILOF	5	1.9%
WY	1	0.2%	KENAI	7	2.6%
No state listed	149	33.5%	KODIAK	39	14.6%
Total	445	100.0%	LARSEN BAY	1	0.4%
			NINILCHIK	20	7.5%
			NORTH POLE	4	1.5%
			OLD HARBOR	3	1.1%
			OUZINKIE	1	0.4%
			PALMER	3	1.1%
			PEDRO BAY	1	0.4%
			PORT LIONS	4	1.5%
			SELDOVIA	1	0.4%
			SEWARD	27	10.1%
			SOLDOTNA	20	7.5%
			STERLING	2	0.7%
			VALDEZ	7	2.6%
			WASILLA	5	1.9%
			WHITTIER	4	1.5%
			YAKUTAT	11	4.1%
			Total	268	100.0%

Source: NOAA, RAM Division

Investigating the port site listed on charter logbooks presents a different perspective on where charter operations are occurring. Table 4-28 is meant to illustrate the diversity in launch locations. Some of the port sites listed would not be considered communities, but represent a landmark harbor, bay, or island that a charter operation relies on. This diversity also helps illustrate the point that charter operations interact differently with communities. If a launch location is community with retail, food, accommodation, and other support industries, the charter operation is more likely to have a direct effect on the community. If the charter operation is a lodge located on remote island, charter anglers may still impact Alaskan communities while traveling to and from the lodge. However while they are residing at the lodge, they may have less direct impact on the economy of neighboring communities.

Table 4-28 Area 2C and Area 3A charter trips by port since 2011

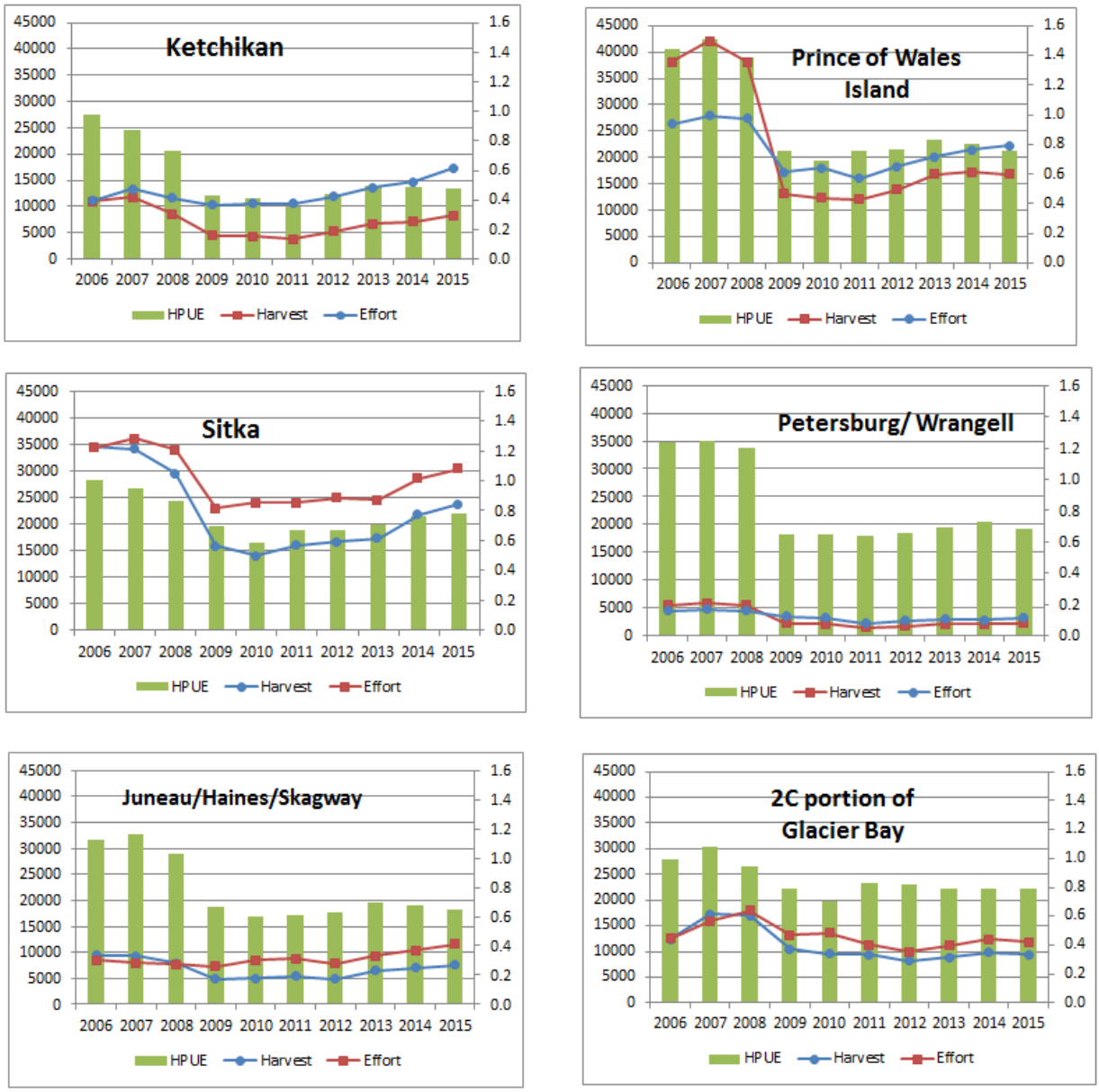
Area 2C		Area 2C continued		Area 3A		Area 3A continued	
Portsite	Total Trips	Portsite	Total Trips	Portsite	Total Trips	Portsite	Total Trips
SITKA	31,489	RASPBERRY ISLAND	93	HOMER	22,087	CLOVER BAY	34
KETCHIKAN	15,432	KILLISNOO	86	SEWARD	18,454	PYBUS POINT LODGE	34
CRAIG	6,790	GUT BAY	81	DEEP CREEK	12,126	CHENEGA BAY	32
WATERFALL	6,616	PYBUS BAY	81	ANCHOR POINT	5,429	UYAK BAY	29
AUKE BAY	6,138	HAPPY VALLEY	80	KODIAK	4,136	PORT ALEXANDER	26
ELFIN COVE	5,298	KEKU STRAIT	80	SITKA	4,127	WRANGELL	26
GUSTAVUS	5,284	LORING	77	YAKUTAT	3,662	SPORTSMAN COVE	24
HOMER	3,445	CORDOVA	68	ELFIN COVE	2,947	ICY BAY LODGE	23
KNUDSON COVE	2,982	SELDOVIA	53	VALDEZ	2,851	ANTON LARSEN BAY	22
YES BAY	2,946	KUIU ISLAND	52	WHITTIER	2,622	KUKAK BAY	21
PETERSBURG	2,746	KILIUDA BAY	48	LARSEN BAY	2,150	KAFLIA BAY	20
ANGOON	2,336	PORT ASHTON	48	NINILCHIK	1,536	ILIAMNA	19
KLAWOCK	2,148	UGAK BAY	47	PELICAN	1,264	GUT BAY	18
SEWARD	1,912	GAMBIER BAY	44	HAPPY VALLEY	1,218	TUTKA BAY	17
JUNEAU	1,878	FUNTER BAY	41	OLD HARBOR	1,094	CHENEGA	15
THORNE BAY	1,702	WHITTIER	38	PORT LIONS	1,047	ESHAMY BAY	12
SPORTSMAN COVE	1,634	PORT VITA	37	KETCHIKAN	972	NAUKATI	11
EL CAPITAN LODGE	1,553	CRESCENT HARBOR	33	CRAIG	676	BARTLETT COVE	9
WARM SPRINGS BAY	1,463	DEEP COVE	33	WATERFALL	636	KUIU ISLAND	9
PYBUS POINT	1,450	EXCURSION INLET	29	SEAL BAY (SC)	587	SHELTER COVE LODGE	9
APPLE ISLAND	1,240	HOLKHAM BAY	29	LOWELL POINT	548	KILLISNOO	8
PELICAN	1,234	SALMON FALLS	27	IRON CREEK	543	AMOOK ISLAND	7
DEEP CREEK	1,149	PARKS CANNERY	25	AUKE BAY	542	ANCHOR RIVER	6
SALMON FALLS	1,076	KAKE	20	CORDOVA	470	COSMOS COVE	5
ANCHOR POINT	923	FRESHWATER BAY	19	GUSTAVUS	469	CRESCENT HARBOR	5
HOONAH	876	COSMOS COVE	17	UGANIK BAY	322	KASITSNA BAY	5
SARKAR COVE	771	SAGINAW BAY	17	KILIUDA BAY	284	PORT ST NICHOLAS	5
CLOVER PASS	667	PORTAGE BAY (SE)	15	SELDOVIA	273	CHENEGA	4
PORT ST NICHOLAS	559	ZACHAR BAY	15	PETERSBURG	269	DOUGLAS	4
PYBUS POINT LODGE	553	PYBUS BAY	14	APPLE ISLAND	245	KEKU STRAIT	4
WRANGELL	553	BOARDWALK	13	RASPBERRY ISLAND	236	ZACHAR BAY	4
KODIAK	521	MORNE ISLAND	12	PORT ASHTON	228	DEEP COVE	3
COFFMAN COVE	503	NAUKATI	11	ZACHAR BAY	228	GAMBIER BAY	3
S KAIGANI BAY	461	SECURITY BAY	11	UGAK BAY	216	HALIBUT COVE	3
WHALE PASS (POW - SE)	449	PHONOGRAPH COVE	10	ANGOON	202	HOLKHAM BAY	3
STEAMBOAT BAY	442	CEDARS LODGE	9	PARKS CANNERY	187	MORNE ISLAND	3
POINT BAKER	410	PORT WALTER	9	PORT VITA	170	PORTAGE BAY (SE)	3
VALDEZ	408	DOUGLAS	8	PORT WAKEFIELD	163	SECURITY BAY	3
PORT ALEXANDER	373	KAFLIA BAY	8	ELLAMAR	138	SHEEP BAY	3
GULL COVE	352	HOBART BAY	7	YES BAY	137	FUNTER BAY	2
BARTLETT COVE	349	IDAHO INLET	7	THORNE BAY	128	HOBART BAY	2
HAINES	347	LIMESTONE BAY	7	FALSE ISLAND	127	KODIAK	2
LARSEN BAY	329	HOBBIT HOLE	6	JUNEAU	125	PELICAN	2
BAY OF PILLARS	308	BOARDWALK	5	AMOOK PASS	121	POINT BAKER	2
SHELTER ISLAND	287	HIDDEN INLET LODGE	5	GULL COVE	121	PORT CHATHAM	2
CLOVER BAY	273	ROCKY POINT	5	KLAWOCK	119	PORT VITA	2
TENAKEE	262	ELFIN COVE	4	HOONAH	107	SNUG HARBOR	2
FALSE ISLAND	255	UYAK BAY	4	STEAMBOAT BAY	100		
KELP BAY	248	BARANOF	3	CLOVER PASS	98		
CANNERY COVE	216	OUTER POINT	3	WARM SPRINGS BAY	94		
SALTERY COVE	212	ROWAN BAY	3	PYBUS POINT	91		
DOVE ISLAND LODGE	202	SITKOH BAY	3	TENAKEE	86		
ORR ISLAND	186	CHENEGA	2	ILIAMNA BAY	73		
NINILCHIK	155	EAGLE LODGE	2	SPRUCE ISLAND	68		
SEALING COVE	154	FARRAGUT BAY	2	S KAIGANI BAY	65		
OLD HARBOR	148	GLACIER BAY	2	SILVER SALMON	60		
YAKUTAT	143	HAWK INLET	2	PORT FIDALGO	49		
SALMON LANDING	138	HOOD BAY	2	SALMON FALLS	49		
UGANIK BAY	138	KASAAN	2	ORR ISLAND	48		
SHELTER COVE LODGE	121	PORT PROTECTION	2	KNUDSON COVE	47		
SEA OTTER SOUND	120	PRINCE RUPERT	2	SEALING COVE	44		
SUNNYSIDE	108	VIXEN INLET	2	WHISKEY GULCH	44		
PORT LIONS	102	WHALERS COVE	2	WILLIAMSPORT	44		
WHALERS COVE	101	WHISKEY GULCH	2	AMALIK BAY	39		

Source: Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Table note: Port site is only included for if greater than 1 trip was listed

Trends of angler effort and halibut harvest are produced annually by subarea in ADF&G reports. Subarea is generally broader than community level. However, this information still provides a measure of relative

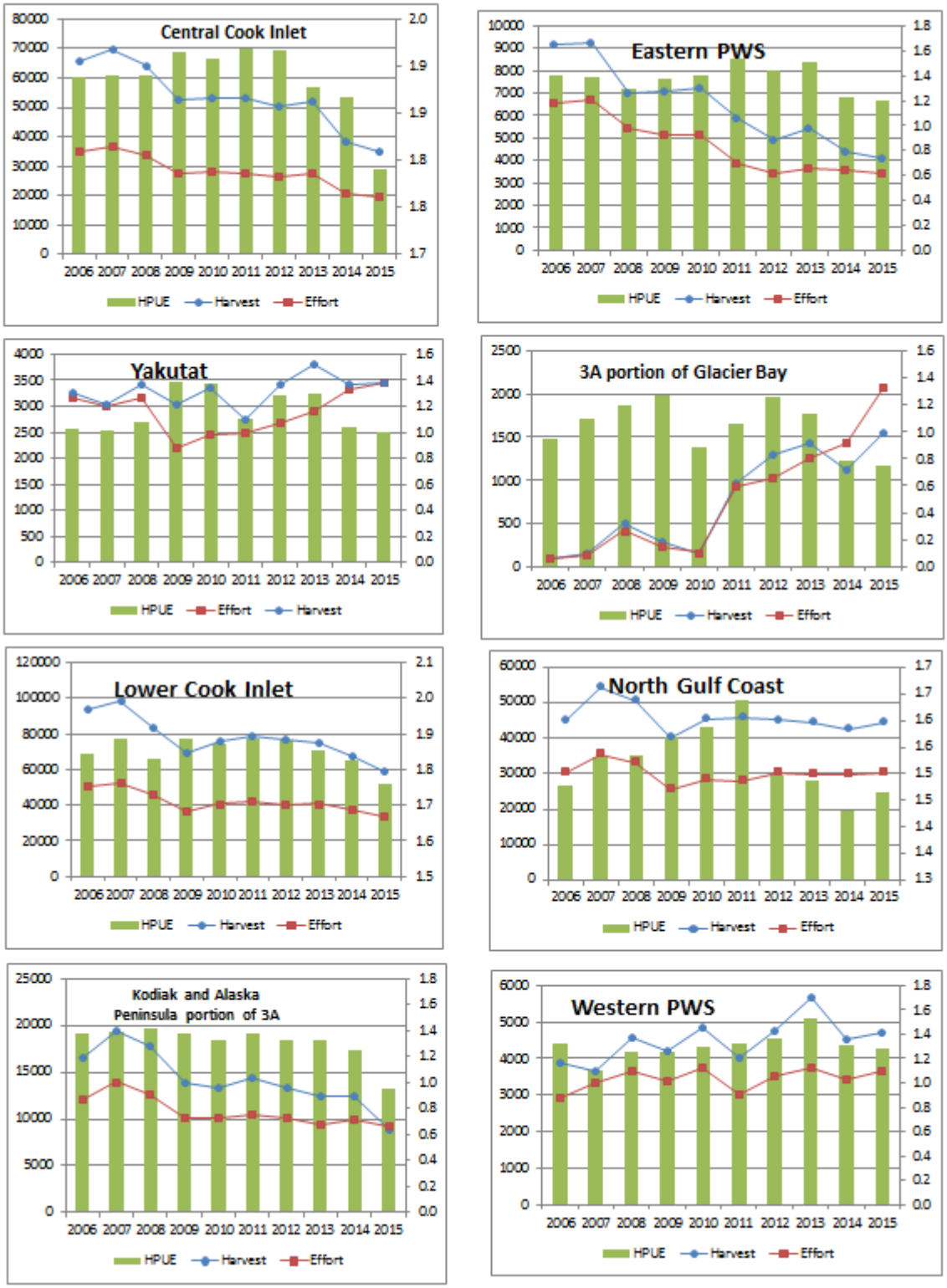
intensity of charter behavior in Southeast and Southcentral regions. Note that the scale for harvest, effort, and harvest per unit effort are all set differently for Southcentral regions (Figure 4-13), as these metrics are significantly different for charter operations across the regions.

Figure 4-12 Harvest, effort, and harvest per unit effort for sub-areas in Area 2C



Source: ADF&G logbooks
Regions represent sampling at the following ports: Ketchikan, Prince of Wales Island (including Craig and Klawock), Petersburg/ Wrangell, Sitka, Juneau, Haines/ Skagway (Juneau proxy), and Glacier Bay 2C (Elfin Cove, Gustavus)

Figure 4-13 Harvest, effort, and harvest per unit effort for sub-areas in Area 3A



Source: ADF&G logbooks
Regions represent sampling at the following ports: Glacier Bay 3A (Elfin Cove, Gustavus), Yakutat, Eastern PWS (Valdez), Western PWS (Whitter), North Gulf Coast (Seward), Lower Cook Inlet (Homer), Central Cook Inlet (Deep Creek, Anchor Point), Kodiak

In addition to looking at harvest, effort, location of CHPs, location of landings, this section also teases out charter vessel characteristics by community. Table 4-29 illustrates the relative fleets across Alaskan communities. It also highlights that the majority of the whole sector is comprised of vessel less than 30 ft LOA (53 percent), with 87 percent of the fleet under 40 ft LOA.

Table 4-29 2014 charter vessel length overall, by registered community

AK Community	Vessel Length Overall					
	<30	31-40	41-50	51-60	>60	Total
ANCHOR POINT	5	2				7
ANCHORAGE	17	9	1	1	2	30
ANGOON	3	5				8
AUKE BAY	1					1
CHUGIAK	2					2
CLAM GULCH	1					1
COFFMAN COVE	2					2
COLD BAY	1					1
COOPER LANDING	4					4
CORDOVA	1					1
CRAIG	19	1				20
DOUGLAS					1	1
EAGLE RIVER	2	2				4
ELFIN COVE	1	9				10
FAIRBANKS	1			1		2
GUSTAVUS	7	2				9
HAINES	2		1			3
HOLLIS	1					1
HOMER	15	20	11	1	2	49
HOONAH		3				3
JUNEAU	13	10	1	2	3	29
KASILOF	2	1				3
KENAI	4	4				8
KETCHIKAN	48	28	2	1	1	80
KLAWOCK	1	1				2
KODIAK	16	7	3	1	1	28
LARSEN BAY	2					2
LORING	1					1
NINILCHIK	10	5	1			16
NORTH POLE	2	2				4
OLD HARBOR	2	1				3
PALMER	1	2				3
PELICAN	2	1		1		4
PETERSBURG	6	1	1		1	9
PORT ALEXANDER	1	1				2
PORT LIONS	1	1				2
RUBY	1					1
SALCHA		1				1
SEAL BAY	1					1
SELDOVIA		2				2
SEWARD	10	11	10	2		33
SITKA	41	31	3	3	1	79
SKAGWAY		2				2
SOLDOTNA	14	4	3	1	1	23
STERLING	1					1
TENAKEE SPRINGS			1			1
THORNE BAY	2	1				3
TOKSOOK BAY	1					1
VALDEZ	4	5	1		1	11
WARD COVE	1					1
WASILLA	3		2			5
WHALE PASS	1					1
WHITTIER		2	1			3
WRANGELL	1	1				2
YAKUTAT	4	4				8
YES BAY	2					2
Total	284	182	42	14	14	536

Source: AKFIN vessel file and ADF&G Logbooks

4.7 Analysis of Alternatives: Alternative 1, No Action

In this analysis the no action alternative is the same as the status quo. That is, the CHLAP and the CSP would still be in place and apply the same rules and regulations (Section 4.4.1 and 4.4.1.2 describe the elements of these management programs in more detail) and CHP could continue to be held without requirements on activity.

Under current regulations (50 CFR 679.41) a person who is a U.S. citizen or U.S. corporation, partnership, association, or other entity is allowed to receive halibut QS/IFQ by transfer. No additional qualifications must be met for a person or entity to hold halibut QS assigned to Category A vessels,which represents 2.1 percent of the total halibut QS in Area 2C, and 2.6 percent of the total halibut QS in Area 3A (Table 4-18). Moreover, holders of Category A QS seldom sell their shares, preferring instead to lease them.

However, in order to hold other vessel categories of halibut QS, i.e., halibut QS assigned to vessel Categories B, C, or D, current restrictions require a person or entity to be (§679.41(c), (d), and (g)):

- An initial issuee of halibut and sablefish fixed gear fishery QS;
- A solely-owned corporation formed by an individual initial issuee for liability purposes;
- An individual eligible to receive an IFQ Crewmember Transfer Eligibility Certificate. An individual can receive a Certificate if (s)he demonstrates in an application to NMFS' satisfaction that (s)he has served at least 150 days as a member of a harvesting crew in any U.S. commercial fishery;
- The individual person who is the heir of a deceased individual QS holder;
- A Community Quota Entity; or
- Any other person, if QS is transferred as a result of a court order, operation of law, or as part of a security agreement. However, if NMFS approves the QS transfer "with restrictions," the agency will not assign IFQ resulting from the restricted QS to any person.

Therefore, current regulations do not allow for an RQE to form as an eligible entity to acquire, hold, or use commercial halibut QS in the recreational sector. There would be no way for the charter sector as a whole to bolster its allocation as suggested in the purpose and need statement of this analysis.

As demonstrated in Table 4-9 and Table 4-10, with the exception in 2011 in Area 2C, management measures have only become stricter during throughout the course of the GHL and CSP programs. The charter catch limit has dropped 0.581 Mlb (41 percent) in Area 2C from 2007 to 2015 and 1.76 Mlb (48 percent) in Area 3A between 2010 and 2015. Under status quo regulations, the charter sector is subject to these annual management measures, the only flexibly is the individual flexibility built into the GAF program.

Under the no action alternative charter operators that wish to provide more opportunity to their guided anglers than the established management measures allow for in their area, would be reliant on the current form of compensated transfer of IFQ: the GAF program. This program has received participation in the first years of implementation as can be seen in Table 4-11 and Table 4-12. Self-transfers accounted for 7 percent of GAF transfers in Area 2C and 40 percent of transfers in Area 3A in 2015. However, this

program is new. If the Council takes no action, there may be increasing trends of CHPs seeking to purchase halibut QS as an individual (presuming they meet the eligibility requirements) in order to more easily facilitate GAF transfers.

According to Yamada and Flumerfelt (2014) some of the primary objections charter stakeholders have had towards the program thus far is their impression that it disenfranchises the smaller charter operators that do not also hold halibut QS and cannot afford to invest annually to lease IFQ. They have also stated that since charter trips are often booked in advance and IFQ availability is not known until sometimes later in the season, the GAF program does not provide intended stability at times of low-abundance. Additionally, despite the limitations on transfer, the ability to lease IFQ as GAF contributes to the concern some stakeholders have over active participation in the commercial IFQ fishery. Additionally, NMFS has worked with charter stakeholders that have expressed frustration with the numerous deadlines involved in the leasing program.

If the concerns with the GAF provision are primarily fundamental in nature and associated with a philosophical objection to the transfer of IFQ to an individual operator, these concerns might only be alleviated through Alternative 2, the development of some kind of entity that can legally hold harvesting privileges for the sector as a whole. However, if it turns out that many of the concerns about the GAF program are more logistical in nature, they could be address through specific regulatory amendments outside of any of the action alternatives proposed in the present analysis.

With regards to Alternative 3, no action would mean that trends in latent capacity would be excepted to remain the same; however there would be nothing to prevent a sudden change in activity should external forces prompt such a change. Stakeholders particularly concerned about the potential capacity of latent CHP becoming active could attempt to acquire these permits through compensation without any regulatory action.

4.8 Analysis of Alternatives: Alternative 2, Establish a Recreational Quota Entity Program

4.8.1 The Proposed Program

Alternative 2 would allow a non-profit holding entity, a Recreational Quota Entity (RQE), to be established and be eligible to purchase and hold commercial QS. (The number of entities and its jurisdiction is addressed under **Element 1**.) This entity would be responsible for 1) maintaining the funding efforts in order to acquire halibut QS for the common angler pool, 2) identifying opportunities to acquire halibut QS from willing commercial halibut QS sellers, 3) negotiating the acquisition of halibut QS, and 4) completing necessary reporting requirements.

This analysis only investigates the possibility of a using a non-profit non-governmental entity to hold QS on behalf of guided recreational anglers. Other types of entity structures have been considered in the past. Several types of common-pool entities were evaluated in 2007, including 1) **a federally-held common pool of QS**, 2) **a state-held common pool of QS**, or 3) **a regional non-profit associate common pool.** In additional, the charter CATCH proposal describes variations on the QS holding entity, suggesting privileges could be held by either the charter operators/ CHP holders or the anglers themselves, and at either the individual or **aggregate level** (Yamada & Flumerflet 2014). A type of program in which a non-profit entity would hold QS on behalf of guided recreational anglers in common was recommended for consideration by the CATCH proposal and adopted by the Council as the entity structure for consideration.

This program structure, similar to a CQE, is considered for the charter sector for several reasons. It was noted that a non-profit, an entity independent of the Federal or state government, could be more flexible and might be able more quickly to take advantage of favorable market conditions for QS then a Federal or state administered program

In addition, there appears to be significant interest from charter stakeholders to consider a program that could benefit the group as a whole, rather than individual with the capital to acquire private benefits. This latter scenario represents the structure of the GAF program currently. Some charter stakeholders have testified to the philosophical desire for their sector to interact with the resource as a common pool (albeit with limited entry due to the CHP), rather than with private harvesting privileges. The benefit of acting as a single non-profit entity is that this entity could pool it resource (funds, intellectual capital, networks, etc) and potentially create more leverage than any individual on his or her own. A potential added benefit to association members is that the association could be used for purposes other than purchasing and holding QS; for example, it could engage in activities that promote the charter fishing industry such as preparing market research and developing advertising or sales promotion programs.

