FINAL

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/

ENVIRONMENTAL IMPACT STATEMENT

FOR THE

INDIVIDUAL FISHING QUOTA MANAGEMENT ALTERNATIVE

FOR FIXED GEAR SABLEFISH AND HALIBUT FISHERIES

GULF OF ALASKA

AND

BERING SEA/ALEUTIAN ISLANDS

September 15, 1992

COVER SHEET

RESPONSIBLE AGENCIES

North Pacific Fishery Management Council
P.O. Box 130136
Anchorage , Alaska 99510

National Marine Fisheries Service
National Oceanic and Atmospheric Admin.
Department of Commerce
Washington, D.C. 20235

PROPOSED ACTION

Implementation of an Individual Fishing Quota management system for the halibut and sablefish fixed gear fisheries off Alaska.

FOR FURTHER INFORMATION CONTACT:

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ABSTRACT

This package contains the Supplemental Environmental Impact Statement for the individual fishing quota (IFQ) management alternative for the sablefish fisheries off Alaska and the Environmental Impact Statement for the IFQ management alternative for the halibut fisheries off Alaska. Both of these documents have previously undergone NEPA review, prior to the approval of an IFQ program for these fisheries. However, an additional, supplemental analysis to both of these documents is provided with this submission to solicit additional public comment on the potential impacts to the human environment of the IFQ program recommended by the North Pacific Fishery Management Council.

Comments on this draft are invited until _____. Send written comments to Steven Pennoyer, Director of the Alaska Region, National Marine Fisheries Service or to Clarence Pautzke, Executive Director, North Pacific Fishery Management Council at the above addresses.

LIST OF COMMON ACRONYMS

ABC	acceptable biological catch
ADF&G	Alaska Department of Fish and Game
AP	Advisory Panel
Council	North Pacific Fishery Management Council
CZMA	Coastal Zone Management Act
DAP	domestic annual processing
EEZ	exclusive economic zone
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FMP	Fishery Management Plan
IFQ	Individual Fishing Quota
IPHC	International Pacific Halibut Commission
MFCMA	Magnuson Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act
MSY	maximum sustainable yield
mt	metric tons
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OY	Optimum Yield
PSC	prohibited species catch
QS	quota share
RIR/IRFA	Regulatory Impact Review/Initial Regulatory Flexibility Analysis
SSC	Scientific and Statistical Committee
TAC	total allowable catch
TALFF	total allowable level of foreign fishing

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose of this Document

On December 8, 1991 the North Pacific Fishery Management Council (Council) recommended an Individual Fishing Quota (IFQ) program for management of the fixed gear sablefish and halibut fisheries off Alaska. For the purposes of this action, "fixed gear" is defined as all hook and line fishing gears (longlines, jigs, handlines, troll gear, etc.) in the GOA and BS/AI and pot gear for sablefish in the BS/AI. The Council's recommendation culminated over three years of discussion and analysis of the IFQ form of management as an alternative to the current open access system. The decision to recommend an IFQ management alternative was based on previous Council decision documents prepared to analyze this and other limited entry management alternatives. These previous analyses include: (1) A Supplemental Environmental Impact Statement (SEIS), dated November 16, 1989, which analyzed three alternatives to continued open access in the sablefish fisheries off Alaska - license limitation, annual fishing allotments, and IFQs, (2) A Supplement to this SEIS which analyzed specific IFQ alternatives for sablefish, (3) a revised Supplement to the SEIS, dated May 13, 1991, which further analyzed specific IFQ alternatives for sablefish, and (4) an Environmental Impact Statement (EIS), dated July 19, 1991, which analyzed various IFQ alternatives for management of the halibut fisheries off Alaska.

This document has been prepared as a supplement to the previous analysis documents listed above. Specifically, it is: (1) an additional Supplement to the SEIS prepared for sablefish limited entry alternatives and (2) a Supplement to the EIS prepared to analyze IFQ alternatives for the halibut fisheries. It is intended to provide additional information on the specific IFQ program recommended by the Council at the December 1991 meeting. This document, in combination with those listed above, forms the complete Environmental Impact Statements to be submitted for review under requirements of the National Environmental Protection Act (NEPA). Following publication in the FEDERAL REGISTER, public comment will be accepted for a period of 45 days. Following this 45 day public comment period, the documents will be revised as necessary to address the comments received. The complete package would then be forwarded for review by the Secretary of Commerce (Secretary), during which additional comments can be directed to the Secretary.

This document will address the specific provisions contained in the recommended program, as they relate to both sablefish and halibut, and provide additional analysis of the potential effects of the program on the human environment, as required under NEPA regulations. This document is provided for Council and public review prior to submission of the IFQ amendment package for review by the Secretary of Commerce. This document will constitute part of the overall amendment package which will also include previous analysis documents. This and other documents are intended to provide the background and assessments necessary for the Secretary of Commerce to determine if the management measures contained herein are consistent with the Magnuson Act and other applicable laws.

Additional public comment on the proposed IFQ program will also be received by the Council at their April 1992 meeting in Anchorage, Alaska. Without further action by the Council on this issue, the amendment package would be forwarded for Secretarial review after the April meeting.

1.1.1 Management Background

The following is a summary of Council actions that culminated in its decision to recommend a specific IFQ program for the fixed gear halibut and sablefish fisheries off Alaska. This summary is in part taken from previous reports which included more detailed discussions of Council actions in the late 1980s.

The Council has discussed limited entry options for various fisheries under its jurisdiction since the late 1970s. A moratorium on entry into the halibut fisheries was recommended by the Council in 1983, but was rejected by the Secretary of Commerce. This moratorium was recommended in response to ever shortening seasons and other management problems associated with a derby style fishery. In the mid-1980s, the Council began consideration of some type of limited entry for the sablefish fisheries. This fishery was rapidly evolving into a derby style fishery similar to the halibut fisheries.

The Magnuson Act specifically authorizes the Councils to establish a system for limiting access to a fishery in order to achieve optimum yield, if, in developing such a system, the Council and Secretary take into account the following considerations:

1. present participation in the fishery
2. historical fishing practices in, and dependence on, the fishery
3. the economics of the fishery
4. the capability of fishing vessels used in the fishery to engage in other fisheries
5. the cultural and social framework relevant to the fishery, and
6. any other relevant considerations.