The downside to this approach is that in a private market, when an individual invests in something like QS, they generally directly see the returns. It is possible that CHP holders or anglers that invest in an RQE may never reap the benefits directly from their contribution. Or it could be that there is a lag time in which benefits may be realized.

Using a structure similar to a CQE, the RQE would be an eligible participant to purchase QS in the Alaska Halibut and Sablefish IFQ Program on behalf of all guided recreational anglers. Any commercial halibut QS purchased by the RQE would be held by this entity for the common pool of guided recreational anglers. Options are included in this analysis for restrictions on the amount of QS that could be transferred from the commercial sector in a given year, and overall (**Element 2, Options 1 through 3**). Options are also included to determine whether D class QS would be unavailable to the RQE (**Element 2, Option 4**). Two-way transfers would be allowed; the RQE would be responsible for managing any acquired halibut QS and facilitating transactions. This would include transactions of QS transferred back to the commercial halibut sector. Quota class and block designation would be retained if the QS would be transferred back to the commercial sector (Under proposed **Element 2**).

Under this alternative, the pounds of halibut IFQ assigned annually to QS holders would not be used directly for halibut harvest by the RQE or the anglers represented, as it is for the commercial sector. Instead, the pounds of IFQ that are derived from the QS held by the RQE would supplement the annual charter allocations and potentially result in less restrictive annual management measures. This alternative would not change the underlying allocations to the sectors or the total QS pool, and therefore the QS holders in the commercial fishery that did not transfer QS to the RQE would not have their IFQ pounds directly impacted by the transfer of other QS to the RQE.

Element 3 suggests that the RQE QS holdings as of October 1 of each year would be the basis with which to estimate IFQ pounds that would be added to the estimated guided recreational allocation under the CSP for the upcoming year. Currently staff use the catch limit resulting from the IPHC 'blue line' provided at the interim IPHC meeting on which to base the analysis of necessary management measures for the following year. Under Alternative 2, staff would use the catch limit resulting from the 'blue line' plus the estimate of the additional IFQ pounds on which to base an analysis of annual management measures and/ or as a buffer to account for uncertain conditions in charter harvest. The rest of the current procedural process steps and timeline would remain unchanged. This charter allocation and the corresponding management measures would be maintained for the following fishing year. Any further

acquisitions for QS by the RQE during the fishing year would not contribute to the guided recreational harvest measures until the following year.

4.8.1.1 Formation and Internal Management of Non-profit Entity (Element 1)

The CATCH proposal **describes two types of non-profit entities** that could be formed in order to represent charter anglers (Yamada & Flumerflet 2014). One type of non-profit entity (a Regional Non-Profit Association), would have the ability to self-tax, but would need to be established through legislative action. The other type of non-profit (a more traditional 501(c)(3) established by the Alaska Non-profit Corporation Act), would not need to be established through statutes, but could not receive funding through self-taxation. Since the appropriate type of non-profit structure will depend on the type of funding opportunities the charter sector is interested in pursuing, the Council's action is limited to determining the number of RQEs that could be formed.

Element 1 of Alternative 2 offers two options for the area of representation for an RQE. One RQE could be formed in order to represent both Area 2C and 3A. Under this option, each area would be managed separately; however there might be a subcommittee to represent each area with a Board of Directors to oversee each area's QS pool. The second option would be for two separate RQEs to form, one for each area. The Council could potentially select both of these options to be included in the regulations, and stakeholders could form the RQE using their optimal structure, understanding that no area can be represented by more than one non-profit entity.

NMFS has indicated that thus far, there are not specific management concerns with either of these options. There may be a marginal increase in administrative burden with processing required information from two entities, rather than one; however, this increase is expected to be small compared to the process of amending regulation and allowing for the opportunity for such an entity to form. Complications could occur if more than two entities were formed. If there were multiple entities per IPHC regulatory area, management could become increasingly burdensome, particularly if the Council chooses to adopt restrictions on transfer and each entity had separate caps on transfer. In addition, it could introduce competition for QS between RQEs in an area. Therefore, the Council might consider allowing the charter stakeholders and RQE committee to weigh-in on this decision point.

Based on stakeholder feedback, the CATCH proposal initially recommended forming one RQE to represent both regulatory Areas 2C and 3A, with each having its own separate QS management pool (Yamada & Flumerflet 2014).

4.8.1.2 Transfer Provisions and Restrictions (Element 2)

The proposed program would provide a structure for two-way transfers to occur, should an RQE acquire QS and choose to sell it back to a participant in the commercial fishery. This is an important element because it is expected that there would be variability from year to year in the amount of QS an RQE would be interested in using. Particularly in halibut biomass increases, there is a point where the charter sector may reach their least restrictive management measures, and be holding surplus QS. With maybe specific exceptions, generally speaking, the commercial sector could use every additional pound of halibut IFQ. In order for two-way transferring to occur, NMFS would need to track QS units, IFQ pounds, QS vessel class, and block specification to ensure that the QS and IFQ could be transferred to an eligible commercial QS holder with the original QS designations to the commercial QS holder. The QS would not be required to be sold back to the same individual that sold the QS to the RQE, it would just need to retain commercial designations.

Element 2 describes a suite of potential transfer restrictions on commercial QS by an RQE: 1) an annual QS use cap by IPHC regulatory area, 2) a total sector QS use cap by regulatory area and, 3) a prohibition on the acquisition of class D QS. These three restrictions are not considered mutually exclusive. Similar transfer restrictions exist for the CQE program as well as the IFQ program as a whole.

Element 2, Option 1 would implement an RQE program with no transfer restrictions. However an RQE could still only use commercial halibut QS for the IPHC regulatory area for which is assigned. In other words, even under Option 1 with no transfer restrictions, 3A QS could only contribute to the 3A charter angler allocation.

Element 2, Option 2 would establish area-specific annual limits for the transfer of commercial halibut QS to an RQE. Therefore whether one RQE was formed with two-sub groups or two separate RQEs were formed these restrictions would still operate at an individual regulatory area level. This option would have the intended effect of slowing down the (opportunity to) transfer halibut QS from the commercial sector to the charter sector. In doing so, this provision would be intended to slow the effect of any negative impacts that may be felt by halibut stakeholders due to this additional transfer opportunity. A restriction of this kind could allow users in the commercial sector, the charter sector, and other halibut user groups the time to adapt business plans and personal strategies, mitigating a potential shock to the characteristic of the fishery, should an impact be felt. There are two mutually exclusive sub-options for the calculation of an annual transfer limit, i.e., an annual QS use cap for an RQE.

- ***Sub-option 1:*** 30% – 50% of the average amount of commercial QS transferred in each area during the previous five years (*e.g., the Area 2C transfer limit is based on 30% – 50% of the average amount of commercial QS transferred in Area 2C in the previous five years*).
- ***Sub-option 2:*** 1% - 5% of commercial QS in each area based on a five-year average

Halibut QS are a revocable privilege that allow the holder the opportunity to harvest a specific percentage of the TAC in the fishery. QS are measured in a fixed amount of "units". The annual commercial allocations, which are expressed in pounds, are referred to as IFQ. The size of each annual IFQ allocation is based on the amount of QS held in relation to the total QS pool for that regulatory area and the annual catch limit set for the regulatory area by the IPHC. The QS pool can vary from year to year based on revoked or newly re-created quota; these are rare occurrences. Each year, after the IPHC sets the halibut catch limits by regulatory area, NOAA RAM calculates a QS/ IFQ ratio; an exchange rate from QS units to IFQ pounds for each regulatory area. This exchange rate varies every year because both of these factors can vary (QS pool but especially area-specific catch limits). The ratios are different by area particularly because catch limits do not change proportionately across regulatory area each year (and also because QS pool, if it changes, may not change proportionately).

Both sub-options of **Element 2, Option 2** will be considered in terms of QS units, as this is the long-term privilege that restrictions would apply to. However, these restrictions would translate into the same percentage of IFQ. For example, a cap of two percent of the QS pool will equate to two percent of the annual IFQ regardless of what the catch limit was set at for that year. Table 4-30 through Table 4-33 translates the range of annual QS caps under consideration into pounds of IFQ for the past five years. As the sub-option dictates, the caps were determined by using a five-year average of QS units (there has been some fluctuation among these years for both regulatory Area 2C and 3A). Staff assumes this would not be a moving five-year average, but the units of QS would be established in regulations around five specific years. Fixing the five-year average should have little difference compared to a moving five-year average, because total QS units only change negligibly each year. For Table 4-30 and Table 4-32, the years represented are 2011 through 2015.

The method of calculating annual QS use caps under Option 2, Sub-option 1, would take into account the current rate of transfer in the commercial halibut IFQ fishery. QS transfer rates in the commercial halibut IFQ fishery can be seen in Table 4-21. This creates sub-options within a range of annual transfer limits, between approximately 45,000 lb and 76,000 lb of IFQ able to be transferred per year in Area 2C (using the 2014 QS/IFQ ratio) and between approximately 76,000 lb to 128,000 lb per year in Area 3A (using the 2014 QS/IFQ ratio).

Table 4-30 Range of annual QS use caps proposed for Area 2C based on a five-year average of QS units transferred in the commercial halibut IFQ fishery (Element 2, Option 2, Sub-option 1 for 2C)

		Cap at 30% of amount QS transferred		Cap at 40% of amount QS transferred		Cap at 50% of amount QS transferred	
End of year	Ratio of QS/ IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ
2010	13.53	816,080	60,316	1,088,106	80,422	1,360,133	100,527
2011	25.56		31,928		42,571		53,213
2012	22.70		35,951		47,934		59,918
2013	20.05		40,702		54,270		67,837
2014	17.94		45,489		60,653		75,816

Source: NMFS Alaska Region RAM Transfer Report, 2015
Table notes: QS unit transfer caps are based on the five-year average amount of QS units transferred (using data between the end of 2010 through end of 2014) in the commercial halibut IFQ sector: 2,720,266 QS units. QS units transferred by year in Area 2C are demonstrated in Table 4-21.

Table 4-31 Range of annual QS use caps for Area 3A based on a five-year average of QS units transferred in the commercial IFQ fishery (Element 2, Option 2, Sub-option 1 for 3A)

		Cap at 30% of amount QS transferred		Cap at 40% of amount QS transferred		Cap at 50% of amount QS transferred	
End of year	Ratio of QS/ IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ
2010	9.25	1,941,340	209,875	2,588,453	279,833	3,235,566	349,791
2011	12.88		150,725		200,967		251,209
2012	15.52		125,086		166,782		208,477
2013	16.76		115,832		154,442		193,053
2014	25.27		76,824		102,432		128,040

Source: NMFS Alaska Region RAM Transfer Report, 2015
Table notes: QS unit caps are based on the five-year average amount of QS units transferred (using data between the end of 2010 through end of 2014) in the commercial halibut IFQ sector: 6,471,132 QS units. QS units transferred by year in Area 3A are demonstrated in Table 4-21.

The method of calculating annual QS use caps under Option 2, Sub-option 2 is based on all halibut QS holdings. Halibut QS holdings in the commercial sector are illustrated in Table 4-17. This sub-option considers a wide range of caps; between approximately 37,000 lb and 184,000 lb of IFQ that would be able to be transferred per year in Area 2C (using the 2015 QS/IFQ ratio) and between approximately 78,000 to 390,000 lb per year in Area 3A (using the 2015 QS/IFQ ratio).

Table 4-32 Range of annual QS use caps for Area 2C based on a five-year average of QS units (Element 2, Option 2, Sub-option 2 for 2C)

		Cap at 1% of QS pool		Cap at 2% of QS pool		Cap at 3% of QS pool		Cap at 4% of QS pool		Cap at 5% of QS pool	
Year	Ratio of QS/ IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ
2011	25.56		23,292		46,583		69,875		93,167		116,458
2012	22.70		26,231		52,461		78,692		104,923		131,153
2013	20.05	595,308	29,691	1,190,615	59,382	1,785,923	89,073	2,381,231	118,765	2,976,538	148,456
2014	17.94		33,184		66,368		99,553		132,737		165,921
2015	16.17		36,823		73,646		110,469		147,292		184,115

Source: NMFS Alaska Region RAM data provided by AKFIN
Table notes: QS unit caps are based on the five year average (using data from 2011 through 2015) as demonstrated by Table 4-17.

Table 4-33 Range of annual QS transfer limits for Area 3A based on a five-year average of QS units (Element 2, Option 2, Sub-option 2, for 3A)

		Cap at 1% of QS pool		Cap at 2% of QS pool		Cap at 3% of QS pool		Cap at 4% of QS pool		Cap at 5% of QS pool	
Year	Ratio of QS/ IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ
2011	12.88		143,592		287,184		430,775		574,367		717,959
2012	15.52		119,173		238,346		357,519		476,692		595,865
2013	16.76	1,849,003	110,322	3,698,007	220,645	5,547,010	330,967	7,396,013	441,290	9,245,017	551,612
2014	25.27		73,180		146,361		219,541		292,721		365,902
2015	23.73		77,903		155,806		233,709		311,612		389,515

Source: NMFS Alaska Region RAM data provided by AKFIN
Table notes: QS unit caps are based on the five year average (using data from 2011 through 2015) as demonstrated by Table 4-17.

The halibut/ sablefish IFQ program does not include an annual limit on the acquisition of QS that can be transferred to an individual. As described in Section 4.5.1 that limit would be up to the total QS use caps that limit the amount of halibut QS that can be held by an individual overall. This will be highlighted further in the discussion of **Element 2, Option 3.**

The CQE program also does not include annual QS use caps; however, when originally implemented, it contained a cumulative community use cap that limited the communities in a region as a whole from acquiring and using more than three percent of the Area 2C, 3A, or 3B halibut QS in the first seven years of the program. The CQE program also has a total QS use cap that would be a limiting factor which is further discussed under **Element 2, Option 3.**

There are three mutually exclusive sub-options for the calculation of a total (cumulative) limit on the amount of QS held by a RQE as proposed in **Element 2, Option 3**. Again, these proposed restrictions would be defined by regulatory area.

- ***Sub-option 1:*** 10% - 40% of commercial QS based on five-year average
- ***Sub-option 2:*** 10% - 40% of each class of QS based on five-year average
- ***Sub-option 3*****:** Transfers to mirror current GAF limits by area: 10% (Area 2C) and 15% (Area 3A) of area QS holdings each year.

The first sub-option uses a straight-forward method, similar to **Option 2, Sub-option 2**, in which the cap is simply a percentage of the overall QS pool for that regulatory area. For **Option 2, Sub-option 2,** annual limits considered are between the range of one to five percent. In total, Option 3, Sub-option 1 considers ten to 40 percent. This represents a range of about 368,000 lb to 1,473,000 lb in Area 2C, and between

about 770,000 lb and 3,116,000 lb in Area 3A (using 2014 QS/IFQ ratio) that an RQE would be cap at in total QS transfer.

Table 4-34 A range of total QS transfer limits for Area 2C based on a five-year average of QS units (Element 2, Option 3, Sub-option 1, for Area 2C)

		Cap at 10% of QS pool		Cap at 15% of QS pool		Cap at 20% of QS pool		Cap at 30% of QS pool		Cap at 40% of QS pool	
Year	Ratio of QS/ IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ
2011	25.56		232,917		349,375		465,834		698,751		931,668
2012	22.70		262,307		393,460		524,613		786,920		1,049,227
2013	20.05	5,953,077	296,912	8,929,615	445,367	11,906,154	593,823	17,859,231	890,735	23,812,308	1,187,646
2014	17.94		331,842		497,763		663,684		995,526		1,327,367
2015	16.17		368,231		552,346		736,462		1,104,692		1,472,923

Source: NMFS Alaska Region RAM data provided by AKFIN
Table notes: QS unit caps are based on the five year average (using data from 2011 through 2015) as demonstrated by Table 4-17.

Table 4-35 A range of total QS transfer limits for Area 3A based on a five-year average of QS units from 2011 through 2015 (Element 2, Option 3, Sub-option 1, for Area 3A)

		Cap at 10% of QS pool		Cap at 15% of QS pool		Cap at 20% of QS pool		Cap at 30% of QS pool		Cap at 40% of QS pool	
Year	Ratio of QS/ IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ	QS unit cap	Pounds of IFQ
2011	12.88		1,435,918		2,153,877		2,871,837		4,307,755		5,743,673
2012	15.52		1,191,729		1,787,594		2,383,458		3,575,187		4,766,916
2013	16.76	18,490,033	1,103,224	27,735,050	1,654,836	36,980,066	2,206,448	55,470,099	3,309,672	73,960,132	4,412,896
2014	25.27		731,803		1,097,705		1,463,606		2,195,410		2,927,213
2015	23.73		779,030		1,168,544		1,558,059		2,337,089		3,116,118

Source: NMFS Alaska Region RAM data provided by AKFIN
Table notes: QS unit caps are based on the five year average (using data from 2011 through 2015) as demonstrated by Table 4-17.

Another component under consideration is to have a cap on each QS class.[25] This would limit the amount of QS that an RQE could hold by QS category, but would also limit the total. As described in more detail in Section 4.5.1, there are four categories of QS: 1) Category A shares are associated with catcher processor activity for a vessel of any size (they can also be used for just harvest activity on a vessel of any size), 2) Category B can be used to harvest halibut on a vessels greater than 60 ft LOA, 3) Category C can be used to harvest halibut on a vessel up to 60 ft LOA, and 4) Category D QS is used for harvesting halibut on small vessels, up to 35 ft LOA.[26]

This sub-option should be considered in the context of Option 3 which creates the decision point of whether to allow the acquisition of D shares by an RQE. If this prohibition is chosen as a preferred alternative and the Council as adopts QS caps by QS class, it should be understood that it will affect the total amount of QS that an RQE may have access to in an open market.

Additionally, the Council should be clear on any restrictions on the acquisition of A shares. Category A shares are traditionally associated with catcher processor activity (more specifically, freezer long liner activity) and are designated to be used on a vessel of any size. While the vessel does not have to conduct onboard processing to use A shares, they are typically much more expensive and difficult to acquire do to this elevated designation. Staff assumes that the Council has currently chosen not to consider a prohibition on acquisition of A shares given the present alternatives and options. However, it is understood that by its nature, this QS is more difficult to acquire.

[25] The Council would only consider selecting Sub-option 1 and Sub-option 2 together if Sub-option 1 was less than the amount of QS units when the QS units from all QS class categories were added together.
[26] See Section 4.5.1 for exceptions to these QS class categories.

Table 4-36 and Table 4-37 break out the QS unit cap level and corresponding pounds for both Area 2C and 3A. The Council is considering between a 10 and 40 percent range by QS class, but the class designations would not be applicable while the QS was being used by the charter sector. The RQE would likely seek to acquire whatever class of QS was available, at a price they could afford. For both Area 2C and Area 3A the majority of QS is designated as "C class". Therefore, even without the prohibition on purchasing D class QS, an RQE would likely seek to acquire a combination of QS of different classes. The end of Section 4.5.3.6 states that QS price does not vary significantly in these areas between C and D class QS, although there may be a larger differentiation in the price of B class QS.

Using the 40 percent cap on QS by class (and the 2015 QS/IFQ ratio) an RQE in Area 2C would have a maximum of 1,472,909 lb to transfer if they maximum their purchase by each class. Excluding A and D shares the cap for 2C drops to 1,220,654 lb. Under a 10 percent QS cap by QS class (and the 2015 QS/IFQ ratio) an RQE in Area 2C would have a maximum of 368,228 lb to transfer. Without A and D shares that cap drops down to 305,164 lb.

Table 4-36 A range of total QS transfer limits for Area 2C based on a five-year average of QS units by QS class (Element 2, Option 3, Sub-option 2, for Area 2C)

For A class QS in Area 2C							
Year	Ratio of QS/ IFQ	Total pounds of A class IFQ	Total A class QS units	10% QS unit cap* of A class	10% cap in pounds of A class IFQ	40% QS unit cap* of A class	40% Cap in pounds of A class IFQ
2011	25.56	48,873	1,249,135	124,921	4,888	499,685	19,550
2012	22.70	55,041	1,249,161		5,504		22,017
2013	20.05	62,316	1,249,436		6,230		24,922
2014	17.94	69,630	1,249,127		6,963		27,854
2015	16.17	77,270	1,249,201		7,727		30,908
For B class QS in Area 2C							
Year	Ratio of QS/ IFQ	Total pounds of B class IFQ	Total B class QS units	10% QS unit cap* of B class	10% cap in pounds of B class IFQ	40% QS unit cap* of B class	40% Cap in pounds of B class IFQ
2011	25.56	103,891	2,655,329	265,536	10,389	1,062,143	41,557
2012	22.70	117,000	2,655,327		11,700		46,801
2013	20.05	132,454	2,655,703		13,244		52,975
2014	17.94	148,010	2,655,225		14,802		59,207
2015	16.17	164,239	2,655,203		16,425		65,699
For C class QS in Area 2C							
Year	Ratio of QS/ IFQ	Total pounds of C class IFQ	Total C class QS units	10% QS unit cap* of C class	10% cap in pounds of C class IFQ	40% QS unit cap* of C class	40% Cap in pounds of C class IFQ
2011	25.56	1,826,287	46,677,704	4,667,955	182,636	18,671,819	730,544
2012	22.70	2,056,727	46,677,625		205,681		822,725
2013	20.05	2,328,549	46,687,407		232,816		931,263
2014	17.94	2,601,955	46,677,772		260,205		1,040,822
2015	16.17	2,887,245	46,677,224		288,739		1,154,955
For D class QS in Area 2C							
Year	Ratio of QS/ IFQ	Total pounds of D class IFQ	Total D class QS units	10% QS unit cap* of D class	10% cap in pounds of D class IFQ	40% QS unit cap* of D class	40% Cap in pounds of D class IFQ
2011	25.56	350,958	8,970,065	894,614	35,002	3,578,456	140,009
2012	22.70	394,568	8,954,760		39,419		157,675
2013	20.05	446,694	8,956,215		44,619		178,477
2014	17.94	499,138	8,954,286		49,868		199,474
2015	16.17	550,228	8,895,371		55,337		221,347

Source: NMFS Alaska Region RAM data provided by AKFIN
Table notes: QS unit caps are based on the five year average (using data from 2011 through 2015).

Similarly for Area 3A, with a 40 percent cap on QS by class (and the 2015 QS/IFQ ratio) an RQE in Area 3A would have a maximum of 3,115,847 lb to transfer if they maximum their purchase for each class. Excluding A and D shares the cap for 3A drops to 2,821,865 lb. Under a 10 percent QS cap by QS class (and the 2015 QS/IFQ ratio) an RQE in Area 3A would have a maximum of 778,962 lb to transfer. Without A and D shares that cap drops down to 705,466 lb.

Table 4-37 A range of total QS transfer limits for Area 3A based on a five-year average of QS units by QS class (Element 2, Option 3, Sub-option 2, for Area 3A)

For A class QS in Area 3A							
Year	Ratio of QS/ IFQ	Total pounds of A class IFQ	Total A class QS units	10% QS unit cap* of A class	10% cap in pounds of A class IFQ	40% QS unit cap* of A class	40% Cap in pounds of A class IFQ
2011	12.88	370,734	4,773,868	477,373	37,072	1,909,492	148,289
2012	15.52	307,688	4,773,872		30,768		123,072
2013	16.76	284,794	4,773,147		28,483		113,932
2014	25.27	188,942	4,773,884		18,894		75,574
2015	23.73	201,135	4,773,879		20,113		80,451
For B class QS in Area 3A							
Year	Ratio of QS/ IFQ	Total pounds of B class IFQ	Total B class QS units	10% QS unit cap* of B class	10% cap in pounds of B class IFQ	40% QS unit cap* of B class	40% Cap in pounds of B class IFQ
2011	12.88	5,324,988	68,568,805	6,856,669	532,482	27,426,675	2,129,929
2012	15.52	4,419,438	68,568,906		441,930		1,767,718
2013	16.76	4,090,562	68,557,819		409,109		1,636,436
2014	25.27	2,713,833	68,568,790		271,375		1,085,500
2015	23.73	2,888,982	68,569,121		288,888		1,155,552
For C class QS in Area 3A							
Year	Ratio of QS/ IFQ	Total pounds of C class IFQ	Total C class QS units	10% QS unit cap* of C class	10% cap in pounds of C class IFQ	40% QS unit cap* of C class	40% Cap in pounds of C class IFQ
2011	12.88	7,678,802	98,878,398	9,887,361	767,843	39,549,444	3,071,372
2012	15.52	6,372,833	98,876,416		637,265		2,549,061
2013	16.76	5,898,588	98,860,335		589,938		2,359,752
2014	25.27	3,913,361	98,876,544		391,324		1,565,298
2015	23.73	4,165,899	98,876,363		416,578		1,666,313
For D class QS in Area 3A							
Year	Ratio of QS/ IFQ	Total pounds of D class IFQ	Total D class QS units	10% QS unit cap* of D class	10% cap in pounds of D class IFQ	40% QS unit cap* of D class	40% Cap in pounds of D class IFQ
2011	12.88	985,477	12,689,790	1,267,026	98,396	5,068,104	393,584
2012	15.52	816,301	12,665,155		81,663		326,652
2013	16.76	755,492	12,662,046		75,598		302,393
2014	25.27	501,221	12,664,050		50,147		200,587
2015	23.73	533,568	12,664,076		53,383		213,531

Source: NMFS Alaska Region RAM data provided by AKFIN
Table notes: QS unit caps are based on the five year average (using data from 2011 through 2015).

No new table is needed to explain the QS transfer limits in consideration under **Element 2, Option 3, Sub-option 3**. This sub-option mirrors the total QS caps in the currently established GAF limits of 10 percent of the Area 2C QS pool and 15 percent of the Area 3A QS pool applied to the respective areas. Sub-option 3 does not denote by QS category therefore this sub-option is depicted most clearly in the current range provided under Sub-option 1. To understand what this would mean in pounds, Table 4-36 and Table 4-37 include these suggested limits in their range.

For Area 2C, this would constitute a limit of 5,953,077 QS units or 368,231 lb using the 2015 QS/IFQ ratio. For Area 3A, this would constitute a limit of 27,735,050 QS units or 1,168,544 lb using the 2015 QS/IFQ ratio.

Section 4.5.1 explains the QS use caps established for the IFQ program. Individuals are not permitted to hold Area 2C QS in excess of one percent of the Area 2C QS poll and individuals are not permitted to hold Area 2C, 3A, and 3B that totaled more than 0.5 percent of the combined Area 2C, 3A, and 3B QS pool.[27] Individuals are not permitted to hold Area 4 QS in excess of 1.5 percent of the total QS pool.
In the IFQ program, there are no separate cap distinctions between QS class (i.e., A, B, C, and D categories).

The CQE program does not have cap distinctions by QS class, with the exception of the acquisition of D shares in Area 3A. The cap is 1,233,740 QS units. This amount of QS units represents about ten percent of the 3A D class QS. The CQE program has slightly different use caps which are more applicable to that program. It includes use caps restricting the amount of QS that could be transferred to an individual community, as well as use caps on the cumulative holdings of all eligible communities in each regulatory area. The cumulative cap is less than the sum of all of the individual community caps. QS use caps prohibit the individual CQE from holding more than one percent of Area 2C and 0.5 percent of the combined Area 2C, 3A, and 3B total halibut QS pool (mirroring the IFQ program.) Area 4B has a QS use cap of 1,392,716 QS units. Collectively, CQEs are restricted to holding no more than 21 percent total by regulatory area (see Section 4.5.2).

Option 4 of **Element 2** considers a prohibition on D class commercial QS by an RQE. This option is considered to reserve the D class halibut QS for new entrants to the commercial fishery. Ultimately this restriction was relaxed for CQEs in some areas, since it was determined that participants leasing through a CQE are most likely to small boat fisherman and could very easily be new entrants to the fishery, thus still promoting the intention of the D class QS. Allowing the transfer of D class QS might be working counter to this goal in the IFQ program.

Table 4-36 and Table 4-37 illustrate the extent of the QS pool that D shares represent. Including A shares, in Area 2C, D shares represent 15 percent of the total QS pool. In Area 3A, D shares represent about seven percent of the total QS pool.

4.8.1.3 Leasing of QS from the RQE to Commercial Participants

An important consideration for the proposed program is whether an RQE that was successfully able to acquire halibut QS would be permitted to temporarily transfer (i.e., lease) it back to the commercial sector. If so, future analysis would need to bring to light the implementation issues that could exist. If not, the Council would need to consider what would become of any surplus QS once the least strict management measures for each regulatory area were met.

The CATCH proposal advocates for a leasing option of QS. Leasing could allow flexibility in adjusting to short term fluctuations in halibut abundance or changes in angler demand. It could also allow for a source of revenue to pay loans or to leverage more QS. This is a point in which consequences may be viewed from very perspectives. The opportunity to lease QS could create stability in the charter sector (highlighted in the purpose in need statement of this action). However, with a large amount of leasing, this stability could be at the expense of instability in the commercial sector. This would particularly be the

[27] There is an exception to these QS use caps if the individual was initially allocated greater than the caps based on their history in the fishery.

case if there were no QS use caps for an RQE, and charter sector could continue to buy and then lease to leverage funds to continue to buy.

In addition, one of the policy objectives IFQ program highlighted the desire to assure that those directly involved in the fishery would benefit from the IFQ program by assuring that the fishery was dominated by an owner-operated fleet. To the extent that leasing occurred through the RQE, it may be more difficult for those in the commercial IFQ fishery to realize those benefits.

If leasing was not permitted, the CATCH proposal also discusses a rollover surplus allocation (similar to the underage-overage provision in the IFQ fishery) and a pro-rata increase in QS holder allowance. If surplus was left unharvested it means optimal yield would not be achieved. This level of removal would be represented in the IPHC stock assessment report for the following year.

4.8.1.4 Additional IFQ and CQE Program Elements and Restrictions

The following sub-sections go into more detail on elements of the IFQ and CQE programs that may be appropriate to consider for an RQE. Specifically, these sub-sections include discussions of block restrictions, the overage-underage provision, resale of QS, cost recovery, and program review.

4.8.1.4.1 Overage-underage provision

Section 4.5.1 describes the overage-underage program that exists in in the commercial halibut fishing for IFQ participants. The Council has not created alternatives or options around this potential aspect of the program. However, the CATCH proposal recommended that this flexibility also apply in the case of an RQE (Yamada & Flumerflet 2014). In Feb 2014, Gregg Williams (former staff) of the IPHC weighed in on the challenges of applying the overage-underage provision that exists in the commercial halibut IFQ fishery to the charter sector as recommended in the CATCH proposal. He emphasized the difference in pounds between a ten percent overage of an individual IFQ holder and a whole halibut charter sector for one regulatory area.

4.8.1.4.2 Cost Recovery

The CATCH report assumes that the RQE would not be required to pay the IFQ program cost recovery fee that commercial QS holders are required to pay (Yamada & Flumerflet 2014). Each year, IFQ participants pay a fee that is 3 percent or less of the ex-vessel value of the halibut harvested to recover IFQ program management, monitoring, and enforcement costs. In the GAF program, the commercial QS holder is responsible for paying cost recovery fees on the IFQ that he or she leases to a charter operator as GAF. NMFS expects that there would be some recoverable costs associated with managing IFQ accounts for an RQE, and therefore cost recovery would be required. For example, NMFS likely would need to develop a real-time reporting system to monitor the charter sector's harvest of IFQ derived from QS held by the RQE. The costs of developing such a reporting system would be recuperated through cost recovery fees.

4.8.1.4.3 Program Review

Both the IFQ program and the CQE program had program reviews built into implementation. A program review is required for the IFQ program based on Section 303A(i)(1)(B) of MSA as its nature as a limited access privilege program (LAPP). While the CQE program was an amendment to the IFQ program, the program was implemented with its own program review requirement. The final Council motion for the CQE requested a program review after five years.

The purpose of the CQE program review five years after implementation was to ensure that any unanticipated adverse impacts of allowing communities to purchase QS were identified for Council consideration and to determine whether the program was working as intended for rural communities. Because there was a considerable amount of uncertainty regarding the amount of QS that communities would purchase under the amendment, and how quickly, the review was warranted.

Given the similarity of uncertainties around the nature of an RQE, the Council might consider a similar time period for a review to ensure the program is working as intended and does not have unanticipated adverse impacts.

4.8.1.5 Funding Considered by Charter Groups

As previously mentioned, Alternative 2 and the current analysis does not propose or analyze funding sources for a potential RQE to use in order to permanently transfer quota for use in the charter sector. This scoping decision was a deliberate choice by the Council in order to focus analytical effort toward how an RQE may be structured, and impacts under the assumption that an RQE would have the means to acquire QS. Similar to the CQE, the Council does not have jurisdiction over the potential avenues considered for funding sources by charter stakeholders. Moreover, the source of funding and practical ability to acquire quota will likely depend on the type of management provisions set up by the Council and NMFS. In light of this inter-connected relationship between program structure and funding, the Council has requested this analytical scope, acknowledging that source and ability of an RQE to generate funding are important components to monitor throughout the analytical process. If the draft analysis moves forward and regulatory issues are identified pertaining to the type of funding that may be employed, the Council might identify issues to engage in the analysis.

Therefore, while the Council has not established alternatives or options specific to a funding mechanism, this section briefly describes the top two funding options analyzed in the CATCH proposal (Yamada & Flumerflet 2014). Overall, the CATCH proposal states that an RQE would seek out a variety of funding sources. Among these sources would include grants, loans, and a source that could provide a long-term revenue stream.

The CATCH proposals states the non-profit entity should give priority to creating a new type of recreational fishing stamp through the state, similar to the state of Alaska run king salmon stamp. This stamp would be specific for those intending to target halibut on a guided trip, and would be paid for by this specific sub-group of recreational anglers. The proposal notes that this plan would not require Congressional Action but would likely require legislative action (Davis, Sylvia, & Cusack 2013; Yamada & Flumerflet 2014).

The second choice for a long-term funding mechanism was stated to be a charter halibut tax. This plan may be a might more complex to establish because the non-profit would need to be established in such a way that it could self-tax, i.e. it would need to be formed as a Regional Non-profit Association. This method would also require legislative action in order for these funds to be collected and paid to the Alaska Department of Revenue. The proposal also discusses what this tax would be based off of. It would likely be a proportion of gross revenue or number of fish harvested rather than just a lump sum transfer in order to not disadvantage smaller operations. For more information on financing option for an non-profit charter entity see Yamada & Flumerflet (2014) and Davis, Sylvia, & Cusack (2013).

4.8.1.6 Blueprint for Assessment Economic and Social Effects

The following sub-sections go on to discuss expected social and economic impacts from **Alternative 2** (development of an RQE) and **Element 2 of Alternative 2** (transfer restrictions for an RQE). The impacts

of **Elements 1 and 3** are not discussed with respect to the following sub-sections as they represent logistical management decisions and are not likely to affect the following user groups or areas of consideration. The following sections include expected effect on the halibut charter fishery, including guided anglers and charter operators. It also includes expected effect on the commercial halibut fishery in Area 2C and 3A, including QS holders, commercial skippers and crew, CQEs, and the commercial QS market. This section also considers potential impacts on non-guided halibut anglers and on subsistence fishing and communities. Finally this section considers potential changes to vessel and crew safety based on the action alternative.

4.8.2 Economic and Social Effects of the Proposed Program

One of the primary considerations about the proposed Alternative 2, centers around the concept of economic efficiency. Economic efficiency is promoted in National Standard 1 and National Standard 5 as one of the goals that the Council balances amongst a suite of others. A market is considered "economically efficient" if resources are allocated to the place in which they generate the greatest economic value. Economic values include more than just accounting costs; they can represent both use value (such as the productive capacity of QS) and non-use values (for example, the benefits someone in Minnesota may derive from knowing there is a healthy halibut charter fishing sector in Alaska), as well as opportunity costs (the value of the next highest valued alternative use of a resource). In theory, the greatest economic value represents the greatest net economic benefit.

For purposes of this initial review analysis, economic efficiency is discuss qualitatively, at three different levels of scope: 1) at an individual transaction level, between a commercial QS holder and an RQE; 2) at a sector level, between the commercial halibut sector and the halibut charter sector; and 3) at a National level, when more social and non-market considerations are included in a broader perspective. Discussing economic values at these different levels can highlight some of the distributional effects that may not be revealed when just considering an action's net benefits to the Nation. The following sections consider economic values and effects at this first and second level of scope. Net benefits to the Nation are further discussed in Section 4.10.

4.8.2.1 Effects on the Halibut Charter Fishery

An analysis of the effects on the charter fishery begins by discussing the first scope of economic efficiency. One of the advantages of the pursuit of economic efficiency at the individual transaction level, is that it does not require the Council or any other governmental agency determine where the greatest net economic benefit lies, but would allow the players to determine this equimarginal point by identifying their own opportunities to gain in the market place. This "natural calculation" exists every day in an open market place. When a willing seller and a willing buyer come to terms on a price for the exchange or goods or services, the economic value of that good is represented in the willingness-to-pay of the buyer. Some social values may be represented in that transaction price. For example an individual in either sector may be willing to pay more than the productive capacity of that QS because they understand it to have a positive effect on the community they live in. Another example could be the increased price that a commercial halibut QS holder is willing to accept, due to the social stigma attached to doing business with participants in another halibut sector. These values could be represented in the transaction price. Economists have techniques to estimate where the greatest economic value could manifest.[28]

[28] Some examples include the travel cost model, which evaluates marginal willingness-to-pay (WTP) based on how much it cost a person in order to travel and participate in an activity (including the opportunity cost of their time), hedonic models which evaluates marginal WTP for different attributes of a good, based on the different prices paid in an aggregated number of market transaction for that good, and choice experiments (CE) in which a person indicates their preference for one good over another (or series of options), given different price levels. Aggregated among other individuals' preferences, the CE is able to estimate a marginal WTP for each attribute of a good. For the commercial

Allowing for this willing seller, willing buyer opportunity is something that the Council has considered to be a "long-term solution" to the tension between commercial and charter halibut allocation discussion since before the CSP was implemented (NPFMC 2007). It was noted in the analysis for the CSP, during the consideration of sector allocations, that in order to maintain an optimal allocation, managers would need to adjust that allocation whenever economic or biological conditions changed (NPFMC 2013; Criddle 2008). While it is unreasonable to assume that the optimal net economic benefits could be sustained over time by a management agency altering the allocation, the ability to transfer QS freely between sectors could allow the market to contribute to a determination of an economically efficient point for optimal allocation (from the perspective of this first scope of economic efficiency).

In a world of perfect information, the option of compensated reallocation would be expected to increase economic efficiency between the commercial QS holder and the charter halibut sector. Overall, between these two halibut user groups, entities would be expected to act in their own best interest and net benefits would be maximized. With a mechanism to authorize transfer, and with limited transaction costs, economic efficiency would be expected to promote reallocation to the sector (or individual) with the greater marginal willingness-to-pay,[29] until the marginal willingness-to-pay was equal across sectors (or individuals) and the net economic benefits are maximized for those entities. Some of the economic literature has pointed out the gains in economic efficiency that may be realized given more open and perpetual transferability of fishing privileges (Call & Lew 2015; Davis, Sylvia & Cusak 2013; Kroetz, Sanchirico, & Lew 2015).

If it is discovered that the funds are not available to purchase QS, or that while some funds are available, the amount of money it would take to make a meaningful positive impact on the charter sector exceeds additional compensation they would receive from the existing angler pool or new angler demand, the sector still has that opportunity to purchase QS should willingness-to-pay change in future conditions. The benefits of opportunity should not be overlooked.

Economic efficiency at the individual level could potentially be gained through a compensated reallocation using common pool or by from compensation by individual operators, as discussed in Section 4.8.1.1. So far in the developmental process, the idea of seeking compensated reallocation for a common pool of anglers appears to be the most supported method among the charter sector.[30] However, opposition from members of the charter sector could be a large hurdle in implementation of such a program. Under Alternative 2, all guided anglers would have equal access to the sport halibut fishery the same management measures established for that area. The current proposal does not provide for a situation in which some guided anglers could take advantage of the increase in the charter allocation and the correspondingly less strict management measures, while other in the fishery were restricted by the annual charter allocation amount without access to pounds of IFQ acquired under a guided angler pool of QS. If such a situation were permitted, it would create serious implementation, accounting, and enforcement challenges in the halibut charter fishery.

Thus, while the RQE would be seeking to maximize net benefits for the sector, there may be some specific individuals related to the charter sector that are not benefited. Even if in aggregate, charter anglers are willing to pay the amount it requires to purchase QS and relax annual management measures

sector, WTP could be estimated more easily using price per pound of QS and understanding that there may be some additional transactions costs associated with selling QS across sectors. While estimating equilibrium point is outside of the current analytical scope, it could be an area for future discussion.

[29] Marginal willingness-to-pay is the additional amount consumers are willing to pay for one more unit of a particular good.

[30] A study is currently underway by the Alaska Fisheries Science Center on attitudes towards an RQE program (Dan Lew, 11/10/2015, personal communications) and is expected to have preliminary results by January 2016.

(in a scenario where costs are passed on to the angler), there will most likely be some anglers that will not meet that threshold. Even if in aggregate, charter operators benefit from increased angler demand or increased prices from relaxed management measures, there will most likely some charter operators whose clients are too sensitive to changes in prices, or who operate too close to the margin, to remain in business. These represent distributional effects. In terms of strict economic efficiency, the cost associated with these losses would be balanced by the greater amount of benefits realized through the transfers.

4.8.2.1.1 Halibut Charter Anglers

To the extent that an RQE was able to obtain funding outlets and identify QS for transfer, Alternative 2 would be expected to have an effect on charter halibut anglers. Regardless of the funding source there is a high likelihood that some or all of the additional cost will be passed on to the charter anglers. The magnitude of where the increased cost would be absorbed depends on the funding mechanism (i.e., a charter halibut stamp would be a direct costs to the angler, but a grant may not) and how much the charter operation is financially able and willing to absorb.

The economic effects to the charter anglers under an RQE program would be an increased price associated with charter halibut fishing. If angler demand (as well as effort and harvest) is assumed to be held constant, this increased price would be in exchange for a relaxation of management measures. For instance, it could provide anglers the ability to retain more halibut on a trip (relaxing bag limit), during a year (relaxation of annual limit), in more varied sizes (relaxation of reverse slot limit), and/ or on all the days of the week (no day or the week closure).

If angler demand changes, as is very likely given the many factors that impact angler demand, the relationship can become much more complex. Including a multitude of exogenous factors, angler demand may respond to price increases and it may also respond to any relaxation of annual management measures.[31] For example, assume halibut abundance remains at status quo, and halibut charter prices increase (in some form, depending on the funding mechanism) to compensate a QS purchase for the RQE. Particularly under the same management regime, this may prompt a decrease in angler demand. The increase in price would have to be enough to compensate charter operators for this loss in clients,[32] or charter operators would have to trust in the future benefits associated with relaxation of annual management measures.

If the price increase occurred at the same time as a relaxation of annual management measures, (if an RQE was able to initiate QS purchase using loans, but needed a long-term revenue stream in order to retire loans) it is difficult to predict direction of effects for charter anglers and operators. Some anglers may be responding to the increase in price by exiting the market, other anglers may be enticed into the market by the increased opportunity for halibut fishing.

Angler demand in for charter halibut fishing in Alaska has been the subject of a number of economic analyses (e.g. Criddle, Hermann, Lee & Hamel 2003; Lew & Larson 2015; Lew & Larson 2012). In one example, a 2015 stated preference study evaluated the impact of size and bag limits on the willingness-to-pay of charter anglers in Alaska provided further explanation for this low harvest season in Area 2C. Based on responses to a series of choice questions, the study determined that the opportunity to catch at least one large fish (i.e., a "trophy fish") is very valuable to non-resident charter anglers. Without that possibility, the willingness-to-pay for a halibut charter trip by an average non-resident angler was indistinguishable from zero. This result is particularly relevant for Area 2C, in which a large proportion of the demand is made up of non-resident anglers (Lew & Larson 2015).

[31] If there is significant consumer surplus associated with halibut charter fishing and charter halibut anglers have a very high WTP, there may a very slow response to either of these factors.
[32] This would be an increase in price in addition to the costs set aside for purchasing halibut QS.

While holding other charter trip characteristics constant (e.g., location of trip, number of fishing days, salmon harvested), Lew and Larson's stated preference study observed no statistical significance in non-resident anglers' willingness-to-pay estimates for stricter reverse slot limits in Area 2C (2015). They tested varying the lower limit in Southeast Alaska on a one fish bag limit between 35, 40, and 43 pounds, with an upper limit of 130 pounds.[33]

An RQE would strive to plan long-term for the charter sector. Therefore if there was a short-term decrease in angler demand, representing less overall effort and requiring less QS in order to relax halibut management measures, an RQE would not necessarily be expected to adjust funding needs to meet this new demand. If it did, less QS could mean lower prices for anglers, and in a cyclical fashion, the angler demand may grow again. An RQE would need to be informed of and monitoring the relationship between changes in management measures, changes in charter fishing trip cost associated with the chosen funding mechanism, and changes in angler demand.

Additionally an RQE would need to be sensitive to the fact that these relationships could be different for different charter operators. If an operation depends heavily on cruise ship passengers, for example, and these passengers are not as interested in trying to stock their freezer as they are interested in some type of fishing or small boat excursion, they may be more sensitive to price given the available substitute options.

4.8.2.1.2 Halibut Charter Operators

Charter operators, including deckhands or any other individuals involved in the business of charter fishing, may or may not be economically affected by the development of an RQE. If the number of charter anglers participating in the fishing was held constant, and the funding mechanism chosen was a halibut stamp with a fee that went directly to an RQE for the acquisition of QS, there might be no change in compensation to the charter operators. However, changes in angler demand based on either changes in charter prices or changes in annual management measures are likely. The effect on charter operators depends on the specific scenario. If there was significant willingness-to-pay among anglers for relaxed management measures, and an RQE was able to attain QS through that fee, this may even increase the number of individual seeking halibut charter fishing opportunities. This additional demand could benefit charter operators. Also, if the willingness-to-pay was significantly high enough, anglers may be willing to pay above the straight fee that would be required to purchase QS from the commercial sector. This additional compensation could also benefit the charter operators. If the number of anglers leaving the market due to increased price was equal to the number of anglers entering the market due to increased halibut fishing opportunity, there may be no change in benefits to charter operators.

Presumably, an RQE would be striving to benefit the charter sector as a whole in that regulatory area, and this entity would be considering QS acquisitions based on an understanding of angler demand, angler willingness-to-pay for relaxed management measures, and its distributional impact on the charter operators.

4.8.2.1.3 Charter Sector Transfer Goals

According to the purpose and need statement, the current provisions allowing individual temporary transfers through the GAF program may not promote long-term planning and stability in regulations for all guided anglers. Understanding the amount of desired QS helps the Council understand the impacts of the proposed RQE and whether the transfer restrictions are appropriate.

[33] They noted the caveat that since 2012, the upper reverse slot limit has consistently been greater than 130 pounds (approximately 63 inches).

Through the CATCH proposal, representatives of the charter sector have laid out halibut QS goals for each area to help achieve long term sector stability. According to the CATCH proposal, these goals include the following stable desired management regimes (Yamada & Flumerflet 2014):

- Area 2C objective: maintain daily bag limits of one halibut of any size in times of low abundance and a two halibut of any size in times of high abundance.

- Area 3A objective: maintain a daily bag limit of two halibut of any size.

These two management goals represent the least strict management measures that would be available currently. In times of high abundance, they represent the halibut regulations by non-guided anglers for each sector (i.e. two fish of any size). The CATCH proposal estimated halibut QS transfer goals for Area 2C and Area 3A by comparing recent charter allocations (or GHL) to the sector's total yield when they were able to operate under their desired management regimes.[34]

Another way to think about the amount of QS that may be transferred is to consider estimates produced annually in the analysis of management measure options (for example, Meyer & Powers 2014). This analysis projects charter removals based on the suite of management measures that the stakeholders of the charter sector request to have analyzed. The objective is to find a measure (or combination of measures) that will keep the sector at or below the total charter catch limit for that area, while also minimizing the economic impact to charter operators and anglers in that regulatory area. This analysis produces tables of different regulatory combinations to provide flexibility in the stakeholders' recommendations to the Council (refer to Section 4.4.1.2.2 for more background on this process and a list of measures previously considered).

Using the harvest forecast for 2015 from Meyer & Powers (2014), the predicted total charter removals in 2015 under 1-fish bag limit, with no size limit is 1.769 Mlb (Table 4-31). Average weight and average release mortality are based off of 2010 2C charter halibut catch, as this was the most recent year without a size limit. The projected charter removals (harvest + wastage) are 918,075 lb greater than the adopted 2C charter allocation for 2015 (0.851 Mlb). It represents 28,600,105 QS units, which is 49 percent of the 2C commercial halibut QS pool (excluding A shares). This amount of QS could not be achieved under the range of any of the total QS caps included in the options at this point, with or without the permission of D share transfers (refer to Section 4.8.1.2).

Table 4-38 Predicted 2015 charter removals under 1-fish bag limit, no size limit

Subarea	2015 harvest forecast (no. hal)	2010 Average Wt (lb)	2015 Yield Without Size Limit	Rel Mort	2015 Projected Removals
Ketchikan	7,052	22.11	155,894	1,337	157,231
Prince of Wales Island	17,996	14.81	266,549	2,071	268,620
Petersburg/ Wrangell	1,943	34.65	67,312	2,521	69,833
Sitka	23,896	25.33	605,169	5,160	610,328
Juneau	7,896	16.21	127,968	1,997	129,966
Glacier Bay (2C)	10,855	47.63	517,025	16,072	533,097
2C total	69,637	24.99	1,739,917	29,159	1,769,075

Source: ADF&G logbooks, sourced through ADF&G

In addition to exceeding all proposed total transfer restrictions, the previous Sections 4.8.2.1.1 and 4.8.2.1.2 highlighted that, depending on a number of market factors, an RQE may not identify the

[34] For additional information on the CATCH proposal's discussion and estimates of transfer needs for Area 3A, see Yamada & Flumerflet page 68, Table 15 (2014).

CATCH goals as the most economically efficient place to operate (i.e. 1 fish of any size in Area 2C, 2 fish of any size in Area 3A). If it turns out there is significant consumer surplus and charter anglers are ready and willing to pay more for increased halibut fishing opportunities, then the least restrictive management measures may be the most economically efficient scenario for the charter sector. However, it may be that purchasing a smaller amount of QS from individuals in the commercial sector, relaxing certain management measures, but not others, could provide the greatest net benefit to the charter sector. Again, it is assumed that the RQE and representatives of charter fishing businesses in each area would have the best understanding of what the optimal amount of QS transfer would be and what the additional QS would be used for (i.e. which management measures are the most burdensome in a profit maximizing market).

Therefore it may be worthwhile to consider what it would take to make some incremental changes in management measures. For example, ADF&G projects charter removals for 2015 under a matrix of different upper and lower limits in a reverse slot limit (Meyer & Powers 2014). The management measures set in 2015 for Area 2C was a reserve slot limit with a lower limit of 42 inches and an upper limit of 80 inches (U42O80).[35] Moving back to a U45O68 reverse slot limit, as was the regulatory regime during 2012 and 2013, would have required an additional 194,000 lb using the projections for 2015 (Table 4-40). Using the 2015 QS/IFQ ratio, this represents 3,136,340 QS units and 5.39 percent of the total QS units (excluding A shares).