Consideration of the above factors is mandated under Section 303 (b)(6) of the Magnuson Act. The Act also lists seven National Standards with which each Fishery Management Plan must be consistent. National Standard 4 states that "conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation shall be: (1) fair and equitable to all such fishermen; (2) reasonably calculated to promote conservation, and (3) be carried out in such a way that no particular individual, corporation, or other entity acquires an excessive share of such privileges".

Beginning in 1985, the Council began exploring the options to open access by soliciting input from the fishing industry regarding potential management alternatives. In 1987, the Council took another step towards limited entry by adopting a Statement of Commitment which dedicated the Council to "develop strategies for license limitation or the use of individual transferable quotas in the sablefish fixed gear fishery". Public workshops were sponsored by the Council in early 1988 to gather industry and public input and to further develop feasible options to the derby fishery. In mid-1988 the Council directed its staff to develop five management options for the sablefish fixed gear fishery: (1) continued open access without modification, (2) modified open access, (3) individual fishing quotas, (4) license limitation, and (5) a combined license, quota, and open access system.

After reviewing a draft analysis document, the Council went on record in December 1988 declaring the status quo (open access) as unacceptable for the sablefish fisheries and expressed a desire to further explore the options of license limitation and IFQs. In early 1989, the Council began serious consideration of limited access alternatives for other fisheries as well. It was at this time that the Council renamed the Sablefish Management Committee as the Fishery Planning Committee and notified the public that it was considering similar limited entry management options for all fisheries, particularly for the halibut fisheries off Alaska.

In November of 1989, the Council reviewed a Supplemental Environmental Impact Statement which analyzed four options for future management of the sablefish fisheries off Alaska: (1) continued open access, (2) license limitation, (3) IFQs, and (4) a combination system called annual fishing allotments, or AFAs. The Council also identified the following 10 problems in the sablefish fishery which the management alternatives were expected to address:

1. Allocation conflicts
2. Gear conflict
3. Deadloss from lost gear
4. Bycatch loss
5. Discard mortality
6. Excess harvesting capacity
7. Product wholesomeness
8. Safety
9. Economic stability in the fisheries and communities
10. Rural coastal community development of a small boat fleet

Based on the analysis contained in the SEIS, the Council decided that license limitation and annual fishing allotments were not viable alternatives to solve the problems facing the sablefish fixed gear fisheries. The decision was made to perform further analyses of the IFQ option.

In April of 1990 the Council reviewed the Supplement to the SEIS which analyzed specific IFQ programs against the open access alternative. By December of 1990, still unable to reach a final decision on the IFQ alternative, the Council directed staff to prepare a revised Supplement which analyzed various forms of an IFQ management alternative. The four IFQ systems being analyzed depicted a range of alternatives in terms of qualification periods, transferability restriction, ownership caps, community development quotas, and other system specifics. At this time the Council also directed staff, under the guidance of the Fishery Planning Committee, to analyze a similar set of IFQ alternatives for the halibut fisheries with the intent that an IFQ program would eventually encompass both the halibut and sablefish fisheries.

The revised Supplement to the SEIS for sablefish fishery management was released for public review on May 14, 1991 with a final decision scheduled for June of 1991. Concurrently, an Environmental Impact Statement (EIS) was being prepared to analyze the IFQ alternatives for the halibut fisheries. This document was released on July 19, 1991 for public review with a final Council decision scheduled for September of 1991. The intent was to hold submission of the sablefish IFQ alternative (if recommended) until final Council action on the halibut IFQ alternative and submit them as a combined package to the Secretary of Commerce. The Council ultimately postponed decisions on both fisheries until the September 1991 meeting.

At the September 1991 meeting the Council provisionally recommended an IFQ management alternative for both fisheries. Though there were differences between the IFQ systems for the two fisheries, they were very similar and the intent was that the two systems would be integrated into a combined IFQ program for sablefish and halibut fisheries. As part of the provisional recommendation, the Council established an IFQ Implementation Team comprised of staff from various government agencies and representatives from affected industry groups. The task of this team was to work out the logistical details of the Council's preferred IFQ alternative and to provide an Implementation Plan for Council and public review prior to final Council recommendation of the IFQ alternative at the December 1991 meeting. The Draft Implementation Plan was made available for review and a public hearing was held prior to the start of the December Council meeting. The purpose of the public hearing was to solicit additional public comment on the Council's Preferred Alternative from September and, in particular, the details of IFQ implementation contained in the Implementation Plan. Incorporating some minor changes in the program from the September version, the Council, on December 8, 1992, recommended the halibut and sablefish fixed gear fishery IFQ alternative that is evaluated in this supplement.

All in all, the issue of limited entry for the sablefish and/or halibut fisheries has been on the Council's agenda for 26 of its recent meetings including every meeting since 1988. The April 1992 meeting will mark the 27th meeting for which this issue will be on the agenda. At the January 1992 meeting the Council requested that the IFQ amendment package not be submitted for Secretarial review until after the April Council meeting. The reason is to allow the Council and public the opportunity to review the additional analysis contained in this document before sending the package forward for Secretarial review. This document is released for review under the guidelines of the National Environmental Protection Agency (NEPA) and public comment will be accepted for 45 days after the date of filing posted on the front of this document. Following NEPA review, this document, along with all past documents prepared for limited entry management alternatives, will be submitted to the Secretary of Commerce as part of the total IFQ amendment package recommended by the Council. The Council could alter this sequence of events by rescinding, at the April 1992 meeting, their previous action which recommended the IFQ program for the sablefish and halibut fisheries off Alaska.

1.1.2 Description of Previous Council Decision Documents

This section is intended to provide an overview of the contents of previously prepared documents upon which the Council based its decision to recommend a specific IFQ program for the management of the fixed gear sablefish and halibut fisheries. These documents have been and are available in their entirety from the Council offices. This overview is intended to aid the reviewers of this Supplemental Analysis document in understanding the history of this issue in the Council's arena. The detailed Table of Contents from each document is presented in Appendix A to supplement the information presented below. Note that each of these documents contains a detailed history of the evolution of the IFQ management alternative through the Council process. This includes descriptions of the scoping meetings and public hearings held to solicit public input on the issue as well as description of the results of discussions by the Council, AP, SSC, and other Council subcommittees.

These previous documents include a detailed discussion of the 10 problems facing the fisheries as identified by the Council. A discussion of the goals and objectives of a limited entry alternative is also provided.