Using the analysis of management measures for the year 2015 (Meyer & Powers 2014), several examples are highlighted for Area 3A. The analysis projects total removals for Area 3A under a two-fish bag limit with no size limit, one trip per vessel per day, and no harvest by captains and crew for 2015. This is very close to the goal laid out by the CATCH proposal with the addition of the "one trip per day" restriction. According to Table 4-39 to choose these management measures would mean the 3A charter catch limit would need to be at or greater than 2.424 Mlbs. This value is 534,000 lb over the Area 3A charter catch limit for 2015. Transferring that level of pounds would require 12,674,330 QS units or seven percent of the total QS units (excluding A shares). Acquisition of this amount of QS would be technically achievable under all of the proposed total transfer caps with or without the permission of D share transfers.

Annual transfer limits on QS, however, could prevent a lump sum transfer of this magnitude in one year. At the most restrictive level (Element 2, Option 2, Sub-option 2: an annual cap at 1 percent of the QS pool for 3A), assuming the RQE could identify available QS each year, it would take seven years to reach this goal.

[35] Based on Table 4-40 and the blue line FCEY of 0.79 Mlb, the Charter Halibut Implementation Committee had recommended U40O80, but the lower limit of this reverse slot limit was dropped when the final catch limit for Area 2C was set at 0.851 Mlb.

Table 4-39 Projected effort, harvest per unit effort (HPUE), yield, release mortality, and total removals for Area 3A for 2015 under a two-fish bag limit with no size limit, one trip per vessel per day, and no harvest by captain and crew

Subarea	Average Weight (lb)	Effort (angler-days)	HPUE	Harvest	Yield (M lb)	RelMort (M lb)	Total Removals (M lb)
Central Cook Inlet	12.6025	20,110	1.9051	38,311	0.483	0.01	0.492
Eastern Prince William Sound	20.5944	3,747	1.4829	5,556	0.114	0.002	0.117
Glacier Bay (3A)	42.2542	1,652	1.1317	1,869	0.079	0.002	0.081
Yakutat	27.9579	3,951	1.268	5,010	0.14	0.003	0.143
Lower Cook Inlet	10.7314	36,303	1.8732	68,003	0.73	0.015	0.744
North Gulf Coast	12.2651	30,570	1.5494	47,365	0.581	0.012	0.593
Kodiak	11.3827	10,550	1.3384	14,120	0.161	0.003	0.164
Western Prince William Sound	16.3487	3,483	1.5557	5,418	0.089	0.002	0.09
Area 3A	12.7997	110,365	1.6822	185,653	2.376	0.048	2.424

Source: Table 13 from Meyer and Powers (2014)

For other incremental examples in Area 3A, the analysis demonstrates the changes in the size limit on the second fish and changing or removing the annual harvest limit (Table 4-41). In 2015, just removing the annual limit would be expected to require an additional 80,000 lb. Increasing the size limit on the second fish from 29 inches to 32 inches would have required 154,000 lb. These two changes in management measures represent 1,898,776 and 3,655,144 QS units respectively; about 1.07 and 2.03 percent of the QS pool (excluding A shares).

Table 4-40 Area 2C projected charter removals (including release mortality) for 2015 under reverse slot limits ranging from U35O50 to U50O80 and annual limits ranging from zero to five fish. Boxed value represents the reverse slot limit adopted for Area 2C in 2015, and shaded value represents the example using management measures in place for 2012/ 2013.

No annual limit, harvest = 69,637 halibut

Lower Limit (in)	Upper length limit (in)															
	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80
35	1.251	1.181	1.117	1.047	0.990	0.939	0.873	0.806	0.770	0.738	0.705	0.686	0.660	0.643	0.640	0.624
36	1.283	1.214	1.151	1.083	1.026	0.976	0.910	0.843	0.808	0.777	0.743	0.723	0.698	0.681	0.678	0.663
37	1.303	1.236	1.173	1.105	1.050	0.999	0.933	0.867	0.832	0.801	0.768	0.749	0.723	0.706	0.703	0.688
38	1.334	1.267	1.206	1.138	1.084	1.034	0.969	0.903	0.869	0.837	0.804	0.786	0.761	0.743	0.740	0.725
39	1.357	1.290	1.230	1.163	1.109	1.059	0.995	0.930	0.895	0.863	0.830	0.812	0.787	0.770	0.767	0.751
40	1.376	1.310	1.251	1.185	1.131	1.082	1.018	0.953	0.919	0.888	0.856	0.837	0.811	0.795	0.791	0.777
41	1.400	1.336	1.277	1.211	1.159	1.110	1.046	0.983	0.948	0.917	0.885	0.866	0.842	0.824	0.822	0.807
42	1.417	1.354	1.296	1.230	1.178	1.130	1.067	1.003	0.970	0.939	0.907	0.888	0.863	0.846	0.843	0.829
43	1.435	1.373	1.316	1.251	1.200	1.152	1.089	1.026	0.992	0.962	0.930	0.911	0.886	0.870	0.866	0.852
44	1.458	1.397	1.341	1.277	1.226	1.179	1.117	1.054	1.021	0.990	0.958	0.940	0.916	0.898	0.896	0.881
45	1.484	1.424	1.370	1.307	1.257	1.210	1.148	1.085	1.052	1.023	0.990	0.972	0.948	0.930	0.928	0.913
46	1.503	1.443	1.389	1.327	1.277	1.230	1.170	1.108	1.075	1.045	1.013	0.995	0.970	0.954	0.950	0.937
47	1.527	1.470	1.416	1.354	1.305	1.259	1.198	1.137	1.104	1.075	1.043	1.025	1.001	0.984	0.982	0.967
48	1.543	1.486	1.433	1.372	1.323	1.278	1.217	1.157	1.124	1.095	1.063	1.045	1.021	1.004	1.002	0.987
49	1.572	1.517	1.464	1.405	1.357	1.312	1.253	1.192	1.160	1.131	1.100	1.082	1.057	1.041	1.038	1.024
50	1.595	1.540	1.489	1.430	1.383	1.338	1.280	1.220	1.188	1.159	1.128	1.110	1.086	1.070	1.067	1.053

Source: Table 10 from Meyer and Powers (2014)
Table note: Values originally produced for this table rely on a method of predicting average weight that results in projections that *overestimate* removals by about 15 percent. Therefore values presented here are deflated by 15 percent to address this expected level and direction of prediction error in average weight (refer to Meyer and Powers (2014) for further explanation).

Table 4-41 Area 3A projected charter removals for 2015 including release mortality under a range of maximum size limits and annual limits (including no annual limit). Boxed value represents the measures adopted for 3A in 2015 (in addition to other measures). Shaded values represent two example scenarios of IFQ needed to change incremental management measures.

Projected total revmovals including release mortality

Size Limit on 2nd fish (in)	Annual Limit										
	1	2	3	4	5	6	7	8	9	10	None
26	0.856	1.633	1.798	1.939	1.981	2.016	2.029	2.040	2.044	2.047	2.056
27	0.874	1.666	1.834	1.979	2.022	2.058	2.071	2.081	2.086	2.089	2.098
28	0.901	1.716	1.891	2.039	2.084	2.120	2.134	2.145	2.149	2.153	2.162
29	0.918	1.749	1.926	2.078	2.124	2.160	2.174	2.186	2.191	2.194	2.204
30	0.944	1.800	1.981	2.136	2.184	2.222	2.236	2.248	2.253	2.256	2.266
31	0.961	1.834	2.019	2.176	2.225	2.264	2.279	2.291	2.295	2.299	2.308
32	0.984	1.878	2.066	2.228	2.278	2.316	2.333	2.345	2.349	2.353	2.364
33	0.998	1.905	2.095	2.260	2.309	2.349	2.366	2.378	2.382	2.387	2.396
34	1.013	1.933	2.127	2.294	2.345	2.386	2.401	2.414	2.419	2.424	2.433
35	1.024	1.953	2.148	2.316	2.368	2.409	2.426	2.438	2.444	2.447	2.458
36	1.036	1.978	2.176	2.347	2.399	2.440	2.456	2.469	2.474	2.479	2.489
37	1.042	1.991	2.189	2.361	2.413	2.455	2.472	2.485	2.489	2.494	2.505
38	1.052	2.007	2.208	2.381	2.434	2.476	2.493	2.506	2.511	2.515	2.526
39	1.059	2.021	2.224	2.398	2.451	2.494	2.511	2.524	2.528	2.533	2.544
40	1.065	2.032	2.235	2.411	2.464	2.507	2.524	2.536	2.541	2.546	2.556
41	1.069	2.041	2.246	2.422	2.475	2.519	2.535	2.548	2.554	2.558	2.569
42	1.074	2.049	2.255	2.432	2.485	2.528	2.545	2.558	2.564	2.568	2.579
43	1.080	2.061	2.267	2.445	2.499	2.542	2.559	2.573	2.578	2.582	2.593
44	1.084	2.067	2.274	2.452	2.506	2.549	2.567	2.580	2.585	2.589	2.601
45	1.087	2.075	2.284	2.461	2.515	2.560	2.576	2.589	2.595	2.600	2.611
46	1.091	2.081	2.288	2.468	2.522	2.566	2.584	2.596	2.601	2.606	2.618
47	1.094	2.088	2.298	2.478	2.532	2.575	2.593	2.606	2.612	2.616	2.627
48	1.096	2.093	2.302	2.482	2.536	2.581	2.598	2.612	2.616	2.621	2.633
49	1.102	2.105	2.315	2.495	2.551	2.595	2.612	2.626	2.631	2.635	2.647
50	1.107	2.113	2.324	2.506	2.561	2.605	2.622	2.635	2.641	2.646	2.658

Source: Table 17 from Meyer and Powers (2014)

Table note: Values originally produced for this table rely on a method of predicting average weight that results in projections that *underestimate* removals by about 15 percent. Therefore values presented here are inflated by 15 percent to address this expected level and direction of prediction error in average weight (refer to Meyer and Powers (2014) for further explanation).

This type of analysis could be expanded in future drafts to tease out more QS needs for the incremental relaxation of different management measures. However, the analysis of annual management measures models effort, harvest, and harvest-per-unit effort based on data from 2006 to current years, and produces projections one year out. An important caveat to using the methods traditionally relied on to project the impacts of annual management measures, is the increasing uncertainty of using past behavior to predict future harvest and effort. These estimates are not expected to explain an RQE's needs for QS in perpetuity. Moreover, the changing management measures would be expected to change angler demand, and consequently levels angler effort.

There are two factors in particular that would affect the stability of any QS estimates needed to reach these management regimes:

1) The abundance of halibut

If halibut abundance increases significantly, the charter sector allocation will correspondingly increase according to Table 4-1 and Table 4-2. Conversely, if the FCEY decreases, and angler demand remains about the same, each charter area will need more IFQ pounds to reach the proposed goals. The RQE would intend to focus on long-term planning in order to gain sector stability. Therefore, it would be expected (to the extent that it was economically efficient for the sector), that the RQE would seek QS for low abundance scenarios. The ability to lease in years of high abundance would likely be a significant determinant in an RQE's strategy of how much QS to attempt to acquire.

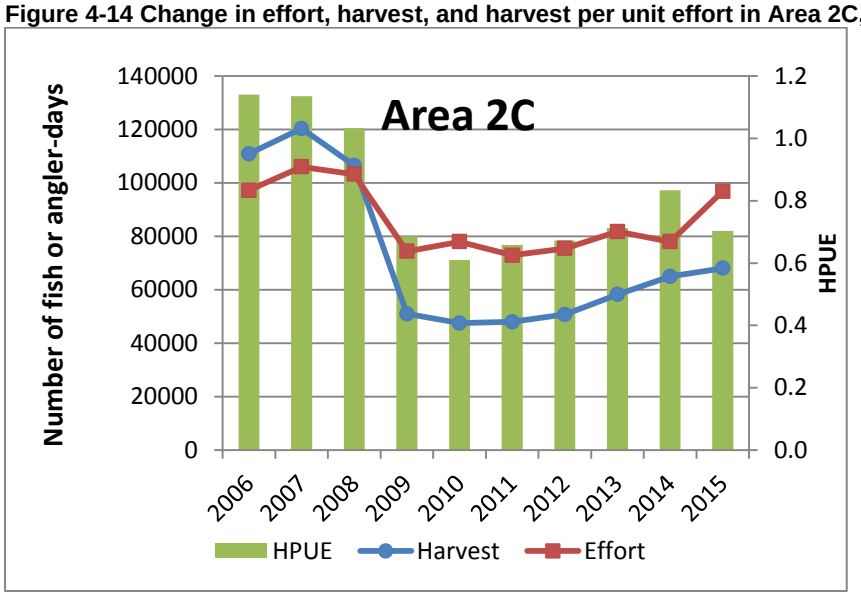
2) Effort in the charter fishery

The other variable that could greatly affect an RQE's demand for halibut QS includes angler participation in halibut charter fishing. The proposed non-profit entity(ies) would represent all guided anglers as a common pool. While new entry into the halibut charter business is capped in the fishery with a limited number of CHPs in circulation, without additional harvest restrictions this does not directly cap angler effort. [36] Variability in angler effort itself depends on a suite of other exogenous factors, for example changes in angler demand, ocean and weather conditions, the management measures chosen (e.g. day of the week closure). In addition, as further analyzed under Alternative 3 in Section 4.9, there is significant latent capacity under the existing CHPs, although it is unlikely that capacity will ever be fully realized.

Change in effort has often been considered in terms of a change in angler-trips. This change is shown for Area 2C in Figure 4-14 and Area 3A in Figure 4-15. Both Area 2C and Area 3A demonstrate a noteworthy decline in effort (as well as harvest) between 2008 and 2009. One likely culprit was the declining state of the U.S. economy in after 2008, which could particularly impact non-Alaskan charter anglers. Area 3A had the same management measures for 2008 and 2009; however, another likely factor impacting angler effort for Area 2C could have been the shift in regulations from a two fish bag-limit (1 U32) to a one fish of any size management regime, predicted to reduce harvest, and potentially effort due to an aversion to the lower bag limit.

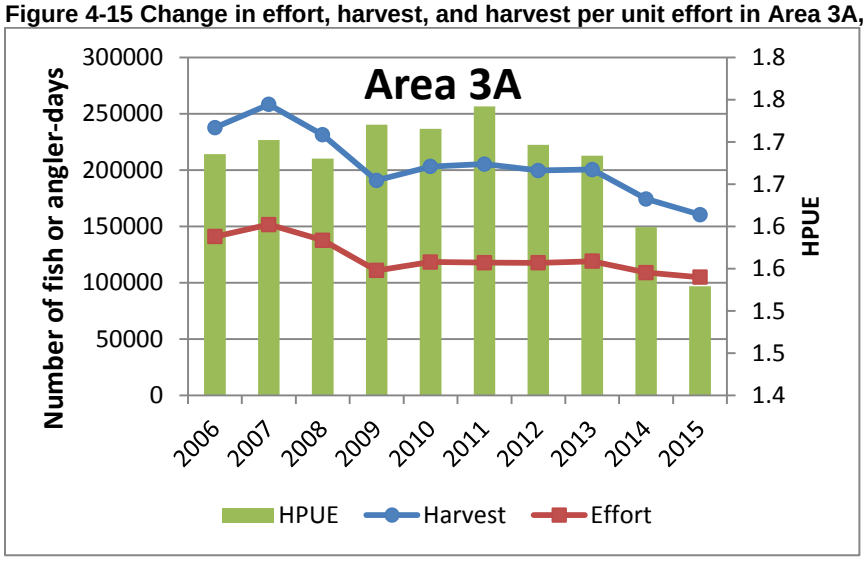
[36] CHPs do have a designated number of anglers that are endorsed to fish halibut on their vessel in a given trip. However, absent other management measure this would not preclude angler from taking multiple trips in a day. Additionally, as discussed in Section 4.9, there is used and underutilized latent capacity in the charter fishery, particularly in the shoulder season.

Figure 4-14 Change in effort, harvest, and harvest per unit effort in Area 2C, 2006 through 2015



Source: Logbook sourced through ADF&G
Figure notes: Harvest is measured in number of fish. Effort is number of bottomfish angler-trips and angler-trips with halibut harvest. 2015 values are preliminary.

Figure 4-15 Change in effort, harvest, and harvest per unit effort in Area 3A, 2006 through 2015



Source: Logbook sourced through ADF&G
Figure notes: Harvest is measured in number of fish. Effort is number of bottomfish angler-trips and angler-trips with halibut harvest. 2015 values are preliminary.

4.8.2.2 Effects on the Commercial Halibut Fishery and Halibut QS Market

The development of an RQE(s) would be expected to have an economic effect on the commercial halibut fishery and the market for halibut QS. In this Initial Review Draft effects are discussed qualitatively, however, there is opportunity in future drafts to more rigorously tease out the magnitude of some of these effects, given for example, different total QS transfer caps.

The commercial halibut fishery could experience some distributional benefits from the proposed RQE. Individual QS holders may benefit from an increase in economic efficiency available through transactions

with an RQE. If an RQE is able to acquire the funding, they may be able to offer QS holders a premium price for their QS. Any entity that currently holds QS could benefit as the value of their QS increases with expanded pool of interested buyers. If an individual QS holder would not benefit from engaging in a QS transaction with the RQE, they would not be required to participate in the exchange. Therefore QS holders are expected to act in their best interest and maximize their own net benefits (i.e., the first scope of economic efficiency discussed in Section 4.8.2).

While there is certainly not a surplus of Area 2C and 3A halibut QS available in the open market (refer to Table 4-21 and Figure 4-9 demonstrating the downward trend of Area 2C and Area 3A QS transfers), there are a number of reasons why some QS holders may be considering selling their QS under current conditions. As halibut allocations have declined in recent years, some QS holders with a small number of units struggle to find a vessel to fish on. Vessels might reach their vessel IFQ caps quicker during years of low halibut abundance and so they may be less willing to take on small amounts of QS. QS holders in this situation may be interested to sell for a premium price.

In addition, a regulatory amendment effective December 1, 2014, changed some of the rules governing the use of hired skippers to fish commercial CV IFQ. This amendment no longer allows initial QS issuees the ability to have a hired master fish their CV IFQ for any QS they received by transfer after February 12, 2010 (see Section 4.5.1). In this action there is a grace period before any QS is revoked; therefore, if the QS holder does not want to or cannot fish this QS themselves, they may be in the market to sell.

Considering economic efficiency at the sector level (scope 2) conveys a different story. While an individual with QS would be expected to act in their own best interest when deciding whether and at what price to sell their QS, this decision may not necessarily maximize the net benefits from a sector-level perspective.

The commercial sector has voiced concerns over the potential RQE program. One of the primary concerns is the potential to further consolidate the fleet, which can negatively impact captains, crew, processors, and support sectors. As demonstrated in Table 4-20, the number of vessels participating in the halibut IFQ fishery has dropped fairly consistently every year in both areas since program inception, with only a few exceptions representing small increases. While limiting participation in order to promote economic stability for the fisheries and communities was one of the goals of the IFQ program, another one of the program goals was to limit the concentration of QS ownership and IFQ usage that would occur over time. This inherent contradiction represents the fact that the Council understood that some unidentified threshold would be considered "too much consolidation". This threshold is subjective to a stakeholder's perspective, and it provides a constant balancing act of consideration for most amendments to the IFQ program.

Specifically under action Alternative 2, some commercial halibut fishery stakeholders are concerned that a transfer of QS from a commercial halibut participant to the charter sector may displace crew members and potentially eliminate the need for some vessels. Both of these changes could have an impact on support sectors as well.

The extent to which consolidation would be expected to occur, depends on the magnitude of QS transferred. The magnitude of QS transferred is likely to be highly influenced by the availability of RQE funds and QS available for transfer. However, these elements are outside of the Council's decision-making scope. If the Council chose to allow for the formation of RQE(s) and it was concerned about the potential for over-consolidation, the Council would focus on transfer restrictions in order to mitigate this impact. In particular, total QS caps for the RQE could be used as tool to ensure some level of the character of the commercial fishery is maintained.

Despite the provisions for two-way transfers (i.e., the RQE could sell QS back to participants of the commercial halibut fishery), commercial sector stakeholders may be concerned that QS would never return to be used in the commercial sector. In years of high halibut abundance, if transfers did not occur and leasing was not available, optimal yield might not be achieved. However, particularly if leasing from the RQE to the commercial sector could occur, once halibut QS was transferred to the charter sector, an RQE may be unmotivated to sell it back. They would hope to earn revenue on lease rates, possibly in order to fund the purchase of more QS. This would likely have a negative impact on captains and crew in the commercial sector.

With less QS being used in the commercial fishery, vessel owners and crew may lose out in this exchange. Restrictions on total transfers to an RQE by area may be one way to alleviate some of this concern. For example, Element 2, Option 3, Sub-option 3 would dictate that no more than 10 percent of the Area 2C QS could be transferred to the charter sector and that no more than 15 percent of the Area 3A QS could be transferred to the charter sector. Some consolidation may still occur if the RQE transferred up to these levels; however, total transfer caps could control how much of that consolidation could occur.

The acquisition of halibut QS by an RQE could also have a negative distributional impact on halibut processors. Depending on the magnitude of QS transferred and rate of transfer, as well as the diversification of the processor, the processing plant could end up in a place where it is not economically feasible to stay open during certain times of the year or at all. Again here, total sector caps for each area could mitigate some of this negative effect. In addition, annual caps may keep any rate of change at a relatively slow pace allowing the businesses to adapt to a shift in total commercial QS. This type of restriction may provide the processor time to consider diversification opportunities.

A rising QS price is good for sellers but bad for any individual looking to acquire QS. The change in the QS market could negatively impact new entrants or those seeking to expand current commercial halibut fishing operations. A prohibition on D class QS could be one way to mitigate some of the effect on new entrants as explained further in Section 4.8.1.2. A wider pool of QS buyers could also impact the CQE's acquisition of QS and in turn this could impact the communities that they represent. Total and annual QS use caps could also diminish the shock to the market.

More practically speaking, even at high price, the availability of QS is often one of the biggest challenges. Halibut QS holders understand the value of their privilege in perpetuity, and many would be unwilling to sell at any reasonable price. This can make finding QS on the market, particularly of the appropriate vessel class, block status, and quantity, a challenge. This would be the case for both the historical players in the market: individuals in the commercial fishery, as well as CQEs, but also for an RQE. Particularly if an RQE has restrictions through QS use caps by QS vessel class, identifying available QS will likely be a challenge.

4.8.2.3 Effects on Subsistence/ Personal Use Fishing, Non-guided Sport Fishing, and Communities

In 2014, subsistence/ personal use fishing produced 0.40 Mlb of harvest, non-charter sport fishing made up 1.14 Mlb of harvest, and charter halibut fishing (plus wastage) contributed 0.76 Mlb of harvest in Area 2C. In Area 3A, subsistence fishing contributed 0.25 Mlb of harvest, non-charter sport fishing harvested 1.49 Mlb, and charter fishing (plus wastage) contributed 1.78 Mlb (IPHC 2014). In Area 2C and 3A, non-charter sport fishing and subsistence fishing halibut removals are not included in the FCEY. Instead removals are subtracted from the subsequent year's total CEY (see Figure 4-1).

Because authorized subsistence/ personal use and non-guided halibut fishing effort are not directly linked to the harvest intensity of the charter sector, a shift in harvest intensity from the commercial sector to the charter sector does not affect how these user groups are managed. However, in many regions these halibut users tend to concentrate effort in around the same general area close to a port or public access. A shift in relative harvest intensity from the commercial sector to the charter sector could concentrate angler activity further. This could impact subsistence and non-guided sport users to the extent that localized depletions may occur. Localized depletion of halibut grounds is also a point of discussion in Section 6.3.2. To the extent that localized depletion may occur, annual QS caps on QS transfer may moderate some of this negative impact.

Distributional impacts to communities would not necessarily be represented in economic values associated with a transaction from an individual IFQ holder to an RQE. Communities could be impacted in both positive and negative ways from the development of an RQE program. Both commercial and charter fishing can have a significant economic impact in Alaskan communities. Commercial fishing relies on inputs from a multitude of support sectors: fuel, bait, vessel parts and maintenance, food, ice, labor, etc. It prompts activity from intermediate demand sectors like seafood dealers and processors. This economic activity can create local employment opportunity.

Similarly, the charter sector instigates economic activity for a community as a tourist industry; by catering to resident and non-resident visitors. The charter sector relies on some of the same input industries: fuel, bait, vessel parts and maintenance, food, labor, etc. While charter fishing does require the same intermediate demand sectors such as processing, as a tourist industry, it also encourages other types of non-fisheries economic activity among retail businesses, restaurants, and accommodations services that benefit from the presence of non-local charter anglers visiting their community. It would be inappropriate to contribute all tourism-related economic activity in a community to halibut charter fishing, as there are often many other substitute activities. There are some types of economic analyses that specialize in estimating overall economic impact.[37]

These methods are currently outside the scope of this analysis. The challenge that these methods would need to overcome, would be in teasing out the explicit effect of halibut charter fishing compared to all other substitutes. It may be that an individual purchased a cruise, and would have visited the community, eaten at a restaurant, and spent a given amount on retail, regardless of the opportunity to fish. It may be that an individual is passionate about fishing, but would just as easily visit an Alaskan community to take part in charter salmon fishing exclusively. Or it may be that an individual specifically sought the opportunity to charter halibut fish, and would not have come to the community otherwise. In any scenario, the opportunity for visitors to charter halibut fish is a benefit to the community's tourism economy because it diversifies the community's opportunities for recreational activities, making it more appealing for visitors.

There is also a multiplier effect associated with the wage that participants in the commercial sector (QS holders, vessel owners, vessel operators, crew) and charter operations (CHP holder, vessel operators, crew, administration, lodge employees) receive. To the extent that these individuals are residents of the community or chose to spend their income in the community, this could provide additional positive impact in the community. Both halibut harvesting sectors can constitute seasonal work; therefore, participants in both sectors have the opportunity to spend part of their residency living outside the community, and spending their money outside of the community.

[37] The Input/ Output (I/O) model and the social accounting matrix (SAM) model are two examples of economic models used to estimate regional economic impacts. Both of these models seek to capture the impact of a shock to a regional economy based on inter-industry transactions between businesses and final consumers in an economy. These models do not measure specific benefits, but rather changes in overall economic activity in a region.