1.1.2.1 Draft Supplemental Environmental Impact Statement for Longline and Pot Gear Sablefish Management in the Gulf of Alaska and the Bering Sea/Aleutian Islands - dated November 16, 1989

The primary focus of the document was an evaluation of license limitation, IFQs, and annual fishing allotments as alternatives to continued open access management for the sablefish fisheries. The introductory chapter of the document contains a detailed history of the evolution of the limited entry alternatives and a description of the problems associated with the derby fishery which has resulted under open access management. A history of the sablefish fisheries off Alaska is provided with descriptions of the biology of sablefish and the physical environment within which the fishery operates.

Chapter 3 of the document contains a description of the economic and social environment surrounding the sablefish fisheries with attention given to the harvesting, processing, and marketing sectors of the industry. Subsequent analysis of each of the four management alternatives, including open access, is expressed in terms of potential impacts on the harvesting sector, processing sector, maritime communities, consumers and markets, and the administrative enforcement environment. Each of the four alternatives is also assessed in terms of its ability to address the 10 major problems in the fishery as identified by the Council.

An additional section of the document lists 23 social, management, and business concerns by which to judge the four alternatives and provides an assessment of the potential results of each of the alternatives relative to the 23 concerns listed. Consistency of the proposed alternatives with Magnuson Act requirements and other applicable laws is provided in the final chapter. The document formed part of the basis for the Council's decision to eliminate license limitation and annual fishing allotments from further consideration and to concentrate on IFQs as an alternative to continued open access. The Council determined that license limitation and annual fishing allotments were unacceptable alternatives in terms of addressing the problems facing the sablefish (and halibut) fisheries. They then directed staff to prepare a Supplemental document, described below, which analyzed various IFQ options against continued open access.

1.1.2.2 Supplement to the Supplemental Environmental Impact Statement for Longline and Pot Gear Sablefish Management in the Gulf of Alaska and the Bering Sea/Aleutian Islands - dated May 13, 1991

The document is a revision of a previously released draft supplemental document. As with the original SEIS prepared for sablefish management, the document also was submitted to cover the requirements for a Regulatory Impact Review (RIR) and Initial Regulatory Flexibility Analysis (IRFA). The focus of the document is a more detailed analysis of four specific IFQ programs versus the continued open access form of management. The document further describes the evolution of the IFQ concept, the details of the four IFQ alternatives, and the functional differences between these alternatives.

Chapter 2 of the document contains a comparison of the status quo (open access) alternative and an IFQ option in general terms. This assessment contains further descriptions of the current, open access fisheries and the effects of this style of fishery management on the resource, fishermen, management agencies, and other aspects of the fishery. The implications of a generalized IFQ approach to managing the fisheries are discussed, with an economic model provided to depict a generalized assessment of the benefits from an IFQ system.

The second phase of the analysis in the document is a detailed description of the specific provisions contained in each of the four IFQ alternative programs which were developed through the Council process. The identification of these four alternatives came as a result of lengthy Council discussion, meetings of the Fishery Planning Committee, and input from interested parties in the fishing industry. The four alternatives represented a broad range of options which included differing provisions for determination of eligibility to receive quota shares, which years of landings history to use in determination of quota shares, ownership restrictions, transferability restrictions, vessel categories, discard and bycatch accounting, community development quotas, and other specific provisions. The analysis provides a detailed assessment of where the quota shares would be distributed, under each IFQ alternative, in terms of state of ownership, distribution across various vessel categories, and between the various management districts in the Gulf of Alaska and the Bering Sea/Aleutian Islands. The analysis attempts to identify the possible effects of the other specific provisions of each of the four IFQ alternatives.

Chapter 3 of the document is a description of the administrative, budgetary, and enforcement aspects associated with each of the alternatives. With few exceptions, the IFQ alternative approved by the Council at the December 1992 meeting is a combination of provisions from each of the alternatives contained in the document, consistent with the expressed intent of the Council when releasing the document for public and industry comment.

1.1.2.3 Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for Proposed IFQ Management Alternatives for the Halibut Fisheries in the Gulf of Alaska and the Bering Sea/Aleutian Islands - dated July 19, 1991

The document is similar to the Supplemental analysis prepared for sablefish (described above) in that it analyzes various IFQ alternatives compared to the open access form of management currently in place. Because there are no preceding documents prepared for the halibut IFQ alternative, the document is more comprehensive in nature. Chapter 1 of the document reviews the history of management of the halibut fisheries and describes the current state of the fishery under open access management. This includes a review of the goals and objectives of limited entry as an option to the current form of management.

Chapter 2 of the document describes the biology of Pacific halibut and the physical environment of the areas of the North Pacific which would be affected by the proposed management alternatives. Chapter 3 describes the economic and social environment surrounding the halibut fisheries off Alaska. This includes information on the harvesting, processing, and marketing sectors of the industry. Trends in seasons, landings, and participation in the fishery are provided utilizing data from the halibut fisheries up through 1990. Information on recreational and subsistence fisheries is also provided in this chapter.

Chapter 4 contains the bulk of the analysis of the IFQ alternatives and is divided into two major sections: the first section contains an assessment of the effects of an IFQ program on 31 aspects of the fishery including vessel safety, gear loss, bycatch, harvesting costs, economic stability in individual operations and communities, and the ability of the IFQ option to address specific problems identified in the current fisheries. The second section of Chapter 4 contains the detailed analysis of the specific provisions of the four IFQ alternatives under consideration. As with sablefish, these included different options for qualification for quota share, calculation of quota share, distribution of quota share among the potential recipients, vessel categories, transferability restrictions ownership restrictions, and community development quotas. With only a few exceptions, the Council ultimately settled upon a combination of the provisions outlined in the document.

Chapter 5 of the document provides information on the social environment surrounding the halibut fisheries off Alaska. This includes: (1) an assessment of the present participation patterns in the fishery (commercial and subsistence harvests) for each of the halibut management areas in the Gulf of Alaska and the Bering Sea/Aleutian Islands, much of which was broken down by residents of Washington and Oregon and of communities throughout coastal Alaska; (2) an assessment of the historical fishing practices of each group of participants and their dependence on the halibut fisheries; (3) a description of Alaskan Native fisheries; (4) community profiles of affected coastal communities including descriptions of the affected work force and relative importance of the halibut fishery to these communities; and, (5) an assessment of the possible impacts to the social environment of these communities resulting from an IFQ program and from continued open access.

Chapter 6 addresses the administrative, budgetary, and enforcement aspects of IFQ management within the context of a combined sablefish and halibut IFQ program. The remainder of the document contains a Regulatory Impact Review and review of the consistency of the proposals with other applicable laws. An Appendix contains a survey of other limited entry programs in existence in other parts of the United States and the rest of the world.

The documents described above represent the decision documents upon which the Council based its recommendation of an IFQ program. That decision was also based on an administrative record built over the past three years consisting of input from written and oral testimony from public and industry

as well input from the Council's Industry Advisory Panel and the Scientific and Statistical Committee. These documents are available upon request from the Council offices in Anchorage.

1.2 Summary of the Proposed Alternatives

Two alternative systems are being considered for management of the halibut and sablefish fixed gear fisheries off Alaska: (1) the current, open access system which is characterized by fixed quotas for each IPHC and NPFMC regulatory area and increasingly short openings, and (2) individual fishing quotas (IFQs). Note that the Council has recommended the IFQ alternative, but this recommendation has not yet been forwarded to the Secretary of Commerce for approval.

1.2.1 Status Quo - Continued Open Access

This alternative maintains the existing management regimes for the halibut and sablefish fixed gear fisheries. Therefore, it does not include the expanded use of what have often been referred to as traditional management measures. It only includes the changes that can be made without an FMP or regulatory amendment. Although the management regime would remain unchanged with this alternative, the nature of the fisheries could change substantially.

1.2.2 Individual Fishing Quotas (IFQs)

The individual fishing quota (IFQ) alternative would issue individual rights to fish to a group of past participants. The rights given to each person would be proportional to his fixed gear halibut and sablefish landings during a qualifying period determined by the Council. The rights for each year would be quantity, species, area, and vessel class specific. With the exception of those who are fishing with community development quotas, only holders of IFQs would be allowed to make fixed gear landings of halibut and sablefish. Past participation would be defined on the basis of vessel ownership or via a qualified lease of a vessel. After reviewing several options for the specific provisions of the IFQ program, the Council recommended a specific IFQ program at its December 1991 meeting. If approved by the Secretary, the plan will be implemented no sooner than 1994.

A summary of the Council's recommendations is presented below. The implementation program is explained more fully in Chapter 5 and the IFQ program is defined in the Council's own language in Appendix B.

Definitions

The definitions contained in the Magnuson Fishery Conservation and Management Act are augmented by those listed below.

1. "Person" means any individual who is a citizen of the United States or any corporation, partnership, association, or other entity (whether or not organized or existing under the laws of any state) which meets the requirements set forth in 46 CFR Part 67.03, as applicable.

2. An "individual" means a U.S. citizen.

3. A person's "quota shares" (QS) for each area equal the person's fixed gear landings (qualifying pounds) for each area fished.

4. The "total quota shares" (TQS) for a management area is the sum of the QSs of all persons for an area. The TQS may change over time due to appeals, enforcement actions, or other management actions.

5. "Individual fishing quota" (IFQ) means the quota that a person receives. For a specific year, species, and area, the amount of a person's IFQ is determined by the QS the person controls, the TQS, the fixed gear TAC, and the level of the fixed gear community development quota all for that year, species, and area. Each person's IFQ will be proportional to his QS. For example, a person who controls 0.1% of the TQS receives an IFQ equal to 0.1% of the fixed gear TAC minus any fixed gear community development quota. That is, IFQ = (QS/TQS) x (FGTAC - FGCDQ). The IFQs are also specific to a vessel class.

6. "Fixed gear" is defined to include all hook and line fishing gears (longlines, jigs, handlines, troll gear, etc.) in the GOA and BS/AI and pot gear for sablefish in the BS/AI. For purposes of determining sablefish QSs and TQSs, legal pot gear landings from the Gulf of Alaska also will be counted.

7. "Catcher boat" or "catcher vessel" means any vessel which, during a given trip, delivers none of its groundfish catch in a frozen or other processed state.

8. "Freezer boat" means any vessel which, during a given trip, delivers some or all of its groundfish catch in a frozen or other processed state.

9. "Bona fide fixed gear crew member," is defined as any person that has acquired commercial fish harvesting time at sea (i.e. fish harvesting crew), that is equal to 5 months of any commercial fish harvesting activity *(in a fishery in state or federally managed waters of the U.S.)*[1] Additionally any individual who receives an initial allocation of QS will be considered a bona fide crew member.

Characteristics of the IFQ Program

1. Quota shares (QSs) and individual fishing quotas (IFQs) will be species, area, and vessel class specific. IFQs are also year specific.

2. The species are halibut and sablefish.

3. The sablefish areas are:

    a. Southeast Outside/East Yakutat,
    b. West Yakutat,
    b. Central Gulf,
    c. Western Gulf,
    d. Bering Sea, and
    e. Aleutian Islands.

4. The halibut areas are the eight IPHC areas from 2C through 4E.

5. The halibut vessels classes are:

    a. catcher boats $\leq$ 35 feet L.O.A.,
    b. catcher boats > 35 feet and $\leq$ 60 feet,
    c. catcher boats > 60 feet, and
    d. freezer boats.

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[1]Text shown in *italics* provides clarification by the staff to indicate Council intent.

6. The sablefish vessels classes are:

   a. catcher boats $\leq$ 60 feet L.O.A.,
   b. catcher boats > 60 feet, and
   c. freezer boats.

7. Initial assignments of halibut quota shares shall be made to each person who owned or leased a vessel with legal fixed gear halibut landings from off Alaska between 1988 and 1990. Similarly, initial assignments of sablefish quota shares shall be made to each person who owned or leased a vessel with legal fixed gear sablefish landings from the EEZ off Alaska between 1988 and 1990.

8. The amount of the initial halibut (sablefish) quota shares for an area assigned to each person will equal the halibut (sablefish) landings for the person's best five years between 1984 and 1990 (1985 and 1990) for that area.

9. For the purposes of items 7 and 8, landings of a vessel will be counted as the lease holder's if there is one; otherwise, they will be counted as the vessel owner's. This will be done on a trip by trip basis.

10. During the qualification period, a vessel is considered to have been a freezer boat in a given year, if during that year it processed any of its commercial fixed gear groundfish landings.