Overall, impacts of an RQE would be to expected differ across communities and in part would depend on how engaged the communities are in the two different sectors. Setting total and annual QS caps could significantly slow impact and alert the Council to any communities which are shifting from a primarily commercial fishing community to a charter community.

4.8.2.4 Safety Considerations

The primary change resulting from Alternative 2 is the potential for a shift in harvest intensity from the commercial sector to the charter sector. Safety conditions are expected to be consistent with the status quo, as neither commercial nor charter sectors would be expected to change the way they catch fish or run their operations.

4.9 Analysis of Alternatives: Alternative 3, Retirement of Latent Charter Halibut Permits

A recency action is considered under Alternative 3, in which CHPs that meet a certain threshold of "latency" would be retired. Two options have been proposed by the Council to measure the threshold of latency. A CHP would be retired if:

Option 1. The CHP has been fished less than 50 angler days in the previous 5 years.

Option 2. A CHP that has not been used by the CHP holder in the previous 3 years.

This action was proposed for this package, as either a compliment or an alternative to the action of allowing the formation of an RQE. Alternatives 2 and 3 are not mutually exclusive. If the Council considers these actions complements, it could choose to implement both elements as a package, as currently proposed. In this case, if approved by the IPHC and the Secretary both elements would be implemented simultaneously, although the regulatory approval to establish an RQE would only be the first step in the creation and practical use of such an entity. It is anticipated that such an entity would still require additional steps and would therefore be on a different timeline as an action that for which a regulatory amendment is the sole catalyst for action. Overall impacts from establishing an RQE may differ depending on if and when this second alternative is moved forward in Council action. However, the Council may choose to adopt only Alternative 3 or only Alternative 2 as a preliminary preferred alternative.

This is not the first time the Council has considered a recency action for privileges in a limited entry program due to a concern about increased effort. For example in 2009, Amendment 92 to the BSAI groundfish FMP and Amendment 82 to the GOA groundfish FMP removed trawl gear endorsements on licenses issued under the license limitation program (LLP) in certain areas if those licenses had not been used on vessels that met minimum recent landings requirements using trawl gear.[38] In this case, similar to the present proposal, the rationale for action was over concern that potential future entry of latent effort could have significant impacts on current LLP permit holders. While some Council actions are intended to "free-up" latent fishing privileges in order to allow for new entry in to a fishery (e.g., Amendment 31 to the King and Tanner Crab FMP prescribing active participation requirements on C- share QS), these amendments were intended to prevent latent fishing privileges from suddenly contributing to increased effort in a fishery that is already reaching optimal yield. Therefore the Council set historical dates in which latency would be determined. This type of action does not allow for a grace period in which the fishing privilege could be sold to someone "active" in the fishery. If it did it could very easily go against

[38] This action contained some exceptions.

the purpose of action, to reduce potential effort; increasing the likelihood that potential effort would be converted to active effort.

Advocates of Alternative 3 may see this action as another way to "ensure long-term planning and stability in regulations for all guided anglers", an issue highlighted in the purpose and need of this package. More specifically, some halibut users from both the charter and the commercial sectors have expressed concern with the capacity potential of the charter fishery. As described in Section 4.4.1.1, the CHLAP established a CHP based on previous experience in the fishery in order to slow the rapid growth of the sector. Concerns have been expressed that if these permits were to be fully utilized any stability and predictability that exists in the fishery may be compromised. Management measures analyzed by ADF&G representatives annually are based on historical effort, using average weight, angler days, and the charter allocation established for that year by the IPHC. Therefore, a sudden increase in participation by current CHP holders from one year to the next could push the charter sector over their projected harvest, theoretically exceeding this allocation.

Paired with Alternative 2, the opportunity for an RQE, some halibut users are concerned that new amount of capacity could strain the funding for an RQE to acquire QS to the point where the marginal difference to the charter sector would be insignificant. Even given the opportunity for compensated reallocation, some stakeholders suspect that not enough commercial QS could be transferred to accommodate full capacity of the charter management limited access program participants if each CHP operated at their "full capacity".

The first recency option under consideration would define latency as those CHPs that have been fished fewer than 50 angler days in the previous five years. Table 4-42 demonstrates that 80 percent of CHPs in Area 2C have conducted charter fishing which was associated with a CHP and twenty percent would be considered "latent" by the definition under Option 1. For Area 3A, 79 percent of the CHP would be considered active, and 21 percent of CHP would be considered latent.

Table 4-42 Count of CHP that have fished less than 50 days from 2011 to 2014

Area	Latent CHPs (0-49 trips)	Active CHPs (≥ 50 trips)	Total CHPs	Percent latent
2C	108	428	536	20%
3A	95	350	445	21%
Total	203	778	981	21%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: This option indicates using 5 years to determine this latency threshold. However, CHP first existed in 2011 and final estimates for CHP are not yet available. Therefore this table only represents 4 years of activity.
Table does not include Community Quota Entity permits or U.S. Military Morale, Welfare and Recreation Program permits.

There are several important things to note with regards to this and the following tables describing latency. To begin with, none of the tables include CQE or MWR charter permits (the counts of these permits are listed in Table 4-4). The Council should be clear whether it is the intent that these permits should be part of any recency proposal.

Secondly, the numbers in Table 4-42 do not necessarily indicate that halibut is caught on a charter fishing trip or that halibut is even the targeted during this reported participation. Table 4-42 is based on CHP numbers recorded in logbooks associated with a sport fishing trip. It is understood that some vessel operators have recorded their CHP number in a logbook even when the target of the trip is not halibut or halibut is not caught. This is not necessarily problematic, but does require more analytical effort to untangle and it also presents the Council with a decision point: should latency of a CHP be associated

with inactivity of a CHP holder in the charter fishery overall or inactivity in charter halibut fishing specifically?

On one hand, if the intent of a recency action is minimize the potential for sudden increase in new entrants to the charter sector, resulting in a possible increase in effort and angler participation, action may be more effective if focused around those not actively participating in the halibut fishery. On the other hand, an individual may be highly active in the charter sector, but for whatever reason has chosen not to cater to anglers targeting halibut. It could be that they are responding to the diminished stock and/ or the stricter management measures.

The numbers in Table 4-42, represent all of the charter trips in which the vessel operator recorded a valid CHP number. This table would overestimate the CHP latency in the fishery if landing halibut were a requirement of activity. In preliminary analysis of those CHP associated with trips that actually landed halibut, 28 percent of CHP would be considered latent under Option 1 (for both areas) and four percent would be considered latent under Option 2 (including both area). Table 4-42 would underestimate the CHP latency in the fishery if any charter activity by a CHP holder were the threshold for CHP activity. Additionally, more data may need to be gathered to know the full extent of active charter participation by CHP holders. In past Council allocative or recency actions, implementation includes an appeals process in which NOAA RAM considers individual cases.

Another data quality issue is that between 2011 and 2014 an average of 13 percent of the CHP numbers listed on the charter logbook were invalid.[39] Eighteen invalid CHP numbers of that group represents active participation by the threshold established under Option 1 (greater than 50 trips with that CHP number between 2011 and 2014). This would be another reason to suggest latency is overestimated in Table 4-42. If the Council were to implement a recency action, it would be based around valid CHP numbers; therefore these individuals would need to make their case in appeals.

A final overall consideration is that some CHPs may not have been used, but may have been transferred sometime during the first five years of the program. A new entrant that recently purchased a CHP may not have had the same opportunity to participate in the charter fishery as those who have held their CHP since implementation. For instance, if the Council established a 50-day use threshold for identifying latency over the past five years, and the CHP holder only held that permit for one season, they would be at a disadvantage in total time to achieve this goal. The Council may want to consider how transfers would play into the latency determination and whether that would be another factor to consider during appeals.

Option 2 is considered using the same method as Table 4-42, in which participation is considered based on a valid CHP number recorded in the logbook (regardless of whether halibut was landed on that trip). Option 2 proposes retirement of latent CHP that have not been used in the previous three years. For the purpose of this assessment, 2012, 2013, and 2014 are considered. Keeping in mind the caveats listed in this section, Table 4-43 demonstrates that far fewer CHP holders would be impacted by this threshold; only three percent of CHP holders in Area 2C and four percent in Area 3A.

Table 4-43 Count of CHP associated with at least one trip from 2012 through 2014

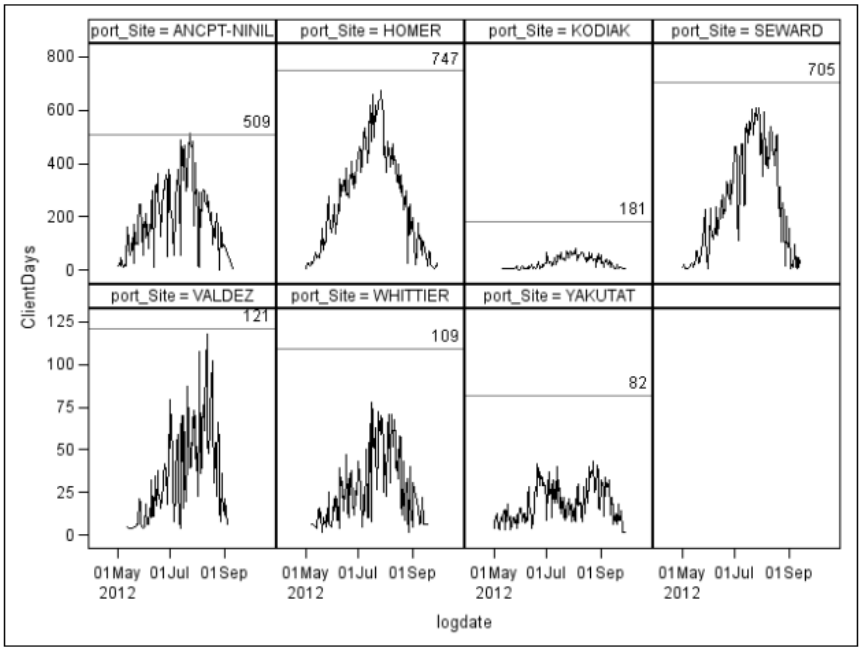
Area	Latent CHPs (0 trips)	Active CHPs (At least 1 trip)	Total CHPs	Percent latent
2C	29	507	536	5%
3A	32	413	445	7%
Total	61	920	981	6%

[39] This trend has been on the decline with 20 percent (191) invalid CHP numbers listed in 2011, to six percent (53) invalid CHP numbers listed in 2014.

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN

The effect that unused and underutilized CHP endorsements could have depends on both the magnitude of latent effort as well as the likelihood of this effort actually being realized. The reasons these CHP are unused or underutilized are unknown and expected to be as diverse as the holders themselves. This makes it difficult to predict the risk of a sudden spike in angler-effort or harvest-per-unit effort. One extreme way to calculate this would be to multiply the total number of angler endorsements by the number of days in the season and compare this to current angler-days in the fishery.[40] This would result in a very unrealistic representation of latent effort because while the full charter halibut season is open from February 1 to December 31, actual fishing tends to occur mid-May to early September. The number of days could be truncated to just the 100 days representing peak season, multiplied by total number of angler endorsements, and then compared to realized angler-days during those 100 days. An example using a very similar method, illustrating underutilized effort can be seen in a figure on Area 3A from a December 2013 report to the Council on Management Options for the charter halibut fisheries in 2014 (Meyer & Powers 2013).

Figure 4-16 Daily charter client effort (angler-days) relative to total angler endorsements at major ports in Area 3A, 2012



Source: Meyer & Powers (2013)
Table notes: Reference lines and values indicated the total angler endorsements for the corresponding vessels. Port site "ANCPT-NINIL" represents Anchor Point, Ninilchik, and Deep Creek.

This figure demonstrates the difference between the number of angler endorsements specified on a CHP and anglers-days. Theoretically, the total number of angler endorsements represents the number of anglers that could fish on a particular day.[41] Logbook data and charter halibut permit data for 2012 were combined to examine the amount of effort that occurred in relation to the potential effort for major ports of landings in Area 3A.

[40] Anglers technically could fish more than one trip in a day, but this is found to be a rare occurrence. Therefore it is assumed anglers would only take one halibut trip a day for purposes of this discussion. Regulations in 3A also prevent a CHP from being used more than once a day; however this is not necessarily the case in 2C. An assumption is also made for this discussion that a CHP, with its corresponding angler endorsements is only used once a day.
[41] Given the previous assumptions.

This figure is a useful illustration of what effort could theoretically look like, and in what parts of the season is capacity close to using all angler endorsements. However the risk of full angler effort that this calculation (100 days * total angler endorsements - realized angler-days) would produce is unrealistic. Not every vessel is going to be at capacity during every trip. The charter halibut fishery has distinct seasonal patterns that peak mid-summer, as illustrated in Figure 4-16. This pattern is expected to continue due to angler demand; it is unlikely that shoulder seasons will ever reach the harvest intensity of peak season.

At this point, for a more practical approach to understanding latent effort, this discussion is just focused around the latent capacity associated with those CHP that fall under the latent thresholds specified under Option 1 and 2 and which is compared to the "active" fleet. This characterization might be appropriate, if for example, all of the CHP under the thresholds of Option 1 and 2 were sold to individuals who participated in the charter halibut fishery similarly to the "active" participants. However, it is understood that latent effort among the "active" fleet could also lead to a sudden increase in harvest intensity, if for some reason this was prompted (e.g., increased angler demand, favorable ocean and weather conditions).

Under Option 1, CHPs that fall in the latent group (50 or less days of fishing between 2011 and 2014), represented an average of 16 angler-days per year in Area 2C between 2011 and 2014. The category of CHP holder that are considered active under Option 1, represent an average of 183 angler-days per year. The product of the number of latent CHPs and 183 angler-days per year, means that this category of CHPs could be using a total of 19,798 angler-days per year if they were being used at "average active" effort levels. This number represents 18,026 additional angler-days from what they are currently being used for and has the potential to increase total effort for Area 2C by 23 percent if they were active (Table 4-44).

Using the same simple calculations, Table 4-44 demonstrates that the latent group of Area 3A as defined by Option 1, has the potential to increase total effort by 25 percent if latent CHP were assumed to operate similar to the active CHPs.

Table 4-44 Comparing latent effort to active effort under thresholds defined in Option 1

Area	Average annual angler-days for latent CHPs	Average annual angler-days for active CHPs	Number of latent CHPs	Potential angler-days if latent CHPs used active level of effort	Additional angler-days per year	Percent change in average angler-days per year
2C	16	183	108	19,798	18,026	23%
3A	24	351	95	33,325	31,076	25%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: Average angler-days are calculated from 2011 through 2014

It could be more straightforward to calculate latent effort under Option 2 as a proportion of the active fleet. Since these CHP holders did not take any trips between 2012-2014, and they represent six percent of the CHPs (five percent for Area 2C and seven percent in Area 3A), it could be expected that if all of these CHPs were sold to "active" participants similar to current fleet, effort would increase by six percent, holding all else constant (and five percent and seven percent for Area 2C and Area 3A).

To be more precise however, some of these CHPs were associated with trips in 2011. Since 2011 effort is considered in the calculations in Table 4-44, it is included here as well. Table 4-45 demonstrates that after considering additional angler-days in 2011 by the latent groups of CHPs (as defined by Option 2), it can be expected that if Area 2C latent CHPs were used to the degree that active CHPs were used, there would be a three percent increase in overall effort. In Area 3A, if latent CHPs were used at the same average effort level as active CHPs, effort would be expected to increase by four percent.

Table 4-45 Comparing latent effort to active effort under thresholds defined in Option 2

Area	Average annual angler-days for latent CHPs	Average annual angler-days for active CHPs	Number of latent CHPs	Potential angler-days if latent CHPs used active level of	Additional angler-days per year	Percent change in average angler-days per year
2C	8	155	18	2,783	2,647	3%
3A	13	293	19	5,566	5,325	4%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: Average angler-days are calculated from 2011 through 2014

In terms of impacts, a recency action that revokes CHPs below a certain threshold of use could affect the value of the remaining CHPs. Table 4-5 in Section 4.4.1.1 includes CHP transfer prices in Areas 2C and 3A over the past five years of the program. Median transaction prices have fluctuated slightly, but with no real distinct trend over the past (and only) five years. The number of transactions was by far the greatest in 2011, the first year of the program, and has since dropped dramatically. In 2014, there were 17 CHP transactions in Area 2C and 24 in Area 3A. Usage data in Table 4-42 and Table 4-43 indicate that there could be unutilized or underutilized CHPs available for transfer to businesses that wish to obtain them. If the Council continues to pursue a recency action, depending on which option it prefers, there may be fewer available CHPs in the marketplace; therefore we may see fewer transactions at a higher price. Option 1 would retire more unused or underutilized permits from the marketplace.

Community impacts are expected for such an action although it is difficult to say precisely where and how these impacts would be felt. It is unknown exactly why these CHP holders have not chosen to participate. Fewer available CHPs at potentially higher price, would likely be a barrier to entry for residents interested in starting a charter halibut business. In contrast, it may provide current operations one factor of stability, potentially positivity impacting a community in this way.

Certain coastal Alaskan communities are highly involved recreational saltwater fishing tourism (as described in Section 4.6). Some of the same communities, but also many others are home to vessel operators, crew, CHP holders, and others involved in halibut charter operations. These do not necessarily represent coastal communities of Alaska. Table 4-46 illustrates Option 1 in terms of state listed on the CHP.

Table 4-46 Count of CHPs that have fished less than 50 days since 2011 by CHP holder state

State of residence	Latent CHPs (0-49 trips)	Active CHPs (≥ 50 trips)	Total CHPs	Percent latent
AK	125	443	568	22%
AR		2	2	0%
AZ	1	6	7	14%
CA	3	4	7	43%
CO		2	2	0%
DC		11	11	0%
FL		1	1	0%
ID		4	4	0%
KY	1		1	100%
ME	1		1	100%
MI	1		1	100%
MN	1		1	100%
MT		1	1	0%
NE		1	1	0%
NV	1	1	2	50%
NY		1	1	0%
OH	1		1	100%
OR		3	3	0%
PA		1	1	0%
TX		1	1	0%
UT	2	15	17	12%
VA		1	1	0%
WA	5	25	30	17%
WY		1	1	0%
No state listed	61	254	315	19%
Total	203	778	981	21%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN

By and large, Alaska is home to the largest number of CHP holders. Table 4-47 breaks out Option 1 by Alaskan communities and by the regulatory area for which their CHP is assigned to.

Table 4-47 Count of Area 2C CHPs that have fished less than 50 days since 2011 by CHP holder address in Alaska community

State of residence	Latent CHPs (0-49 trips)	Active CHPs (≥ 50 trips)	Total CHPs	Percent latent
CITY NOT LISTED	39	127	166	23%
SITKA	16	62	78	21%
KETCHIKAN	9	78	87	10%
CRAIG	8	13	21	38%
PETERSBURG	7	6	13	54%
JUNEAU	5	17	22	23%
ELFIN COVE	4	4	8	50%
WARD COVE	3	5	8	38%
PORT ALEXANDER	2	2	4	50%
HOONAH	1	3	4	25%
PELICAN	1	3	4	25%
AUKE BAY	1	8	9	11%
HAINES	1	1	2	50%
ANGOON	1	9	10	10%
PALMER	1		1	100%
ANCHORAGE	1		1	100%
2C TOTAL	100	366	466	21%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN

Note: Communities in which no permits fall under the 50 trip threshold are not listed, but are included in the total.

Table 4-48 Count of Area 3A CHPs that have fished less than 50 days since 2011 by CHP holder address in Alaska community

State of residence	Latent CHPs (0-49 trips)	Active CHPs (≥ 50 trips)	Total CHPs	Percent latent
CITY NOT LISTED	22	127	149	15%
KODIAK	15	24	39	38%
ANCHORAGE	9	20	29	31%
HOMER	9	36	45	20%
VALDEZ	4	3	7	57%
ANCHOR POINT	4	5	9	44%
SOLDOTNA	3	17	20	15%
EAGLE RIVER	3	1	4	75%
KENAI	2	5	7	29%
NINILCHIK	2	18	20	10%
YAKUTAT	2	9	11	18%
STERLING	1	1	2	50%
SEWARD	1	26	27	4%
WASILLA	1	4	5	20%
ANIAK	1		1	100%
ELFIN COVE	1	4	5	20%
KASILOF	1	4	5	20%
CORDOVA	1	1	2	50%
WHITTIER	1	3	4	25%
GIRDWOOD	1		1	100%
FAIRBANKS	1		1	100%
OLD HARBOR	1	2	3	33%
3A TOTAL	87	330	417	21%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: Communities in which no permits fall under the 50 trip threshold are not listed, but are included in the total.

The same information is produced for the latency threshold proposed in Option 2 and depicted in Table 4-49, Table 4-50, and Table 4-51. Again, there are less CHP holders affected by this threshold.

Table 4-49 Count of CHPs that have not been used between 2012 and 2014 by CHP holder state

State of residence	Latent CHPs (0 trips)	Active CHPs (At least 1 trip)	Total CHPs	Percent latent
AK	24	544	568	4%
AR		2	2	0%
AZ		7	7	0%
CA	1	6	7	14%
CO		2	2	0%
DC		11	11	0%
FL		1	1	0%
ID		4	4	0%
KY		1	1	0%
ME		1	1	0%
MI		1	1	0%
MN		1	1	0%
MT		1	1	0%
NE		1	1	0%
NV		2	2	0%
NY		1	1	0%
OH	1		1	100%
OR		3	3	0%
PA		1	1	0%
TX		1	1	0%
UT		17	17	0%
VA		1	1	0%
WA	1	29	30	3%
WY		1	1	0%
State not listed	10	305	315	3%
Total	37	944	981	4%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN

Table 4-50 Count of Area 2C CHPs that have not been used between 2012 to 2014, listed by CHP holder address in Alaska community

State of residence	Latent CHPs (0 trips)	Active CHPs (At least 1 trip)	Total CHPs	Percent latent
CITY NOT LISTED	7	159	166	4%
SITKA	3	75	78	4%
KETCHIKAN	2	85	87	2%
CRAIG	1	20	21	5%
ELFIN COVE	1	7	8	13%
PALMER	1		1	100%
PORT ALEXANDER	1	3	4	25%
2C TOTAL	16	450	466	3%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: Communities in which no permits fall under the 50 trip threshold are not listed, but are included in the total.

Table 4-51 Count of Area 3A CHPs that have not been used between 2012 to 2014, listed by CHP holder address in Alaska community

State of residence	Latent CHPs (0 trips)	Active CHPs (At least 1 trip)	Total CHPs	Percent latent
CITY NOT LISTED	3	146	149	2%
HOMER	3	42	45	7%
KODIAK	2	37	39	5%
SEWARD	1	26	27	4%
SOLDOTNA	1	19	20	5%
NINILCHIK	1	19	20	5%
VALDEZ	1	6	7	14%
WASILLA	1	4	5	20%
KENAI	1	6	7	14%
ANIAK	1		1	100%
EAGLE RIVER	1	3	4	25%
ELFIN COVE	1	4	5	20%
OLD HARBOR	1	2	3	33%
3A TOTAL	18	399	417	4%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: Communities in which no permits fall under the 50 trip threshold are not listed, but are included in the total.

Understanding that the address of a CHP holder does not necessarily reflect where that individual conducts their halibut charter business, Table 4-52 illustrates the port of landing that is used for charter operations and the relationship to the recency proposed under Option 1. These listed locations provide a better sense for where the fishery is occurring and what community may be impacted given a retirement of latent permits action.

Again, there could be both positive and negative impacts to the community. If the halibut charter fishing trip is the significant pull for visitors (either Alaskan resident or non-resident) to go to that community, addition businesses (e.g., retail, restaurants, accommodation, other tourism businesses) could benefit from greater number of visitors in town. Particularly under regulations that prohibit vessel operators from taking anglers on more than one trip a day (currently the regulations in Area 3A), there could be excess demand, stunting the level of visitors that make the trip when there are no seats on halibut charter vessels available. However, if the draw for tourists to visit a community is also heavily embedded in other factors, for example, their cruise ship travels there or they would be happy to make the trip for any type of charter fishing, they may choose to still go to the community but engage in other tourism activities. This would diminish the multiplier effect of specifically halibut charter fishing's impact on other industries in the community.

Additionally, depending on the magnitude of latent effort and the real risk of a sudden increase, retiring latent CHPs could lead to more stability for the CHP holders and other individuals involved in the fishery.

Table 4-52 Count of CHP that have fished less than 50 days since 2011 by historical ports of landing (2011 through 2014)

Area 2C				Area 3A			
Port of landing	Landings made since 2011 by:		Percent of landings from latent CHPs	Port of landing	Landings made since 2011 by:		Percent of landings from latent CHPs
	Latent CHPs (0-49 trips 2011-2014)	Active CHPs (≥ 50 trips (2011-2014)			Latent CHPs (0-49 trips 2011-2014)	Active CHPs (≥ 50 trips (2011-2014)	
SITKA	290	24,165	1%	SEWARD	240	15,128	2%
KETCHIKAN	146	8,158	2%	DEEP CREEK	189	11,291	2%
PETERSBURG	134	2,095	6%	HOMER	171	19,167	1%
SALMON FALLS	132	612	18%	KODIAK	134	3,084	4%
AUKE BAY	110	3,170	3%	LARSEN BAY	124	1,246	9%
KNUDSON COVE	86	620	12%	VALDEZ	111	2,012	5%
GUSTAVUS	86	3,805	2%	CORDOVA	88	249	26%
CRAIG	73	5,233	1%	ANCHOR POINT	80	4,646	2%
KELP BAY	69	167	29%	PORT LIONS	80	726	10%
KLAWOCK	53	1,547	3%	WHITTIER	76	2,253	3%
HAINES	45	183	20%	UGAK BAY	55	115	32%
PELICAN	41	532	7%	ELFIN COVE	54	732	7%
ELFIN COVE	41	2,632	2%	NINILCHIK	51	1,221	4%
LORING	40	33	55%	YAKUTAT	40	2,797	1%
HOMER	39	247	14%	CHENEGA BAY	38		100%
S KAIGANI BAY	36	346	9%	SITKA	36	455	7%
HOONAH	30	748	4%	UYAK BAY	25	4	86%
JUNEAU	27	1,181	2%	ZACHAR BAY	22	168	12%
SEWARD	27	260	9%	3A TOTAL	1,830	71,406	2%
PORT ALEXANDER	27	284	9%				
PORT LIONS	24	2	92%				
ANGOON	22	1,772	1%				
GULL COVE	21	136	13%				
THORNE BAY	20	1,035	2%				
2C TOTAL	1,791	80,269	2%				

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: Communities that have had less than 20 historical landings from the CHPs that fall under the latency threshold of Option 1 are not listed, but are included in the 2C and 3A Total.