11. The initial assignment of quotas shares to each person by vessel class will be based on the vessel class used in the most recent year through September 25, 1991. All QS will be assigned to the vessel class of the most recent year of participation regardless if qualifying landings were made on a vessel of that size. However, if the owner or lease holder participated in the most recent year using vessels in more than one vessel class, qualifying pounds will be assigned to separate vessel classes in proportion to the landings made with each vessel class.

12. Prior to the beginning of each fishing year for the fixed gear halibut and sablefish fisheries, the fixed gear TACs by area, excluding any TAC that is reserved for community development quotas, will be apportioned to the owners of QSs as year, species, area, and vessel class specific IFQs based on the amount of QS held by each person. For example, a person who owned 0.1% of the halibut QSs for an area would receive 0.1% of the halibut fixed gear TAC for that area excluding any community development quotas.

13. Any person owning freezer boat quota shares may sell or lease those quota shares to any other person.

14. Fish caught with freezer boat IFQs may be delivered frozen or unfrozen.

15. Any person owning catcher boat quota shares may sell those quota shares either to any U.S citizen who is a bona fide fixed gear crew member or to a corporation or partnership that was an initial recipient of catcher boat QSs. Up to 10% of a person's catcher boat quota shares may be leased during each of the first three years following implementation. They may only be leased to the same types of persons to which they may be sold.

16. Fish landed with catcher boat IFQs may not be frozen or processed in other ways aboard the vessel utilizing those IFQs.

17. Sablefish catcher boat IFQs may be utilized on a vessel with freezer capacity as long as no frozen product of any species is on board the vessel while those catcher boat IFQs are being utilized. Further, sablefish freezer boat and catcher boat IFQs may not be utilized at the same time on a vessel.

18. In order to use catcher boat IFQs, the user must:

a. own or lease the QS,
b. be a U.S. citizen,
c. be a bona fide crew member,
d. be aboard the vessel during fishing operations, and
e. sign the fish ticket upon landing.

The exception to these requirements is identified in item 19.

19. A person that received initial catcher boat QS may utilize a hired skipper to fish its IFQs providing that it owns the vessel upon which the IFQs will be used. Such a person may purchase up to the total share allowed for the area. For the sablefish fishery east of 140°W longitude and for the halibut fishery in Area 2C, the above allowance for hired skippers applies only to corporations or partnerships as defined below and it applies only to the IFQs resulting from their initial QS's. In these areas, the exception dose not apply to IFQs associated with subsequently acquired QSs.

20. **Corporation:** Any corporation that has no change in membership, except a change caused by the death of a corporate member providing the death did not result in any new corporate members. Additionally, corporate membership is not deemed to change if a corporate member becomes legally incapacitated and a trustee is appointed to act on his behalf, nor is corporate membership deemed to have changed if the ownership shares among existing members changes, nor is corporate membership deemed to have changed if a member leaves the corporation. *(In the case where ownership of shares is initially allocated to a publicly held corporations, the Council did not make a recommendation regarding what constitutes a change in membership of the corporation.)*

21. **Partnership:** Any partnership that has no change in membership, except a change caused by the death of a partner providing the death did not result in any new partners. Additionally, a partnership is not deemed to have changed if a partner becomes legally incapacitated and a trustee is appointed to act on his behalf, nor is a partnership deemed to have changed if the ownership shares among existing partners changes, nor is a partnership deemed to have changed if a partner leaves the partnership.

22. The Secretary may, by regulation, designate exceptions to the restrictions on who may use catcher boat IFQs (item 18) to be employed in case of personal injury or extreme personal emergency which allows the transfer of catcher boat QS/IFQs for limited periods of time.

23. For sablefish no person or individual may own, hold, or otherwise control, individually or collectively more than:

a. 1% of the combined total for the Gulf of Alaska and Bering Sea/Aleutian Islands QSs or IFQs or

b. 1% of the QSs or IFQs for the area east of 140°W.

24. For halibut no person or individual may own, hold, or otherwise control, individually or collectively more than:

    a. 0.5% of the total QSs or IFQs from the combined IPHC areas 2C, 3A, and 3B,

    b. 0.5% of the total QSs or IFQs from the combined IPHC areas 4A, 4B, 4C, 4D, and 4E, or

    c. 1.0% of the total QSs or IFQs from IPHC Area 2C.

25. The exceptions to items 23 and 24 are that any person who receives an initial assignment of quota shares in excess of these limits may continue to control and use them. However, such persons shall be prohibited from purchasing, leasing, holding or otherwise controlling additional quota shares or IFQs until that person's quota share falls below the limits set forth in items 23 and 24, at which time each such person shall be subject to the limitations.

26. For sablefish, no more than 1% of the combined Gulf of Alaska and Bering Sea/Aleutian Island fixed gear quota may be taken on any one vessel and no more than 1% of the fixed gear quota east of 140°W. (EY/SO) may be taken on any one vessel. The exception is that persons who received an initial allocation of more than the 1% overall ownership level (or 1% in the area east of 140°W.) may fish their IFQs on a single vessel.

27. For halibut, no more than 0.5% of the combined IPHC area quota may be taken on any one vessel except that persons who received an initial allocation of more than 0.5% overall ownership level may fish their IFQs on a single vessel. *(This differs from the ownership cap in that the vessel limit applies to the whole North Pacific combined area TAC rather than the TAC combined for areas 2C, 3A, 3B, or for areas 4A, 4B, 4C, 4D, and 4E combined.)*

28. The sale of sablefish or halibut, caught in an IFQ fishery, to other than a legally registered buyer is illegal. However, the direct sale to dockside customers is allowed provided the fisher is a registered buyer and proper documentation of such sales is provided to NMFS.

29. Frozen product may only be off-loaded at sites designated by NMFS for monitoring purposes.

30. QS owners wishing to transport their catch outside of the jurisdiction of the Council must first check in their catch at a NMFS specified site and NMFS may require that the load be sealed.

31. Persons holding IFQs and wishing to fish must check-in with NMFS or their agents prior to entering any relevant management area, additionally any person transporting IFQ caught fish between relevant management areas must first contact NMFS or their agents. All vessels will be required to notify NMFS six hours before off-loading fish from an IFQ fishery.

32. Persons must control IFQs for the amount to be caught before a trip begins, with the exception that limited overages will be allowed as specified in an overage program approved by NMFS and the IPHC.

33. Quota shares and IFQs arising from those quota shares may not be applied to; 1) trawl-caught sablefish or halibut, or 2) sablefish or halibut harvested utilizing pots in the Gulf of Alaska, or 3) halibut harvested utilizing pots in the Bering Sea/Aleutian Islands.

34. All sales, transfers, or leases of quota shares and IFQs must occur in a manner approved by the Secretary. All quota share and IFQ assignments and transfers will be administered by NMFS based on regulations established by the Secretary. The Secretary, in promulgating such regulations, shall hold at least one public hearing in each state represented on the Council and in at least one community in each of the management areas governed by the Council.

35. The Secretary will promulgate regulations to establish a monitoring and enforcement regime to assure compliance with this program. Persons holding QS, who are found to be in violation of these sections or in violation of under-reporting catch, will be subject to appropriate penalties as designated by the Secretary, including forfeiture of their QSs and IFQs. *(The Council also directs the implementation teams to develop and recommend appropriate penalties and strictures to the Secretary of Commerce.)*

36. QS are a harvest privilege, and good indefinitely. However, they constitute a use privilege which may be modified or revoked by the Council and the Secretary at any time without compensation.

37. Discard of sablefish is prohibited by persons holding sablefish IFQs and those fishing under the sablefish community development quota (CDQ) program.

38. Discard of legal sized halibut is prohibited by persons holding halibut IFQs and by those fishing under the halibut CDQ program. Persons holding freezer boat shares are exempt from this halibut discard prohibition.

39. Any person retaining sablefish or halibut with commercial fixed gear must own or otherwise control IFQs *unless the fish are taken as part of a CDQ program. (The intent of the Council is to prohibit open access fixed gear fisheries for sablefish and halibut, and to require that persons in fixed gear fisheries who retain sablefish and/or halibut as bycatch must own or control IFQs for those species.)*

40. In order for the continued prosecution of non-IFQs fixed gear fisheries, the Council recommends the suspension of the halibut fixed gear Prohibited Species Catch limit for the first two years of the IFQ program.

41. Pacific cod and rockfish harvested incidentally during the operation of a QS/IFQ fishery shall be termed bycatch species for the purpose of this program. Other species may be included by NMFS by regulatory amendment if it can be shown that the species is unlikely to survive if discarded and if it can be shown that such retention is beneficial to the nation. Any species identified as a bycatch species that is taken during the operation of a QS/IFQ fishery shall be retained and landed unless designated a prohibited species.

42. Persons holding IFQs may utilize those privileges at any time during designated seasons. Retention of fixed-gear caught sablefish or any halibut is prohibited during closed seasons. Seasons will be identified by the Council and the IPHC on an annual basis. *(The IPHC and IFQ implementation teams have recommended initially that the season for IFQ sablefish and halibut should open on March 1 and close on November 30.)*

43. The Western Alaska Community Development Quota Program is established to provide fishermen who reside in western Alaska communities a fair and reasonable opportunity to participate in the Bering Sea/Aleutian Islands sablefish and halibut fisheries, to expand their

participation in salmon, herring, and other nearshore fisheries, and to help alleviate the growing social economic crisis within these communities.

The NMFS Regional Director shall hold the designated percentage of the annual fixed gear TAC of sablefish and halibut for each management area in the Bering Sea and Aleutian Islands for the western Alaska community development quota program. These amounts shall be released to eligible Alaska communities who submit a plan, approved by the Governor of Alaska, for its wise and appropriate use.

The designated percentages are as follows:

a. 20% of each fixed gear sablefish TAC in the BS/AI,
b. 100% of the area 4E halibut quota,
c. 50% of the area 4C halibut quota
d. 20% of the area 4B halibut quota, and
e. 30% of the area 4D halibut quota.

This is a very brief summary of the CDQ program which is more fully described in Appendix B.

44. The persons who would receive reduced IFQs due to the CDQ programs, will be partially compensated with increased IFQs for other areas. The mechanism for doing this is intended to proportionately share the cost of the CDQ program among all of the initial QS recipients.

45. Two ad hoc working groups have been established. One group includes representatives from fixed gear vessel owners, crew members and processors who would likely be affected by the Council's action on IFQs. The second group is composed of administration, data management, enforcement, and legal professionals. The groups developed a detailed implementation plan covering all aspects of the carrying out the Council's preferred alternative for a fixed gear IFQ management program (for sablefish and halibut). The implementation groups are also authorized to continue their work to implement the Council's QS/IFQ program.

1.3 Alternatives considered and rejected

When the Council began consideration of limited access alternatives for sablefish in 1987, there were three basic alternatives to open access which were considered: license limitation, individual fishing quotas, and annual fishing allotments. These three systems have been discussed and analyzed in detail since that time (NPFMC 1988, NPFMC 1989). Based on these discussions and analyses, the Council has gone on record as stating that "neither license limitation nor annual fishing allotments were acceptable alternatives for solving the problems in the sablefish fisheries". The Council had previously gone on record stating that continued open access, in its current form, was unacceptable.

The Council discussed annual fishing allotments but determined that because this alternative combined open access and a form of individual fishing quotas, it would result in a more complicated management program than either program alone and would not eliminate the problems associated with open access management.

The Council discussion on license limitation concluded that a reduction in fleet size would be necessary to temporarily alleviate the problems in the sablefish fishery. It was apparent that such a reduction might not be possible in an equitable manner. It was also apparent that a reduction in the

number of vessels could soon be offset by an increase in fishing power per vessel and that this alternative would only change the rules of the race for fish but would not replace it as the mechanism for allocating fixed gear sablefish TACs among competing fishermen.

In short, neither license limitation nor annual fishing allotments held the potential for alleviating the basic problem in the fishery which is the race for fish. It is this race for fish which gives rise to a myriad of other problems in the fishery as identified in the preceding analysis documents. Therefore, the Council proceeded to undertake a more extensive analysis of the IFQ alternative to open access. Discussions and analyses of limited entry since then have centered on the specifics components of a possible IFQ alternative management program. As the Council discussions for sablefish management proceeded through 1989, 1990, and 1991 the halibut fisheries were brought into the picture for IFQ consideration as well. The Council and its Fishery Planning Committee have worked towards refining the IFQ alternatives for sablefish with the intent that such a system would eventually incorporate halibut. Therefore, the only viable option to open access in the halibut fisheries was deemed to be an IFQ system which would work in conjunction with a sablefish program, and possibly with other longline fisheries. The specific options for an IFQ system for halibut have closely mirrored those set down for sablefish.