Table 4-53 Count of CHP that have not been used between 2012-2014 by historical ports of landing (2011 through 2014)

Area 2C			
Port of landing	Landings made since 2011 by:		Percent of landings from latent CHPs
	Latent CHPs (0 trips 2012-2014)	Active CHPs (> 0 trips 2012-2014)	
SALMON FALLS	66	678	9%
SITKA	44	24,411	0%
GUSTAVUS	37	3,854	1%
2C TOTAL	157	81,903	0%
Area 3A			
Port of landing	Landings made since 2011 by:		Percent of landings from latent CHPs
	Latent CHPs (0 trips 2012-2014)	Active CHPs (> 0 trips 2012-2014)	
HOMER	62	19,276	0%
CHENEGA BAY	38		100%
3A TOTAL	158	73,078	0%

Source: ADF&G Charter logbook and NOAA RAM Division, sourced through AKFIN
Note: Communities that have had less than 20 historical landings from the CHPs that fall under the latency threshold of Option 2 are not listed, but are included in the 2C and 3A Total.

An important concluding reminder is that the halibut charter sector now currently operates under the CSP and under these regulations management measures are based on a specific charter allocation. To the extent that there is not a very sudden jump in effort in one year, changes in effort will be reflected in the management measure implemented in the following year. Therefore, changes in effort should not have a significant impact on other halibut user groups.

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

The calculation of net benefits from the two action alternatives proposed would require a summation of the welfare change to all groups impacted by action. This analysis does not attempt to provide that calculation for either action alternative. Instead, at this stage in the analytical draft, this section qualitatively discusses three possible general outcomes of the proposed action under **Alternative 2**, each of which would be expected to result in different net National benefits. This is followed by a discussion of the net benefits to the Nation under **Alternative 3.**

The first possible outcome under adoption of **Alternative 2** is that no RQE would purchase QS. Net benefits will not change under this outcome as the market for QS is unchanged and any administrative expenses are close to zero in terms of National net benefits. The second scenario is that an RQE purchases a moderate amount of QS in order to make incremental changes in the management measures the charter sector is willing to pay for. The third possible outcome is that RQEs purchase a substantial share of the QS in the market. This last possible outcome overlaps with the second, as small scale purchases of QS are likely to precede any larger purchases that would substantially affect the market price of QS.

In the previous section on effects of an RQE, the net benefits from action were first discussed in terms of an individual commercial halibut QS holder and the charter halibut sector. This approach relies primarily on private benefits and private costs. This relatively narrow analysis suggests that an RQE program would result in positive net benefits regardless of the level of QS transfer that was achieved. The RQE would purchase QS from a willing seller, relieving the management measures that it understands are most burdensome on angler demand, until the point where the cost of an additional unit of QS would reach the benefits it could provide the charter sector. A mechanism for transfer is not currently in place, so from an individual commercial halibut QS holder and the charter halibut sector scope, there could be inefficiencies in this missed opportunity for transfer.

Brining the scope of net benefits out to both of the sector-levels (commercial and charter) introduces more uncertainty into the magnitude and even direction of net benefits. While an RQE would be expected to act in the best interests of the whole charter sector for the regulatory area which it represents, an individual halibut QS holder may not act in the best interests of the whole commercial sector. Considering the net benefits at the sector level introduces new costs, such as the effect on the QS market for the QS holders that did not choose to sell to an RQE. Particularly in a scenario in which a substantial quantity of QS is transferred to an RQE, net benefits may turn out negative at the sector level. A substantial decrease in catcher vessel IFQ being landed at a processor that relies on this species, could potentially put this processor out of business. If active QS holders rely on that processor, they will be disadvantaged as well.

Evaluating the net benefits at a National level, as is the task of this section, presents additional social benefits and costs for consideration, that may not be in individual-level or sector-level transactions decisions. As an extreme example, regardless of the individual private efficiency gains in open-access to QS transfers, the total dissolution of one of these fishing sectors would arguably result in negative net benefits to the Nation.

National net benefits could be negative if there was a scenario in which halibut was left unharvested. If an RQE purchased a substantial amount of QS, halibut abundance increased and either the RQE was not inclined to sell QS, or there was no temporary transfer mechanism to bring this QS back into the commercial market, optimal yield might not be achieved.

Whether Council action on Alternative 2 would result in an overall increase in net National benefits if a moderate level of QS is transfer is undetermined. It is likely action would produce a negative net benefit to the Nation if substantial transfers occurred. This reinforces the ideas that total and annual transfer restrictions may be an important tool if the Council takes action on Alternative 2.

The net benefits to the Nation from **Alternative 3**, the retirement of latent CHPs, are expected to be very minor. This action may benefit current active CHP holders that are seeking greater stability and long-term planning by limiting the number of latent CHP that could suddenly because active (through purchase by an active holder or increased usage by current holder). However changes in effort in the halibut charter fishery could still occur through increased utilization of active CHPs. Furthermore, there are other external factors that may detract from the ability of this action to provide stability on its own. For example, changes in halibut biomass, particularly without a sector-wide mechanism to adjust the charter catch limit.

Alternative 3 is expected to disadvantage new entrants or those looking to expand operations in the halibut charter fishery, as less CHP are available for transfer. This may in turn disadvantage charter anglers as, particularly in peak season, they may have more difficulty booking a halibut charter trip.

This action would be expected to have limited indirect impact on other halibut user groups, and the welfare of the majority of the general public. This option does not propose any change to the annual combined catch limit set by the IPHC for the charter and commercial sectors. The footprint of the fishery, relative timing, seasons, gear type, and localized harvest intensity would remain consistent with status quo.

Overall, it is difficult to say with certainty which direction the net benefits to the Nation would result in from action in Alternative 3; however, it is presumed this effect would be insignificant.

5 INITIAL REGULATORY FLEXIBLITY ANALYSIS

5.1 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.

5.2 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.

5.3 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 SBA has established size criteria for all major industry sectors in the United States, including fish harvesting and fish processing businesses. Effective July 14, 2014, a **business involved in *finfish harvesting*** is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual gross receipts not in excess of **$20.5 million** for all its affiliated operations worldwide. A business that ***both harvests and processes*** fish (i.e., a catcher/processor) is a small business if it meets the **criteria for the applicable fish harvesting operation (i.e., finfish or shellfish)**. A **wholesale business** servicing the fishing industry is a small business if it **employs 100 or fewer persons** on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. Charter operators would fit under the category of ***other marine fishing,*** and would have a threshold in which combined annual gross receipts not in excess of **$7.5 million** for all its affiliated operations worldwide.

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 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 venturers 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.

5.4 Reason for Considering the Proposed Action

In October 2014 the Council developed the following purpose and need:

> *Alaska's guided halibut anglers have seen recent increases in regulatory restrictions due to declining halibut stocks and guided recreational allocations. There is currently no sector-wide mechanism to shift allocation between the commercial and guided recreational sectors. The current provision provided under the Catch Sharing Plan to temporarily transfer allocation known as GAF (Guided Angler Fish), may not be sufficient to ensure long-term planning and stability in regulations for all guided anglers. A market-based mechanism for the guided halibut recreational sector may be an effective means to supplement their annual allocations. Allowing an RQE (Recreational Quota Entity) to hold commercial halibut QS on behalf of guided recreational halibut anglers under a "willing seller and willing buyer" approach may result in less restrictive annual harvest measures for guided recreational anglers, while complying with*

total halibut removals under the guided halibut catch limits determined by the International Pacific Halibut Commission. The guided recreational halibut allocation under the Halibut Catch Sharing Plan would be combined with the halibut quota share held by the RQE to determine the annually adjusted total guided halibut allocation. The total allocation would be the basis for the determination of appropriate management measures for the guided halibut sector each year.

5.5 Objectives of Proposed Action and its Legal Basis

The principal objectives of the proposed actions are to promote long-term planning, as well as social and economic stability in the charter halibut sector. Under Alternative 2, the purpose is to allow for the development of an entity that can represent halibut charter guided anglers in order to seek out halibut QS for transfer from the commercial halibut sector in Areas 2C and 3A. This action may promote long-term economic efficiency in the use of the halibut resource. The objective of Alternative 3 is to create stability in the halibut charter fishery by seeking to reduce the risk of a sudden increase in charter halibut effort from latent CHPs. This alternative proposes to reach this objective by retiring latent CHP.

The Halibut Act grants the Council the authority to oversee allocations of the halibut fishery in Alaskan and Federal waters. Setting overall removals of halibut is under the authority of the International Pacific Halibut Commission. The proposed action would require amendments to a number of Federal regulations.

5.6 Number and Description of Directly Regulated Small Entities

This section provides estimates of the number of harvesting vessels that are considered small entities. These estimates may overstate the number of small entities (and conversely, understate the number of large entities). The RFA requires a consideration of affiliations between entities for the purpose of assessing if an entity is small. The estimates do not take into account all affiliations between entities. 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 the American Fisheries Act (AFA) catcher vessel sectors are categorized as "large entities" for the purpose of the RFA under the principles of affiliation, due to their being part of the AFA pollock cooperatives. However, vessels that have other types of affiliation, (i.e., ownership of multiple vessel or affiliation with processors), not tracked in available data, may be misclassified as a small entity.

Entities that would be directly regulated by Council action include **CHP holders** (in action under Alternative 2 or 3), and **halibut QS holders in Area 2C and 3A** (in action under Alternative 2). Charter halibut businesses and CHP holders would be impacted under the proposed action in Alternative 2. **CQEs** and the entities holding **MWR** permits would be directed regulated through Alternative 2, as and relaxation of halibut charter management measures would also apply to the charter permits they hold in Area 2C and 3A. Although these entities may be indirectly impacted by Alternative 3, it is assumed that this action would not retire any CQE or MWR charter permits. It is also important to note that while charter anglers may be directly regulated through Alternative 2, these individual do not constitute 1) a small business, 2) a small non-profit organization, or a 3) small government jurisdiction, and therefore the RFA requirements to not apply to this user group. For impacts on charter halibut anglers refer to Section 4.8.2.1 in the RIR.

The analysis for the CSP determined that charter halibut businesses regulated under that action were all or almost all expected to be small entities, based upon SBA criteria that their annual gross revenue, from all sources, does not exceed $7.5 million (NPFMC 2013). This analysis provides some estimates of gross

revenue earned by an average charter operator in Area 2C (for example Table 2-59 in the RIR, NPFMC 2013). These data indicate that an average permit holder would need to hold more than 140 CHPs to generate $7.0 million in gross revenue (from only the charter fees). Since that time the threshold for a small entity category "other marine fishing" has increased by 0.5 million. Regardless, this threshold would be considerably high for an operation that just provided charter tours. While it is not uncommon in this sector for a single entity to hold and operate multiple charter vessels, the analysis concludes that all operators are likely to be small businesses, based upon the $7.5 million SBA threshold for RFA, and assumes this is the case.

This section considers the number of charter halibut business directly regulated in terms of the number of CHP holders. This may not be a perfect match as some operators may have multiple CHPs linked to multiple holder's names. Conversely, but less likely, some holders may be part of multiple charter halibut businesses. Numbers on sportfishing guide business and sportfishing guide licenses are also available; however, these numbers may not be representative as not all of these operations provide for halibut fishing. Table 4-4 indicates that of the CHPs in Area 2C there are 368 unique CHP holders for 535 unique CHPs. For Area 3A, there are 416 unique CHP holders for 439 unique CHPs.

Table 4-4 also demonstrates that there are 12 CQE's in Area 2C that hold community CHPs, and nine CQE's in Area 3A that hold community CHPs. The CQEs likely qualify, on their own merits, as small not-for-profit organizations, not dominant in their field. MWR permits are linked to military entities, and are therefore would not be considered: 1) a small business, 2) a small non-profit organization, or a 3) small government jurisdiction.

QS holders in the commercial halibut fishery would be directly regulated in Alternative 2 of this action, as regulatory amendments would be made to expand the QS market that they would have the opportunity to participate in. There were 1,080 halibut QS holders at the end of 2014 in Area 2C. There were 1,453 QS holders at the end of 2014 in Area 3A (Table 4-22). Depending on the Council's preferred alternative (PA) the number of entities may be truncated. If an RQE was only able to purchase B and C class QS, this would exclude some QS holder from being directly regulated by this action (although that is not to say they might not be indirectly impacted). Table 4-22 and Table 4-23 illustrate that if only including B and C class QS holders, this represents 698 and 1,046 entities for Area 2C and 3A, respectively.

Because there are no data to directly link QS holders with all other fishery revenue they may generate, it is not possible to determine the number of small entities with certainty. Vessels that are used to harvest IFQ are examined as a proxy. While vessels are not the entity directly regulated by this action more than one QS holder will often consolidate their IFQ on one vessel. For example, in Table 4-18 it is illustrated that there are 1,080 commercial QS holders in Area 2C and 1,453 QS holders in Area 3A. However, in 2014, 901 vessels reported IFQ landings. Therefore, it is very likely that most of the QS holders' total gross revenues are less than this amount and would be considered small entities. To the extent that a QS holder uses several vessels to harvest their IFQ (this may be the case if they hold QS in multiple regulatory areas), there may be entities greater than the threshold.

Of the 901 vessels that targeted halibut IFQ in 2014, revenue from five of these vessels are understood to exceed the $20.5 million threshold. This number includes vessel from all regulatory areas, although only QS holders from Area 2C and 3A would be directly impacted. Therefore, less than five entities are expected to be considered "large entities" in the commercial halibut fishery, while the vast majority are considered small.

Considering the 1,080 commerical halbiut QS holders in Area 2C, the 1,453 commerical halbiut QS holders in Area 3A, and the counts of CHP holders, it is important to note that there is also assumed

overlap in these counts of assumed small entities. This is expected to be the case between commercial halibut QS holders in Area 2C and 3A and also between those who may hold both commercial halibut QS and a CHP (those who self-transfer GAF, for example). Table 4-6 indicates that there are 43 individuals in Area 2C and 37 individuals in Area 3A that hold at least one CHP and also hold QS.

5.7 Recordkeeping and Reporting Requirements

Once the Council identifies a preliminary preferred alternative (PPA) this analysis will determine any reporting, record keeping and other compliance requirements of the alternatives, and if these reporting requirements necessitate specialized skills. The analysis will ultimately estimate the public reporting burden to comply, measured in time, across all directly regulated small entities, and multiply by a 'reasonable' wage rate to derive a crude estimate of the labor costs of compliance. These costs are then added to any capital costs (e.g., electronic broadcast costs, fax or phone costs), across the directly regulated entities.

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

Once the Council identifies a PPA this analysis will determine if any Federal rules have been identified that would duplicate or overlap with the proposed action.

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

After the Council has identified a PPA analysis will describe any significant alternatives to the proposed actions that accomplish the stated objectives, are consistent with applicable statutes, and that would minimize any significant economic impact of the proposed rule on small entities.

6 ENVIRONMENTAL ASSESSMENT

There are four required components for an environmental assessment (EA). Some of these components are addressed in other sections of this document. The need for the proposed action is described in Section 2.1, and the alternatives in Section 0. This EA addresses the probable environmental impacts of the proposed action and alternatives. A list of agencies and persons consulted is included in Section 8.

The purpose of this EA is to analyze the environmental impacts of the proposed federal action to allow a representative entity hold commercial halibut QS for a guided angler common pool in Area 2C and Area 3A, and to provide sufficient evidence to determine the level of significance of any potential impacts. This section evaluates the impacts of the alternatives and options on the various environmental components. The socio-economic impacts of this action are described in detail in the Regulatory Impact Review (RIR) and Initial Regulatory Flexibility Analysis portions of this analysis (Sections 4 and 5).

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

The National Environmental Protection Act (NEPA) also requires an analysis of the potential cumulative effects of a proposed action and its alternatives. An EA or EIS must consider cumulative effects when determining whether an action significantly affects environmental quality. The Council on Environmental Quality (CEQ) regulations for implementing NEPA define cumulative effects as:

> *"the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7).*

The discussion of past and present cumulative effects is addressed with the analysis of direct and indirect impacts for each resource component below. The cumulative impact of reasonably foreseeable future actions is addressed in Section 6.4.

6.1 Documents incorporated by reference in this analysis

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

Final EA: Regulatory Amendment for a Pacific Halibut Catch Sharing Plan for the Charter Sector and Commercial Setline Sector in International Pacific Halibut Commission Regulatory Area 2C and 3A (November 2013).

This EA was produced in during the development of the CSP for halibut in Areas 2C and 3A. It provides thorough background on the Pacific halibut stock: the life history, removals, stock status, harvest policy, coast-wide stock assessment and specific fisheries. The CSP was considered to be an action that promoted long-term conservation of the halibut stock by establishing a more stable allocation between the sectors and fostering a more easily managed charter halibut fishery. Separate accountability for wastage, implemented under the CSP, also promotes conservation by encouraging better handling of discarded fish by both the commercial and charter sectors (78 FR 39122). This document is available from: http://alaskafisheries.noaa.gov/analyses/halibut/earirirfa_halibut_csp1113.pdf

Final EA: For Amendment 66 to the Fishery Management Plan for Gulf of Alaska Groundfish To Allow Eligible Gulf of Alaska Communities to Hold Commercial Halibut and Sablefish Quota Share for Lease to Community Residents (March 2004).

This EA was produced during the development of the Community Quota Entity (CQE) program to examine environmental effects that may be expected from allowing a community entity to hold and lease QS to community residents. While the CQE has a very different practical intent than the proposed RQE, there is overlap in the structure used to develop such an entity. Therefore it is worthwhile to consider the CQE as a reference for impacts on the environment. This document is available from: http://alaskafisheries.noaa.gov/analyses/amend66/AM66_finalea.pdf

International Pacific Halibut Commission Report of Assessment and Research Activities (RARA) for 2014 (January 2015)

This document is produced annually by the International Pacific Halibut Commission (IPHC) and contains a description of the fishery and changes to regulations, population assessments, incidental catch assessments, and a description of recent research and survey work done by the IPHC. This document serves as a reference for latest status of the halibut stock and is used throughout this EA. This document is available from: http://www.iphc.int/library/raras.html

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

This EIS provides decision makers and the public an evaluation of the environmental, social, and economic effects of alternative harvest strategies for the federally managed groundfish fisheries in the GOA and the Bering Sea and Aleutian Islands management areas and is referenced here for an understanding of the groundfish fishery. The EIS examines alternative harvest strategies that comply with Federal regulations, the Fishery Management Plan for Groundfish of the GOA, the BSAI FMP, and the MSA. These strategies are applied using the best available scientific information to derive the total allowable catch (TAC) estimates for the groundfish fisheries. The EIS evaluates the effects of different alternatives on target species, non-specified species, forage species, prohibited species, marine mammals, seabirds, essential fish habitat, ecosystem relationships, and economic aspects of the groundfish fisheries. This document is available from: http://alaskafisheries.noaa.gov/analyses/specs/eis/default.htm.

6.2 Analytical Method

The two proposed action alternatives, establishing a program to allow for movement of commercial QS between commercial and charter sectors (**Alternative 2**) and a recency action on latent Charter Halibut

Permits (CHPs) (**Alternative 3**) are chiefly motivated by social and economic concerns. Extensive environmental analysis is not necessary for many environmental components. This section identifies the components of the environment that may be affected by Council action and warrant further discussion. Table 6-1 shows the eight components of the human environment and whether the proposed action or its alternative may have an impact on the component and require further analysis. No effects over the status quo are anticipated for ecosystem, benthic community, seabirds, groundfish, or marine mammals. Table 6-1 shows the potentially affected components: Pacific halibut and socioeconomic components of the human environment.

Table 6-1 Resources potentially affected by the proposed action and alternatives

	Potentially affected component						
Alternatives	Pacific halibut	Seabirds	Ecosystem	Benthic Community	Groundfish	Marine Mammals	Socio-economic
Alt 1: No Action	N	N	N	N	N	N	N
Alt 2: Development of RQE Program	**Y**	N	N	N	N	N	**Y**
Alt 3: Retirement of latent CHP	N	N	N	N	N	N	**Y**

N = no impact beyond status quo anticipated by the option on the component.
Y = an impact beyond status quo is possible if the option is implemented.

In order to consider which environmental components may be impacted by the proposed alternatives, it is necessary to understand how the fishery could change, compared to the status quo. (See Section 3 for a more thorough description of the two action alternates.) Alternative 2 in this analysis discusses a resource allocation issue: whether or not to allow an entity to be developed on behalf of charter halibut anglers, with the opportunity to purchase commercial halibut QS. No combination of the elements and options under Alternative 2 would influence the annual combined catch limit set by the IPHC for the charter and commercial sectors. Both sectors would still be constrained by the total catch limits set for each regulatory area based on halibut abundance. As both types of fishing occur under the status quo, the footprint of the fishery and relative timing of the fisheries would be expected to remain the same; as would regulations around seasons and gear type. The primary change that would occur would be an opportunity to shift in harvest intensity and size selectivity from the commercial halibut IFQ fishery in Area 2C and Area 3A to the charter halibut fishery in the corresponding area. The level of harvest intensity shifting sectors will depend on many factors, including the elements and options under Alternative 2. Along with the change in relative intensity of halibut harvest by each sector, there could be a possible change in the intensity halibut is harvested in specific locations (e.g., nearshore versus further off-shore).

Given this potential movement of halibut harvest opportunity between user groups within a regulatory area under Alternative 2, it is important to consider the effects that changes in the distribution and selectivity of fishing may have on the halibut stock. Using available information, Section 6.3.2 of this analysis examines the potential implications of this shift in sector harvest in terms of the halibut conservation efforts and accountability.

No effects are expected on ecosystems, benthic community, sea bird, groundfish, and marine mammal components of the environment from the proposed Alternative 2 (including its elements and options). No effects are presumed for these components because, as mentioned, the current manner in which the fish are harvested would remain unchanged from the status quo.

- No effects on the **ecosystem** are anticipated because the seasons, gear type, harvest limits and regulations protecting habitat and important breeding areas would remain the same. The impact of current fishing patterns on ecosystems are analyzed in in previous NEPA documents (NMFS 2007) and would not be changed by this alternative.

- Similarly the **benthic community** would not be affected from a shift in the intensity of hook-and-line halibut fishing from the commercial to the charter sector as proposed in Alternative 2. The footprint of these fisheries would be expected to remain consistent with the status quo and the levels of intensity would not reach a higher degree than they have in the past. That is, regardless of QS acquired by a potential RQE, guided anglers would not be able to exceed harvest limits above the current limits for the unguided sector (i.e., two halibut of any size).

- No impacts are expected on **seabirds** because the proposed action Alternative 2, would not introduce a new gear type or change fishing pattern in a way that would be more likely to result in the incidental take of seabirds. This alternative also would not affect the availability of forge fish for prey or their benthic habitat because the overall harvest allocation of halibut would not be changed by this action and the hook-and-line gear types used by both sectors would not change due to this action.

- Effects on **groundfish** under Alternative 2 are difficult to precisely specify due to the nature of the different fisheries and multitude of state and federal regulations that apply. In the commercial sector, groundfish is considered bycatch. In some instances in federal water, groundfish is required to be retained, in some instances it is required to be discarded, and in some instances it can be retained up to a certain maximum retainable amount (MRA). An MRA is ratio of incidentally caught species (groundfish species) compared to a basis species (halibut) calculated on an instantaneous basis. In GOA, there is a prohibition against discarding rockfish when halibut or sablefish IFQ is onboard, and the vessel operator has a Federal Fisheries Permit[42] (§679.7(8)). There is a similar mechanism in place for commercial halibut fisheries in state waters. In Central and Southeast state waters, all rockfish caught in the commercial halibut fishery must be retained and the portion above the bycatch allowance is surrendered to the state. In most state waters of the GOA, most rockfish are defined as bycatch only. For example, in Central Region, the only rockfish that can be targeted is black rockfish (Scott Meyer, 11/6/2015, personal communications).

  If halibut QS was moved from the commercial sector to the charter sector, it might be expected that groundfish bycatch would decrease proportionately. However, depending on the species, this amount of groundfish could be reallocated to the directed fishery if that target fishery were nearing the TAC.

  Groundfish catch in the charter sector is difficult to compare to bycatch rates in the commercial sector, because in many cases it is not bycatch. Anglers will often target groundfish simultaneously or sequentially to targeting halibut. Certain groundfish species can be caught in the same areas, at about the same depth, using the same bait as halibut (for example, some types of rockfish and Pacific cod). While fishing for halibut, anglers (or their charter operators) know that the gear is effective for other groundfish and fully intend to keep the other groundfish if

[42] An FFP is free of charge and unrestricted in number. It is required for the harvest of any groundfish species in Federal waters.

caught (up to the daily bag limit set by the state). If halibut fishing is poor, anglers may switch to groundfish fishing sooner. If the area has less strict management measures due to QS moved from the commercial sector to the charter sector there may be variable impacts on amount of groundfish caught as "bycatch" and the amount of time spend targeting groundfish.

Overall this is an area of research that could be expanded in effort to demonstrate a more precise impact on groundfish; however, a shift of halibut fishing intensity from the commercial sector to the charter sector is not expected to result in greater groundfish wastage, impact groundfish prey, effect stock biomass, or spatial or temporal distribution of groundfish in any significant way.