1.4 Arrangement of this Document

The remainder of this document will analyze the Council's specific Preferred Alternative, from December of 1991, for IFQ management of the sablefish and halibut fixed gear fisheries off Alaska.

Chapter 2 compares the current open access form of management to the Council's recommended IFQ program. This is first presented in the form of a general comparison of open access and IFQs. This general comparison references the New Zealand and Canadian quota programs where relevant. A comparative overview of the New Zealand ITQ program is also provided as Appendix C. A subsequent section of Chapter 2 delves into the specific provisions of the Preferred Alternative for IFQs adopted by the Council. This includes a detailed breakdown of the distribution of quota shares which will result in the initial allocation process. The implications of the additional provisions adopted by the Council are also discussed. These provisions are detailed in Section 1.2.2 of this document and include vessel class category restrictions, transferability restrictions, ownership restrictions/caps, community development quotas, and discard and bycatch provisions.

Chapter 3 contains information intended to provide the reviewer with a better understanding of the potential impacts of this program on the socioeconomic environment in affected coastal communities. This includes: (1) comparisons of historical participation in the halibut and sablefish fisheries by region with the proposed distribution of QSs and IFQs, (2) a discussion of the elements of the proposed IFQ program that are intended to limit the structural changes that will occur and (3) an examination of the relative importance to coastal communities of halibut and sablefish fisheries when compared with other fisheries.

Chapter 4 contains a discussion of the possible effects of the recommended IFQ program on other fisheries. These include non-IFQ fisheries, fisheries conducted in adjacently managed waters, and recreational fisheries.

Chapter 5 contains a revised summary of the Implementation Plan envisioned for the IFQ program. This is the document originally prepared by the Council appointed Implementation Team which included representatives from various segments of the industry. That document has been condensed for inclusion in this supplemental analysis. Information is contained in this document which outlines the logistics involved in implementing the IFQ program from the initial allocation of quota shares to

enforcement of the provisions of the program and monitoring of the quotas. Estimates of the costs of the program are also contained in this chapter.

Chapter 6 contains a revised Regulatory Impact Review summary. Discussion in this chapter includes benefits from the sablefish and halibut resources, impacts on consumers, redistributions of costs and benefits, and consistency of the proposed action with Executive Order 12291 which requires a determination of whether a proposed action constitutes a 'major' action; i.e., whether it results in a net change in effects amounting to $100 million or more. Much of the information in this chapter summarizes information from Chapters 2 through 5.

Chapter 7 discusses consistency of the proposed actions with provisions of the Magnuson Act and other applicable law. These considerations have been addressed in previous analysis documents, but are included here to specifically address the Preferred Alternative approved by the Council for a combined sablefish/halibut IFQ program.

2.0 ANALYSIS OF THE ALTERNATIVES

Two alternatives are being addressed in this document. Alternative 1, continued open access has been rejected in favor of Alternative 2, an IFQ program for the sablefish and halibut fixed gear fisheries. Unless the Council rescinds its recommendation, the IFQ alternative will be forwarded to the Secretary of Commerce for consideration.

2.1 Open Access Fisheries

The problems that have been identified for Alternative 1 (status quo) are outlined below.

1. The fixed gear halibut and sablefish fisheries would remain open access fisheries and the race for fish would continue to be used to allocate area-specific commercial fishing quotas among individual fishermen.

2. This method of allocating the quotas tends to:

    a. increase fishing, processing, and marketing costs without increasing catch;

    b. decrease product quality, sablefish and halibut prices, and the availability of fresh halibut;

    c. increase conflicts among halibut fishermen, sablefish fishermen, or other interest groups;

    d. adversely affect halibut and sablefish stocks; and

    e. result in an unintended distribution of benefits and costs.

The Council has identified ten components of this allocation problem, they are:

1. allocation conflicts;

2. gear conflicts;

3. fishing mortality due to lost gear;

4. bycatch loss of halibut in other fisheries, and sablefish, to some degree;

5. discard mortality for halibut and other retainable species in the halibut and sablefish fisheries;

6. excess harvesting capacity;

7. product wholesomeness as reflected in halibut and sablefish prices;

8. safety;

9. economic stability in the fixed gear halibut and sablefish fisheries and communities; and

10. rural coastal community development of a small boat fishery.

The topics of Section 2.2 are the expected effects of adopting an IFQ program. The effects include the ability of an IFQ program to solve the problems identified for the status quo. The merits of specific elements of the Council's Preferred Alternative are discussed in Section 2.3.

2.2 Effects of an IFQ Program

The various types of effects of adopting an IFQ program are discussed in Sections 2.2.1 through 2.2.31. The information contained in these sections is the basis for much of the benefit cost analysis summary presented in Chapter 6.

Some of the effects can be quantified more readily than others. Estimates of the former are calculated as the difference between estimates for the 1990 halibut fishery (1989 sablefish fishery) as it actually occurred and estimates of what would have occurred had an IFQ program been in place in 1990 (1989). All else being equal, there are two reasons why this will tend to overstate the annual effects of an IFQ program for each of the first few years. First, because the halibut stock appears to be in the decreasing phase of a normal cycle of abundance, quotas are expected to continue to decrease for the next few years after a one-year upward adjustment for 1992. Sablefish stocks have declined in recent years, but appear to be in a stable pattern now. Second, full adjustments to an IFQ program will not occur for several years.

An IFQ program will affect fishing activity and costs by providing each fishing operation with substantially more flexibility in determining its fishing strategies and by providing a mechanism that tends to redistribute effort and catch to more profitable fishing operations. Fishing cost models were used to estimate many of the effects of an IFQ program.

Although the sablefish model is for all of the Council's management areas, the halibut model was limited to four IPHC areas, they are areas 2C (Southeast Alaska) 3A and 3B (Central Alaska) and 4A (Eastern Aleutians). Areas 4B through 4E (the remainder of the Aleutians and the Bering Sea) were eliminated as their present seasons are unrepresentative of the fishery as a whole. Also eliminated as unrepresentative were vessels landing less than 500 pounds of halibut during 1990. The halibut cost model for 1990 included 3,796 vessels (68% of all vessels landing halibut) which harvested 49 million pounds of halibut (93% of the total landings). Excluding the unrepresentative areas and vessels from the cost model is expected to result in estimates that tend to understate slightly the effects of an IFQ program.