- In addition to the components listed above, it is not anticipated that Alternative 2 will affect **marine mammals** present in Area 2C or 3A. As the footprint of the fisheries and the gear types remain unchanged from the status quo, no changes in incidental takes or disturbance of marine mammals would be expected under action Alternative 2.

  Halibut is not a primary prey species for the majority of marine mammals in Area 2C and 3A. While a small halibut may occasionally contribute to the diet of the Steller sea lion, primary prey species include pollock, Pacific cod, and Atka mackerel. Halibut contributes to the diet of some cetaceans in Area 2C and 3A, such as killer whales; however, it is not considered a primary prey species. Killer and sperm whale depredation on halibut long-line vessels has become increasingly common as these whales have learned to track these vessels based on sounds of their acoustic signatures. While a potential shift in harvest intensity between commercial and charter halibut fisheries may slightly impact the accessibility of halibut to whales, due to the use of long-line gear in the commercial sector, it is not expected to impact the overall availability of halibut to whales.[43] An incremental reduction in the availability of Pacific halibut on longlines may result in incremental changes in the energy budget of a few whales, but killer and sperm whale behavior is sufficiently plastic to allow them to forage effectively for prey without depredating longline gear. Moreover, any potential localized depletion that may occur from changes in harvest intensity of halibut from the commercial sector to the charter sector would be unlikely to create significant adverse effects for a predator as mobile as a killer or sperm whale.

Alternative 3 would not expand an existing fishery: this alternative would retire latent Charter Halibut Permits (CHPs) based one of two proposed sets of criteria. Again, under this alternative no combination of the elements and options would change the annual combined catch limit set by the IPHC for the charter and commercial sectors. The footprint of the fishery, relative timing, seasons, gear type, and localized harvest intensity would remain consistent with status quo. Therefore, this alternative is not expected to impact any of the environmental components. This alternative is socio-economic in nature. Continued discussion about the impacts of Alternative 3 on the human environment are found in Section 4 and Section 5.

6.3 Pacific halibut

6.3.1.1 Life History, Development, and Feeding Behavior

Pacific halibut (*Hippoglossus stenolepsis*) are among the largest teleost fish in the world, with individuals growing up to eight feet in length and over 500 lb. IPHC studies show that female halibut typically grow

[43] Although studies have been done on whale depredation in the commercial long-line sector, no comparable studies where identified for the charter sector. It is assumed that in the charter sector, where anglers use jig gear, whale depredation is a significantly limited issue.

faster and attain much larger sizes than males. For this reason the commercial catch, which has a minimum size limit, is predominantly female. The North American catch of Pacific halibut, mostly by longline gear, consists of individuals chiefly from 10 to 200 lb. Few males reach greater than 80 lb, and nearly all halibut over 100 lb are females (IPHC 2014).

While female halibut tend to grow faster than the males, they are also shown to mature slower. Most male halibut are sexually mature by about eight years of age, while half of the females are mature by about age twelve. At this age, most females are generally large enough to meet the minimum size limit for the commercial fishery of 32 inches.

The number of eggs produced by a female is related to its size. A 50 lb female will produce about 500,000 eggs, whereas a female over 250 lb may produce four million eggs. Eggs are fertilized externally by the males. Halibut are believed to be "batch spawners", meaning that only a portion of a female's eggs are hydrated at a time and released, and this process is repeated several times over the spawning season until all the eggs have been expelled. Halibut range from depths up to 250 fathoms for most of the year and up to 500 fathoms during the winter spawning months. During the winter spawning months (November through March), the eggs are released, slowly move up in the water column, and are caught by ocean currents. Prevailing currents carry the eggs north and west. By the age of 6 months, young halibut settle to the bottom in shallow nearshore areas such as bays and inlets. Research has shown that the halibut then begin what can be called a journey back. This movement runs counter to the currents that carried them away from the spawning grounds and has been documented at over 1,000 miles for some fish.

Larvae begin life in an upright position with an eye on each side of the head. When the larvae are about an inch long, an extraordinary transformation or metamorphosis occurs: the left eye moves over the snout to the right side of the head and pigmentation on the left side fades. When the young fish are about six months old, they have the characteristic adult form and settle to the bottom in shallow inshore areas. The survival of young halibut, and the varying strength of each year class, may be driven by food availability, proximity to predators, temperature or other environmental factors, or a combination of these. Recruitment of juvenile halibut to the stock has been highly variable over the historical record, with apparently strong links to the productivity cycles of the north Pacific (i.e., the Pacific Decadal Oscillation).

Halibut feed on plankton during their first year of life. Young halibut (one to three years old) feed on euphausiids (small shrimp-like crustaceans) and small fish. As halibut grow, fish make up a larger part of their diet. Larger halibut eat other fish, such as herring, sand lance, capelin, smelt, pollock, sablefish, cod, and rockfish. They also consume octopus, crabs, and clams.

6.3.1.2 Distribution and Migration

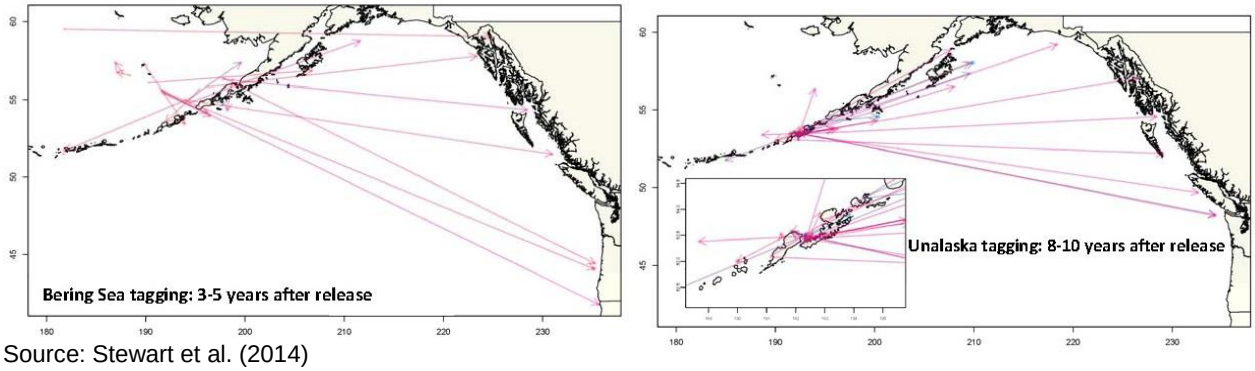
The range of Pacific halibut that the IPHC manages, covers the continental shelf from northern California to the Aleutian Islands and throughout the Bering Sea. Pacific halibut are also found along the western north Pacific continental shelf of Russia, Japan, and Korea. Research shows that Pacific halibut form a single genetic stock across their entire range, and abundance estimates are therefore derived for the coast-wide population (IPHC 2014). However, management of the resource is conducted on a regulatory area basis (see Figure 2-1).

Stewart et al. (2014) provides a general understanding of Pacific halibut distribution, indicating that the bulk of the pelagic juvenile halibut occurs in the western GOA, Aleutian Islands and southeastern Bering Sea. Densities of one to four year old halibut (not frequently encountered in setline surveys or the directed fishery) are typically also very high in these areas; this has been observed in trawl surveys, directed IPHC trawl investigations, and in the length-frequencies of halibut captured as bycatch in various trawl fisheries

operating in these areas. One- and two-year-old Pacific halibut are commonly found in inshore areas of central and western Alaska, but are virtually missing from southeast Alaska and British Columbia (IPHC 2014).

The IPHC has tagged almost 450,000 halibut since 1925 and over 50,000 tagged fish have been recovered. Traditionally, the tags are attached on the outside of the fish, where they will be seen by fishers and processors. A reward is paid for their return. The aggregate result of historical IPHC tagging programs indicates that the Bering Sea is a net exporter of halibut of all sizes to all other regulatory areas. New analysis of historical tagging projects conducted by the IPHC in the BSAI has recently been undertaken (Webster 2015). Results of this analysis indicate that juvenile halibut tagged in the BSAI and near Unalaska tend to remain near the area of tagging for the first year at large, but then distribute broadly to the Aleutian Islands, Gulf of Alaska (70 to 90 percent), and Area 2 (Figure 6-1). This would imply that by the time they enter the directed fishery (and are fully selected by the setline survey), halibut spending their first few years of life in the Bering Sea could be in virtually any regulatory area.

Figure 6-1 Release and recovery locations for juvenile halibut tagged in the Bering Sea, and near Unalaska



Source: Stewart et al. (2014)

It was long believed that most adult halibut tend to remain on the same grounds year after year, making only a seasonal migration from the more shallow feeding grounds in summer to deeper spawning grounds in winter, sometimes covering large distances. Recent research, however, has demonstrated that a measurable proportion of the adult population continues to migrate, generally, though not entirely, eastward, even at large sizes and older ages (IPHC 2014).

By the time Pacific halibut become large enough to be caught by the commercial fishery, much of the extensive counter-migration to balance egg and larval drift has apparently taken place. However, many adult halibut continue to migrate along the continental shelf and also migrate across the shelf annually, moving to deeper depths on the slope during the winter for spawning, and returning to shallow coastal waters in the summer months for feeding. Although halibut have been caught as deep as 4,000 ft., they are most often caught between 90 and 900 ft. (IPHC 2014).

Halibut also move seasonally between shallow waters and deep waters. Mature fish move to deeper offshore areas in the fall to spawn, and return to nearshore feeding areas in early summer.

6.3.1.3 Biomass, Abundance, and Assessment

The IPHC is responsible for monitoring and promoting the health of the Pacific halibut resource and engages in basic scientific research, fishery-dependent and fishery-independent sampling, as well as quantitative analyses to support management decisions. These scientific results are provided annually to the IPHC and stakeholders for decision-making during the Annual Meeting process, which typically occurs in January each year.

The process relies on several key steps: 1) the annual stock assessment integrates available data into a statistical framework which produces coastwide stock estimates and a decision table-based risk assessment; 2) coastwide stock estimates are apportioned by regulatory area; 3) the current harvest policy is applied to these area-specific estimates to produce yield estimates; and 4) these estimates, along with the coastwide risk assessment and input from stakeholder groups are used by the Commissioners to set annual catch levels for the upcoming year (IPHC 2014).

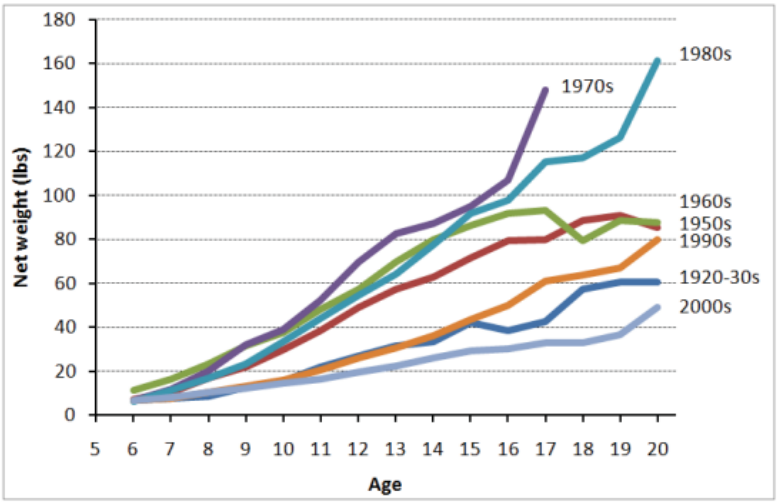
The annual stock assessment produced by the IPHC integrates observed data on removals from all directed and non-directed fisheries and the setline survey, along with the current understanding of biological processes such as maturity, natural mortality, and growth, in order to estimate the relative trend and abundance level of the resource coastwide. The stock assessment procedure underwent a major change in the mid-2000s to reflect a new understanding of halibut movements. As previously mentioned, until the mid-2000s, it was believed that halibut over 65 cm in length were essentially non-migratory, and the IPHC assessed the halibut stock in each regulatory area separately. Since tagging studies in the mid-2000s demonstrated that a substantial portion of the adult stock is migratory, the IPHC has assessed the halibut population as a single stock since 2006 (Meyer 2014). The IPHC combines directed and non-directed fishery and longline survey data coastwide in a single age and sex structured model of halibut abundance. For more rigorous description of the process the IPHC uses to model and predict risk neutral levels of halibut removal see Stewart and Martell (2015).

The halibut stock has undergone many fluctuations in abundance with consequent effects on the commercial fishery removals. These fluctuations are understood to be linked to changes in recruitment (the number of young halibut entering the population each year), which appears to be linked to the productivity of the northeastern Pacific Ocean, specifically, the Pacific Decadal Oscillation (an El Niño-like pattern of Pacific climate variability) (IPHC 2014).

In addition to changes in population, the Pacific halibut stock has experienced significant change in biomass due to changes in average size-at-age. In 2012, the coastwide average size in the commercial catch was was 23.2 lb. This is a large decrease from 20 to 30 years before when the coastwide average weights in the catch were 30 to 40 lb. For the past 25 years, weight at a given age has been decreasing. Similarly low weight-at-age was seen in the 1920s, but subsequently increased to a maximum in the 1980s (Figure 6-2).

The mechanisms creating these changes are poorly understood, but may represent a combination of density-dependent competition for food, ocean productivity, fishing effects, and other natural and anthropogenic factors. Such changes in size-at-age can result in fluctuations in the catch, even when similar numbers of fish are being removed from the stock. These changes in stock abundance have not been identical among all regulatory areas, with some showing much more pronounced trends and others more stability. To better understand the role of environment on the halibut stock, the IPHC began an environmental monitoring program aboard its setline survey in 2009, which provides an annual summer snapshot of conditions along the continental shelf of the eastern north Pacific and Bering Sea (IPHC 2014).

Figure 6-2 Changes in weight-at-age of Pacific halibut from the 1920s – 2000s

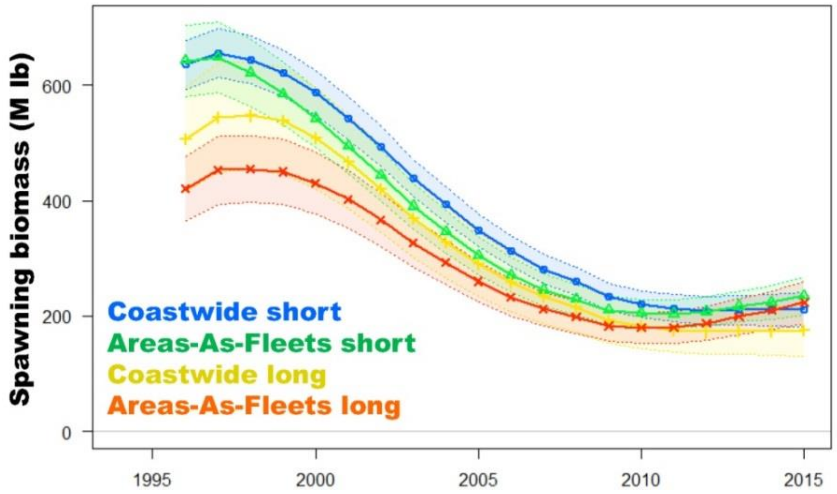


Source: The Pacific Halibut: Biology, Fishery, and Management, Tech Memo No. 59 (IPHC 2014)

For the past two years, the IPHC has used an ensemble approach to its coastwide stock assessment for the Pacific halibut stock, described in Stewart and Martell (2015). In this approach, multiple models are included in the estimation of management quantities, and uncertainty about these quantities. For 2014, these included two coastwide models and two areas-as-fleets models, in each case one using more comprehensive data available only since 1996, and the other using the full historical record (Figure 6-3). The results of the 2014 assessment indicate that the stock declined continuously from the late 1990s to around 2010. That trend is estimated to have been a result of decreasing size-at-age, as well as recent recruitment strengths that are much smaller than those observed through the 1980s and 1990s.

Since that time period, the estimated female spawning biomass appears to have stabilized near 200 Mlb, with flatter trajectories estimated in coastwide models and slightly increasing trends in areas-as-fleets models (Stewart & Martell 2015).

Figure 6-3 Trend in spawning biomass estimated from each of the four models included in the 2014 stock assessment ensemble



Source: Stewart & Martell 2015
Figure notes: Series indicate the maximum likelihood estimates, shaded intervals indicate approximate 95% confidence intervals

The ensemble model approach was developed to more accurately convey the uncertainty in the estimation of stock status and as a more robust assessment tool to avoid abrupt changes in the halibut stock assessment, such as that occurring between annual cycles in 2011 and 2012. In 2012, IPHC staff reported that then-recent stock assessments for Pacific halibut had consistently overestimated biomass and underestimated harvest rates due to a retrospective bias in the stock assessment. While the 2012 assessment was corrected for the retrospective bias and the assessment results were found to track observed halibut trends, estimates of stock size were decreased by approximately 30 percent compared to previous assessments.

Following the correction of the retrospective bias, historical female spawning and coastwide exploitable biomass of halibut have again been hindcast in the stock assessment. Table 6-2 provides biomass estimates from 1996 through 2015, and also identifies estimates of halibut fishing intensity (from all sources of estimated removals) during that time period. Fishing intensity (*F*) is the calculated fishing mortality rate at which the equilibrium spawning biomass per recruit is reduced to x percent of its value in the equivalent unfished stock.

Generally, studies of similar BSAI groundfish have confirmed that an exploitation rate of $F_{35\%}$ is an adequate proxy for the level of fishing that will achieve maximum sustainable yield (F_{MSY}; Goodman et al. 2002), commonly used as an "overfishing level" in Alaskan flatfish and other groundfish fisheries. Catch that corresponds to an $F_{40\%}$ rate provides a safety buffer to account for uncertainty in the stock assessment and catch estimates. An $F_{40\%}$ harvest rate is considered a conservative maximum catch limit in Alaskan fisheries (established in the Council's formulas for setting acceptable biological catch (ABC)). In the past three years, the IPHC has set catch limits that result in a total fishing impact that would be considered conservative by fishery management scientists (Table 6-2). However, the IPHC harvest policy is not an equilibrium MSY-based harvest policy like that for BSAI groundfish. Instead the IPHC policy is a dynamic policy including environmental influence on recruitment and target harvest rates that are less that MSY rates.

Table 6-2 Median population (millions of pounds, net weight) and fishing intensity estimates (based on median spawning potential ratio)

Year	Female Spawning Biomass	Fishing Intensity ($F_{xx}\%$)	Coastwide Exploitable Biomass
1996	584.6	49%	779.2
1997	605.7	43%	809.6
1998	591.4	42%	762.7
1999	567.1	40%	746.8
2000	529.5	40%	688.3
2001	483.9	38%	603
2002	434.5	34%	532.2
2003	382.6	30%	460.5
2004	339.5	28%	403.6
2005	299.5	26%	352.6
2006	266.7	26%	307.9
2007	241.5	25%	266.9
2008	224.4	25%	236.3
2009	204.6	26%	203.9
2010	197.8	27%	186.4
2011	195.3	31%	175.6
2012	197.2	35%	169.2
2013	203.9	38%	168.8
2014	208.5	43%	169.7
2015	215.1	44%	180.6

Source: Stewart & Martell 2015

The IPHC's harvest policy is based on the coastwide exploitable biomass of halibut, or fish that are accessible in the IPHC setline survey and to the commercial halibut fishery (generally over 26 inch halibut (O26)). The resulting coastwide estimates of biomass are apportioned to regulatory areas based on the area-specific setline survey weight per unit effort, weighted by the area of bottom habitat (0-400 fathoms) in each area. There are additional adjustments for harvest taken prior to the average survey date in each area and hook competition by other species (see Webster and Stewart 2015). Section 4.4.1.2.1 discusses the process by which the IPHC will then set the annual combined catch limit (CCL) for the charter and commercial allocation in Area 2C and Area 3A.

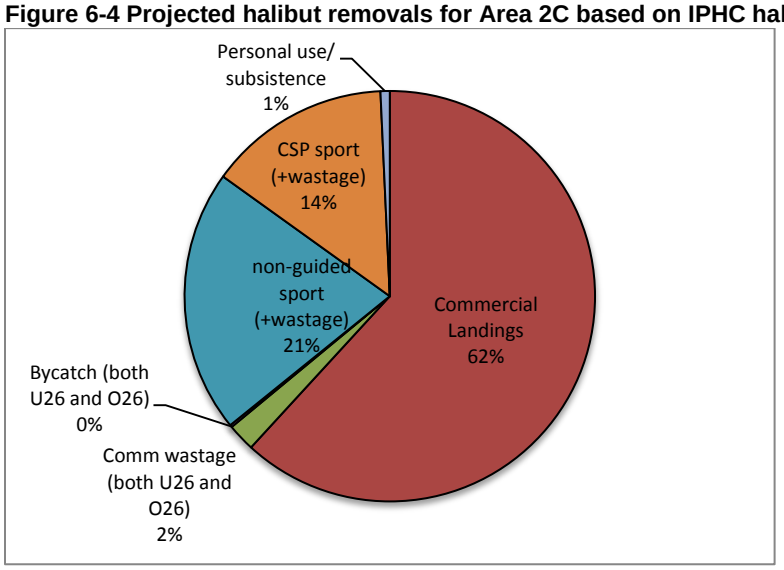
6.3.1.4 Removals

In the last four years, there is no information to suggest that halibut is subject to "overfishing," as that term is commonly applied to stocks managed under the Magnuson-Stevens Act. The Halibut Act does not define "overfishing" or require that an overfishing limit be defined. The halibut stock is currently managed conservatively, in a manner that is not likely to result in a chronic long term decline in the halibut resource due to fishing mortality (from all sources of removals) (NPMFC 2015).

However, the exploitable biomass of halibut is fully utilized. Five major categories of use occur in Alaska: commercial landings, sport (guided and unguided), subsistence and personal use, discard mortality in halibut targeted fisheries, and discard mortality in non-halibut directed fisheries. Sport removal of halibut (including the unguided sector) is an important proportion of halibut removals (Figure 6-4 and Figure 6-5). In Area 2C, the IPHC catch table for 2015 allocated 0.79 mt to the guided halibut sport fishing sector and its wastage (i.e. 14 percent of the total removals). As prescribed in the CSP, this

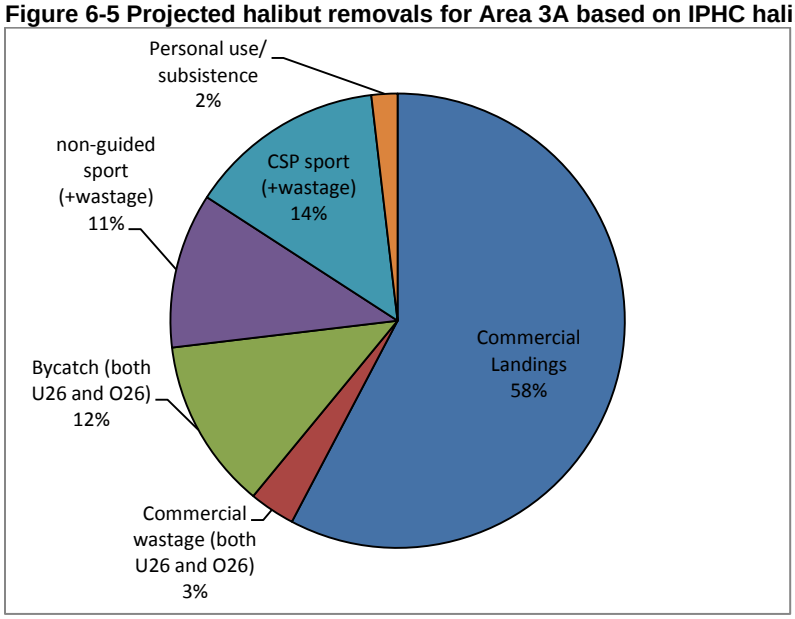
represents 18.3 percent of the total O26 FCEY. Area 3A guided halibut sport fishing sector was allocated 1.49mt (14 percent of the total projected removals for 2015).

Figure 6-4 Projected halibut removals for Area 2C based on IPHC halibut catch for the 2015 blue line values



Source: IPHC (2015) Final decision table, available at:
http://www.iphc.int/meetings/2015am/Final_Adopted_catch_limits_1_30_15.pdf

Figure 6-5 Projected halibut removals for Area 3A based on IPHC halibut catch for the 2015 blue line values



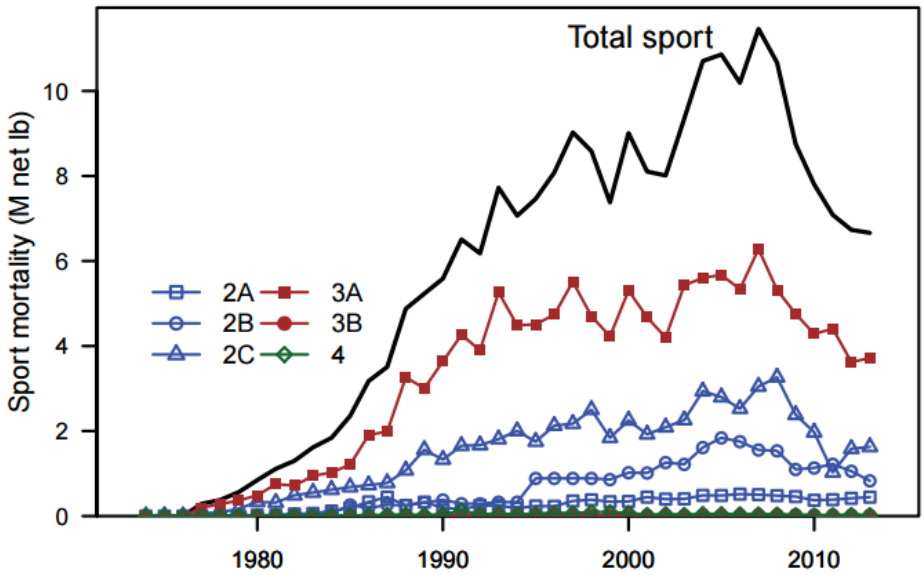
Source: IPHC (2015) Final decision table, available at:
http://www.iphc.int/meetings/2015am/Final_Adopted_catch_limits_1_30_15.pdf

The coastwide sport harvest of halibut (including guided and unguided) has grown considerably since IPHC began keeping sport catch statistics in the late 1970s (Figure 6-6). The sport harvest first reached one Mlb in 1981 and continued to grow, surpassing five Mlb in 1989 and 10 Mlb in 2004. Sport harvest peaked at 11.5 Mlb in 2007 and has since declined somewhat to 7.5 million pounds in 2011.

In Alaska, the harvest by the sport fishery has followed a similar trend, in part because it makes up the vast majority of coastwide sport halibut fishing. Alaska sport fishing harvest of halibut peaked at 9.4 Mlb

in 2009. Increased fishery restrictions coupled with declines in abundance have resulted in the harvest in 2012 of 6.87 Mlb Figure 6-6 reinforces the fact that all nearly all of Alaskan sport halibut harvest comes from Area 3A and Area 2C.

Figure 6-6 Sport catch removals (millions of pounds, net weight) since accounting began, 1977-2012



Source: The Pacific Halibut: Biology, Fishery, and Management, Tech Memo No. 59 (IPHC 2014)

Estimates of removals include estimates of wastage in the guided sport fishery. As described in Section **4.4.1.2.5**, ADF&G has estimated wastage (i.e., discard mortality) for the guided sport halibut fishery in Areas 2C and 3A since 2007. These estimates rely on available Statewide Harvest Survey estimates of the numbers of released fish, an assumed mortality rate based on hook use data, and modeling of the size distribution of released fish. Discard mortality rates for guided and unguided recreational fisheries are dependent on the hook type (circle versus other) that is used. The rates were derived as weighted estimates, with 3.5 percent mortality rate for halibut released on circle hooks and a 10 percent mortality rate for halibut released on all other hook types, weighted by the proportions of released fish caught on each hook type.

Table 4-9 and Table 4-10 in Section 4.4.1.2 illustrate harvest limits and guided angler harvest for the past twenty years in Area 2C and Area 3A. Since the second year the guideline harvest limit (GHL) was in place (2004), Area 2C exceeded its harvest limit from between 15 to 58 percent up until 2010. Management measures became stricter and Area 2C was able to stay within its GHL/ allocation until 2014, the first year of the CSP. Under the first year of the CSP, the 2A charter sector was estimated to be nine percent over its allocation. Preliminary estimates indicate the 2A charter sector to be 0.4 percent under its allocation for 2015, the second year of the CSP.

Between 2003 to 2013, Area 3A was able to stay very near or below its GHL, with one year contributing an overage of 10 percent. In the first year of the CSP, Area 3A was estimated at 16 percent over the catch limit, which was cut by almost one Mlb from 2013. Preliminary estimates for 2015 demonstrate that with increase management restrictions and a 100,000 lb increase in the harvest limit, Area 3A was nine percent over the charter catch limit for this area.

6.3.2 Effects of the Alternatives

The analysis of environmental effects are focused around Alternative 2, as Alternative 1 represents status quo environmental conditions, and Alternative 3 is socio-economic, and not focused around conservation concerns. Alternative 2 would allow for the formation of a non-profit recreational quota entity (RQE), for Area 2C and Area 3A. This alternative would provide an RQE(s) with the opportunity to peruse commercial halibut QS for use in a common pool for charter anglers for Area 2C and Area 3A separately.

The overall effects of the Pacific halibut directed fishing and other removals on the halibut stock is assessed annually in the IPHC's RARA (e.g., IPHC 2015). Table 6-3 describes the criteria used to determine whether the impacts on target fish stocks are likely to be significant. As described in Section 6.3.1.4, while the Halibut Act does not define "overfishing" or require such a limit to be defined, no information suggests that the Pacific halibut stock is subject to "overfishing". It is estimated that the Pacific halibut fishery under the status quo is sustainable as defined by IPHC harvest policy.

Table 6-3 Criteria used to determine significance of effects on target Pacific halibut stock

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

As discussed in the environmental scan (Section 6.2), there are many characteristics of the halibut fisheries that would not change under Alternative 2. The framework for the CCL, as described in Section

4.4.1.2.1, would not change with this action and the allocation tiers would still be determined by the thresholds detailed in Table 4-1 for Area 2C and Table 4-2 for Area 3A. Both sectors would still be constrained by the total catch limits set for each regulatory area based on halibut abundance. While there are differences in the way each sector is managed (i.e., the commercial halibut IFQ fishery is subject to in-season closure upon reaching the commercial catch limit by area, whereas the charter sector is not), an overage or an underage from either sector is accounted for in the subsequent year by increasing fishery removals that result in a lower estimated initial biomass. On average, over the past five years (2010-2014), Area 2C was approximately 580,000 lbs under its harvest limit, and Area 3A was approximately 86,000 lbs under its harvest limit. Therefore, despite variability in harvest rates compared to harvest limit (particularly for these year in the charter sector), removal is still accounted for. Under the currently proposed alternatives and options **it can be reasonably expected that the ability of stock to yield sustainable biomass by IPHC regulatory area on a continuing basis will not be significantly impacted by action under Alternative 2.**

One element that has been discussed outside of the proposed action could influence the magnitude of expected impacts on halibut biomass. At the Council meeting in February 2014, Gregg Williams of the IPHC staff spoke to the possible conservation and biological issues that could arise if an RQE was able to participate in the same **overage/ underage adjustment** that currently applies in the commercial halibut IFQ fishery. As described in Sections 4.5.1 the IFQ provisions provide for administrative adjustment of IFQ permits as a result of under-and overfishing the prior year up to ten percent. If IFQ pounds remain unfished, a regulatory provision allows up to ten percent of the pounds remaining at the time of landing may be carried over to the following year. If a person exceeds an IFQ permit by some amount, not greater than ten percent, the next year the holder of the QS may see a deduction in their permit account. Mr. Williams highlighted that while the amount of IFQ rolled-over from QS holders has essentially been a wash in the long-run (i.e., a small amount over, a small amount under), the ability for an entity that represents a much larger pool of individuals to impact the stock, could be much greater due to the amount of halibut this represents. In the case of the recreational sector, there would be no individual accountability for such overage/underage. The Council's current list of alternatives and options does not include this potential flexibility, and the Council should be clear whether it warrants further IPHC investigation.

It is not anticipated that Alternative 2 would have significantly adverse impacts on status quo levels of fishing mortality or wastage. In the IFQ fishery, vessel operators are prohibited from discarding any halibut (above the legal size limit) for which anyone aboard the vessel has available quota for.

There is no prohibition on discarding halibut in the halibut sport fishery. With recent management measures designed to limit the charter sector harvest, while balancing economic interest and angler preference, the charter anglers have likely changed their patterns of discarding. For example, under the reverse slot limit restrictions for Area 2C in 2015, charter anglers were required to discard halibut between 42 and 80 inches in length. However, these discards to not all constitute wastage. Halibut released by charter anglers have very high survival rates, depending on the type of hook used. A discard mortality rate has been estimated by ADF&G since 2007. The CSP introduced separate accountability for wastage (Section 4.4.1.2.5), and applies it to the total charter removal under the charter allocation. From a conservation perspective, benefits may change as slot limits and minimum size limits require the discard of halibut in different size thresholds.

Under Alternative 2, the primary environmental consideration with regards to the sustainability of the halibut resource includes the consideration of what could result from the opportunity to shift some harvest intensity from the commercial halibut IFQ fishery the charter halibut fishery. **Will there be effects on the spatial or temporal distribution of the halibut stock? Will there be localized depletion?**

This is a challenging impact to assess, because there are some pieces of information that are unavailable. This includes halibut biomass estimates for sub-areas and migratory patterns of halibut by sub-area.

While biomass information is not available at a localized level, creel sampling occurs at the major ports, so harvest-per-unit effort can be understood in terms of number of retained halibut (harvest) and angler-days (effort). Figure 4-12 and Figure 4-13 demonstrate these trends for by sub-area.

As part of the assessment of annual management measure ADF&F often produces this type of information on harvest, effort, and harvest-per-unit effort in sub-areas of 2C and 3A. This continuous monitoring can aid management in tracking significant changes in number of fish, average weight of halibut, number of angler days, and overall effort relative to the management measures set each year.

IPHC has conducted general research on localized depletion of halibut. One of their studies occurred in 1988, published in the 1992 RARA, before the IPHC considered the Pacific halibut population to be of one stock (Greernaert et al. 1992). In this early work, the IPHC conducted a depletion and tagging study in the northern portion of Area 2B, Graham Island. Two research trips were made, the first between May 31 and June 20, and the second July 17 through July 27. This made a combined 21 days fishing. They fished an area of about 1 by 2.5 miles with depths ranging between 87 and 105 fathoms. The same fishing patterns were repeated, the same bait used, time and number of hooks that were set. Halibut catch was reported to vary, but depletion never occurred.

More recent research on localized depletion occurred from the IPHC in 2008 (Webster 2008). The intent of this study was to model factors affecting catchability of Pacific halibut. The probability of capture is one factor that impacts catch per unit effort (CPUE) in IPHC setline surveys. This probability can be influenced by environmental covariates (depth, temperature), individual covariates (sex, maturity, size prior injuries), and fishing design variables (location of set, time of day or year, length of soak).

The study took place in the eastern part of Area 3A. Five clusters were selected for this study, three in the Yakutat setline survey region, and two in the Prince William Sound survey region. Fishing occurred in each area over five days. The technique is called removal sampling, in which a closed population is repeatedly sampled over multiple occasions in quick succession. The basic idea was that the catch at a station will decline on each successive set as more of the local population is removed, and modeling the rate of decline will allow the researchers to estimate the number of fish that were present prior to the first set. Successful modelling of catch probability depended on observing a declining catch and on the rate of migration not being too high. As the rate of migration approaches 1, it becomes harder to distinguish high catchability and low local abundance from low catchability and high local abundance.

The results of this research showed daily catches of legal-sized halibut have declined little over the five days, with some clusters showing no decline at all. IPHC researchers determined that with such large daily movement of animals into the catchable population, they would not be able to obtain useful estimation of catch probabilities. It is also noteworthy that the amount of fishing effort applied in this study is relatively low compared with season-long fishing effort. An alternative conclusion could be that the catch rates were not high enough to affect the local population. Catch rates and migration may be confounded in these studies. Relatively speaking, the fishing effort applied is quite small compared with a season-long effort of multi-year localized fishing such as might happen in some sport fisheries.

However importantly, as discussed in Section 6.3.1.3 , based on research around the migratory nature of the adult halibut, the IPHC considers Pacific halibut to be a single stock, and assesses it as such. Therefore, it can be concluded **that Alternative 2 is unlikely to affect the distribution of harvested**

stock either spatially or temporally such that it has an effect on the ability of the stock to sustain itself.

This is not to say that there could not be localized effects under Alternative 2. The Council has received numerous public comments in the past on the perceived impact or expected impacts of localized depletion. Depending on the type of charter operation (lodge versus day trips), vessel operators typically do not travel more than two to three hours from a home port. In many sub-areas for both Area 2C and 3A, the footprint of the halibut charter fishery overlaps with the footprint of the other halibut user groups, such as non-guided sport anglers and subsistence users. [44] Any potential localized depletion resulting from a shift in harvest intensity to more nearshore areas could impact these user groups. Given the resources, this could also be an important area of future research.

It should also be noted that one effect not analyzed here is the different size compositions that the commercially harvested halibut IFQ and recreationally harvested halibut may have. Depending on the amount transferred, effects of this difference might be evident. Particularly is there were annual transfer limits in place, this type of effect may be noted early on the program's development.

Finally, **Alternative 2 is not expected to have an impact on prey availability** such that it jeopardizes the health of the halibut stock. Both sectors of halibut fishing occur under the status quo. The footprint of the fishery and relative timing of the fisheries would be expected to remain the same; as would regulations around seasons and gear type; therefore, prey availability is not expected to be jeopardized by the potential for some redistribution of commercial halibut QS to the charter sector.

6.4 Cumulative Effects

NEPA requires an analysis of the potential cumulative effects of a proposed federal action and its alternatives. Cumulative effects are those combined effects on the quality of the human environment that result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of which federal or non-federal agency or person undertakes such other actions (40 CFR 1508.7, 1508.25(a) and 1508.25(c)). Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. The concept behind cumulative effects analysis is to capture the total effects of many actions over time that would be missed if evaluating each action individually. Concurrently, the Council on Environmental Quality (CEQ) guidelines recognize that it is most practical to focus cumulative effects analysis on only those effects that are truly meaningful. Based on the preceding analysis, the effects that are meaningful are potential effects on Pacific halibut. The cumulative effects on the other resources have been analyzed in numerous documents and the impacts of this proposed action and alternatives on those resources is minimal, therefore there is no need to conduct an additional cumulative impacts analysis.

This EA analyzes the cumulative effects of each alternative and the effects of past, present, and reasonably foreseeable future actions (RFFA). The past and present actions are described in the previous sections in this chapter.

This section provides a review of the RFFA that may result in cumulative effects on the Pacific halibut stock. Actions are understood to be human actions (e.g., a proposed rule to designate northern right whale critical habitat in the Pacific Ocean), as distinguished from natural events (e.g., an ecological regime shift). CEQ regulations require consideration of actions, whether taken by a government or by private

[44] This is a prime motivator for the Sitka Sound Local Area Management Plan (LAMP). This LAMP restricts commercial fishing vessels and charter vessels from halibut fishing in Sitka Sound to allow personal use fishermen and non-guided sport fishermen greater opportunity to catch halibut in waters near Sitka.

persons, which are reasonably foreseeable. This requirement is interpreted to indicate actions that are more than merely possible or speculative. In addition to these actions, this cumulative effects analysis includes climate change.

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

The following RFFAs are identified as likely to have an impact on a resource component within the action area and timeframe:

1) Regulatory amendment published in 79 FR 43679, limiting the use of hired masters to fish IFQ that was transferred after December 10, 2014.

2) Recent amendment to the GOA groundfish FMP: Allowing the use of pot gear in the GOA sablefish fishery, with expectations.

As this analytical process develops, this section will be expanded to analyze any direct and indirect potential environmental impacts of Alternative 2 in the context of these recently implemented or pending actions. This section will evaluate the potential significance of the impacts from Alternative 2 and the reasonably foreseeable future actions listed above, cumulatively.

7 PACIFIC HALIBUT ACT CONSIDERATIONS

7.1 Northern Pacific Halibut Act

The fisheries for Pacific halibut are governed under the authority of the Northern Pacific Halibut Act of 1982 (Halibut Act, 16 U.S.C. 773-773k). For the United States, the Halibut Act gives effect to the Convention between the United States and Canada for the Preservation of the Halibut Fishery of the North Pacific Ocean and Bering Sea. The Halibut Act also provides authority to the Regional Fishery Management Councils, as described in § 773c:

(c) Regional Fishery Management Council involvement

The Regional Fishery Management Council having authority for the geographic area concerned may develop regulations governing the United States portion of Convention waters, including limited access regulations, applicable to nationals or vessels of the United States, or both, which are in addition to, and not in conflict with regulations adopted by the [International Pacific Halibut Commission]. Such regulations shall only be implemented with the approval of the Secretary, shall not discriminate between residents of different States, and shall be consistent with the limited entry criteria set forth in section 1853(b)(6) of this title. If it becomes necessary to allocate or assign halibut fishing privileges among various United States fishermen, such allocation shall be fair and equitable to all such fishermen, based upon the rights and obligations in existing Federal law, reasonably calculated to promote conservation, and carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of the halibut fishing privileges.

It is necessary for the Council to consider the directions in the Halibut Act about the regulations that may result from this action. Much of the direction listed in § 773c(c) is duplicative with the Magnuson-Stevens Act's National Standard 4, requiring that regulations not discriminate between residents of different States, and directing that if halibut fishing privileges are allocated or assigned among fishermen, such allocation shall be fair and equitable. The relationship between this analysis and National Standard 4 is discussed above in Section 6.1.

The Halibut Act also directs regulations to be consistent with the limited entry criteria set forth in the Magnuson-Stevens Act. These are criteria that the Council and the Secretary must take into account when establishing a limited access system for a Magnuson-Stevens Act fishery. The criteria are listed below. For each of the criteria, a reference is provided to areas in the analysis that are particularly relevant to the consideration of that criterion, although they may not be the only information that is relevant to the issue.

(A) present participation in the fishery;
(B) historical fishing practices in, and dependence on, the fishery;
(C) the economics of the fishery;
(D) the capability of fishing vessels used in the fishery to engage in other fisheries;
(E) the cultural and social framework relevant to the fishery and any affected fishing communities;
(F) the fair and equitable distribution of access privileges in the fishery; and
(G) any other relevant consider actions.

8 PREPARERS

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10 APPENDICES

APPENDIX A

North Pacific Fishery Management Council

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Recreational Quota Entity Committee Minutes
April 7 2015, Anchorage, AK

The North Pacific Fishery Management Council's Recreational Quota Entity Committee met on April 7, 2015 in Anchorage, Alaska. Committee members present included: Ed Dersham (Chairman), Steve MacLean (Council staff), Martin Spargo, Bruce Gabrys, Ryan Littleton (phone), Duncan Fields (phone), Richard Yamada, Andy Mezirow. Ken Dole was absent. Other attendees included: Tom Gemmell, Dan Hull, Bob Powers, Rachel Baker, Brad Robbins, Nicole Kimball, and Sarah Marrinan.

NPFMC Chairman, Dan Hull, spoke briefly and reminded the committee that the Council and fishery sectors have supported a market-based approach as a long –term solution to allocation issues in the halibut fisheries. The Council believes that the CATCH proposal, and motion from the Council, provides the committee with a good foundation to begin to flesh out elements of a RQE program, and the Council expects to see something from the committee that can be analyzed and considered by the Council.

Steve MacLean provided a brief summary of the CATCH proposal, and Sarah Marrinan (Council staff) provided an overview of the Council motion from October 2014.

Following those brief presentations, the committee asked questions of clarity and provided comments on the Council motion. The majority of questions and discussion focused on the inclusion of Alternative 3, retirement of latent charter angler permits, in the Council motion. Most of the committee felt that Alternative 3 was not responsive to the Purpose and Need statement, and confounded the main issue of the intended action; creation of a Recreational Quota Entity. Some on the committee felt that creation of a RQE and retirement of "latent" permits were more appropriately considered in two separate actions. Some of the concern included the possibility that controversy over retirement of permits could delay or derail action on creation of a RQE. **The committee approved a motion that would make the focus of the committee the formation of a Recreational Quota Entity, and strike out Alternative 3 from the discussion of the Council motion.**

The committee had a brief discussion about the type of entity that is intended for a RQE. The funding source for the RQE would affect that tax liability for the RQE, and may affect the likelihood of the entity acquiring suitable funding to meet their goals. The committee also discussed the implications of prohibiting or allowing acquisition of D class shares by the RQE, and encouraged staff to include that discussion in the analysis.

The committee discussed the need for and timing of additional committee meetings and concluded that it is **not necessary for the committee to meet in June**, but acknowledged that a new committee chairman may wish to meet in October.

APPENDIX B

Table 21 to Part 679 – Eligible Communities, Halibut IFQ Regulatory Area Location, Community Governing Body That Recommends the CQE, and the Fishing Programs and Associated Areas Where a CQE Representing an Eligible Community May Be Permitted To Participate

Eligible GOA or AI community	Halibut IFQ regulatory area in which the community is located	Community governing body that recommends the CQE	May hold halibut QS in halibut IFQ regulatory **area and vessel category**				May hold sablefish QS in sablefish IFQ regulatory areas		Maximum number of CHPs that may be held in halibut IFQ regulatory		Maximum number of Pacific cod endorsed non-trawl groundfish licenses that may be assigned in the GOA groundfish regulatory area	
			Area 2C	Area 3A	Area 3B	Area 4B	CG, SE, WG, and WY (All GOA)	AI	Area 2C	Area 3A	Central GOA	Western GOA
Adak	4B	City of Adak				**All**		X				
Akhiok	3A	City of Akhiok.		**All**	**All**		X			7	2	
Angoon	2C	City of Angoon.	**A,B,C**	**A,B,C**			X		4			
Chenega Bay	3A	Chenega IRA Village.		**All**	**All**		X			7	2	
Chignik	3B	City of Chignik.		**A,B,C**	**All**		X				3	
Chignik Lagoon	3B	Chignik Lagoon Village Council.		**A,B,C**	**All**		X				4	
Chignik Lake	3B	Chignik Lake Traditional Council.		**A,B,C**	**All**		X				2	
Coffman Cove	2C	City of Coffman Cove.	**A,B,C**	**A,B,C**			X		4			
Cold Bay	3B	City of Cold Bay.		**A,B,C**	**All**		X					2
Craig	2C	City of Craig.	**A,B,C**	**A,B,C**			X					
Edna Bay	2C	Edna Bay Community Association.	**A,B,C**	**A,B,C**			X		4			
Elfin Cove	2C	Community of Elfin Cove.	**A,B,C**	**A,B,C**			X					
Game Creek	2C	N/A.	**A,B,C**	**A,B,C**			X		4			
Gustavus	2C	Gustavus Community Association.	**A,B,C**	**A,B,C**			X					
Halibut Cove	3A	N/A.		**All**	**All**		X			7	2	
Hollis	2C	Hollis Community Council.	**A,B,C**	**A,B,C**			X		4			

Table 21 to Part 679 – Eligible Communities, Halibut IFQ Regulatory Area Location, Community Governing Body That Recommends the CQE, and the Fishing Programs and Associated Areas Where a CQE Representing an Eligible Community May Be Permitted To Participate

Eligible GOA or AI community	Halibut IFQ regulatory area in which the community is located	Community governing body that recommends the CQE	May hold halibut QS in halibut IFQ regulatory **area and vessel category**				May hold sablefish QS in sablefish IFQ regulatory areas		Maximum number of CHPs that may be held in halibut IFQ regulatory		Maximum number of Pacific cod endorsed non-trawl groundfish licenses that may be assigned in the GOA groundfish regulatory area	
			Area 2C	Area 3A	Area 3B	Area 4B	CG, SE, WG, and WY (All GOA)	AI	Area 2C	Area 3A	Central GOA	Western GOA
Hoonah	2C	City of Hoonah.	**A,B,C**	**A,B,C**			X		4			
Hydaburg	2C	City of Hydaburg.	**A,B,C**	**A,B,C**			X		4			
Ivanof Bay	3B	Ivanof Bay Village Council.		**A,B,C**	**All**		X					2
Kake	2C	City of Kake.	**A,B,C**	**A,B,C**			X		4			
Karluk	3A	Native Village of Karluk.		**All**	**All**		X			7	2	
Kasaan	2C	City of Kasaan.	**A,B,C**	**A,B,C**			X		4			
King Cove	3B	City of King Cove.		**A,B,C**	**All**		X					9
Klawock	2C	City of Klawock.	**A,B,C**	**A,B,C**			X		4			
Larsen Bay	3A	City of Larsen Bay.		**All**	**All**		X			7	2	
Metlakatla	2C	Metlakatla Indian Village.	**A,B,C**	**A,B,C**			X		4			
Meyers Chuck	2C	N/A.	**A,B,C**	**A,B,C**			X		4			
Nanwalek	3A	Nanwalek IRA Council.		**All**	**All**		X			7	2	
Naukati Bay	2C	Naukati Bay, Inc.	**A,B,C**	**A,B,C**			X		4			
Old Harbor	3A	City of Old Harbor.		**All**	**All**		X			7	5	
Ouzinkie	3A	City of Ouzinkie.		**All**	**All**		X			7	9	
Pelican	2C	City of Pelican.	**A,B,C**	**A,B,C**			X		4			
Perryville	3B	Native Village of Perryville.		**A,B,C**	**All**		X					2

Table 21 to Part 679 – Eligible Communities, Halibut IFQ Regulatory Area Location, Community Governing Body That Recommends the CQE, and the Fishing Programs and Associated Areas Where a CQE Representing an Eligible Community May Be Permitted To Participate

Eligible GOA or AI community	Halibut IFQ regulatory area in which the community is located	Community governing body that recommends the CQE	May hold halibut QS in halibut IFQ regulatory **area and vessel category**				May hold sablefish QS in sablefish IFQ regulatory areas		Maximum number of CHPs that may be held in halibut IFQ regulatory		Maximum number of Pacific cod endorsed non-trawl groundfish licenses that may be assigned in the GOA groundfish regulatory area	
			Area 2C	Area 3A	Area 3B	Area 4B	CG, SE, WG, and WY (All GOA)	AI	Area 2C	Area 3A	Central GOA	Western GOA
Point Baker	2C	Point Baker Community.	**A,B,C**	**A,B,C**			X		4			
Port Alexander	2C	City of Port Alexander.	**A,B,C**	**A,B,C**			X		4			
Port Graham	3A	Port Graham Village Council.		**All**	**All**		X			7	2	
Port Lions	3A	City of Port Lions.		**All**	**All**		X			7	6	
Port Protection	2C	Port Protection Community Association.	**A,B,C**	**A,B,C**			X		4			
Sand Point	3B	City of Sand Point.		**A,B,C**	**All**		X					14
Seldovia	3A	City of Seldovia.		**All**	**All**		X			7	8	
Tatitlek	3A	Native Village of Tatitlek.		**All**	**All**		X			7	2	
Tenakee Springs	2C	City of Tenakee Springs.	**A,B,C**	**A,B,C**			X		4			
Thorne Bay	2C	City of Thorne Bay.	**A,B,C**	**A,B,C**			X		4			
Tyonek	3A	Native Village of Tyonek.		**All**	**All**		X			7	2	
Whale Pass	2C	Whale Pass Community Association.	**A,B,C**	**A,B,C**			X		4			
Yakutat	3A	City of Yakutat.		**All**	**All**		X			7	3	

N/A means there is not a governing body recognized in the community at this time.
CHPs are Charter halibut permits.
All means category A, B, C, and D quota share.