The halibut model was used to generate three sets of estimates. They are for: (1) the actual 1990 fishery; (2) the 1990 fishery with partial adjustment to an IFQ program; and (3) the 1990 fishery with full adjustment to an IFQ program. The differences between the first and second sets of estimates are used as estimates of the effects of the increased flexibility in fishing strategies provided by an IFQ program. The differences between the first and third are used as estimates of the combined effects of the increased flexibility in fishing strategies provided by an IFQ program and the redistribution of effort and catch to more profitable operations as the result of an IFQ program. Finally, the differences between the second and third are used as estimates of the effects of the redistribution of effort and catch to more profitable operations. Although the sablefish model did not generate the same set of estimates for 1989, the sablefish estimates can be used to make the same types of comparisons.

Tables 2.1 and 2.2 summarize the models' estimates for the halibut and sablefish fisheries, respectively. These tables are referred to throughout this chapter. The specifics of the halibut and sablefish cost models, including the assumptions and parameter values they use, were described in previous reports. Therefore, only a few comments concerning the models are repeated below.

Fixed cost was estimated on the basis of a fixed number of operational days per year and was apportioned to fishing operations based on the number of fishing and non fishing days associated with halibut or sablefish trips. For example, if the annual fixed cost for a vessel is $100,000, if that type of vessel is assumed to have 200 operating days per year, and if that vessel had 5 halibut trips per year each consisting of 4 fishing days and 6 nonfishing days for a total of 50 halibut trip days, the fixed costs associated with halibut is $25,000 ($100,000 x 50 days/200 days). As a result of this method of apportioning fixed costs, total fixed costs for the halibut and sablefish fisheries are dependent on the number of total trip days by vessel class but not the number of vessels. This will tend to understate the saving in fixed costs that would occur with an IFQ program.

For Alternative 2, the estimates of the number of vessel and fishermen participating in the halibut and sablefish fisheries are the minimum numbers required if each vessel and fisherman spends the maximum fixed number of operational days per year in the halibut or sablefish fishery. Because it is unlikely that all or even most of the halibut or sablefish landings will be made by full time halibut or sablefish vessels and fishermen, the actual numbers of vessels and fishermen that would participate in the fisheries with an IFQ program probably would be substantially greater.

The model does not capture all the expected effects of an IFQ program. Some of the other effects are estimated independently and other types of effects are identified but not estimated.

2.2.1 Effects of an IFQ Program on Vessel Safety

An IFQ program is expected to increase vessel safety by reducing substantially the incentive fishermen have to disregard factors that increase the risk of accidents. However, due to a lack of reliable data and methodological problems, it is hard to provide quantitative estimates on the linkages between vessel safety and other factors, such as management practices.

In their recently released book, Fishing Vessel Safety, Blueprint for a National Program, the National Research Council noted that commercial fishing has one of the highest mortality rates of any occupation and that safety has largely gone unregulated (p.142). While attributing a large portion of the safety issues to the actual vessel (e.g. its structure, equipment, and crew), the authors did consider fishery management practices to be one of three major external influences on vessel safety (p.131).

They assert that the current fishery council structure has not been effective in resolving allocation conflicts and that has "resulted in a highly competitive operating environment in which fishermen may take unnecessary risks to maintain their livelihood." (p.132). The extremely short and inflexible halibut and salmon openings off the West Coast and Alaska were specifically mentioned as examples of where management practices had forced fishermen to work under "extremely adverse environmental conditions or not at all." (p.133). Although the data is inconclusive about whether the number of incidents for olympic-style fishing is significantly higher than might have occurred during an extended season, the authors note numerous potential safety concerns with current management of these fisheries.

Safety issues can arise due to the opening dates being predetermined and with no allowance for bad weather being made. They recommend the establishment of flexible season openings with the provision of alternate dates if the weather forecast calls for marginal or adverse weather. Although there is no data to test the effectiveness of the program, they cite the addition of just such a practice in the Atlantic surf clam fishery as a responsible council action to safety concerns.

Other safety issues that could stem from shortened seasons are fishermen moving into new fisheries that are farther from home port then their vessel is safely designed for, no time for on-the-job training of new and inexperienced crew, and increased congestion while entering and leaving port.

2.2.2 Effects of an IFQ Program on Product Quality, the Availability of Fresh Halibut, and Exvessel Prices

There are several reasons why an IFQ program is expected to increase the exvessel and wholesale prices of halibut and sablefish. First, it would provide the flexibility in scheduling landings that is necessary for fishermen and processors: (1) to take advantage both of the latent year round market for fresh halibut and the seasonal consumption patterns for sablefish and (2) to decrease storage time and costs for the halibut and sablefish that are frozen. Second, it would increase the quality of landed halibut and sablefish by decreasing the opportunity cost of the time required to assure that the catch is quickly dressed and cared for. Third, it would eliminate the short intensive openings that result in such large concentrations of landings that unloading and processing delays can decrease product quality and prices. The benefits of increased product quality may become more important if federal inspection of seafood products expands. Finally, the ability of processors to influence the rate and timing of landings may decrease processing costs and increase exvessel prices.

In making his decision concerning when and how to fish, each fisherman would respond to market incentives. The ability of processors to influence these incentives by offering season and quality specific exvessel prices or other inducements means that the preferences of individual processors would be considered by fishermen but would not necessarily dictate when and how fishermen would fish for halibut. Because the decisions of fishermen would reflect the benefits of both fishermen and processors of different uses of IFQs, both groups could benefit from the opportunities offered by IFQs. For example, it may become mutually beneficial for a fisherman and processor to agree on delivery schedules, quality control measures, and prices. Such agreements could decrease uncertainty, decrease costs, and increase marketing opportunities.

Some processors may not want small deliveries throughout the year and would reflect this desire in setting their prices or delivery contracts. Other processors might adjust their production schedules to accommodate such deliveries. The change away from the present system would reduce overall processing space needs. However, if a processor felt the most efficient use of manpower and space was to continue to process large quantities of halibut and sablefish in a few short periods, arrangements could be made with fishermen to match this landings pattern. Due to the strong seasonality in consumption of sablefish in Japan, processors may prefer relatively short seasons but later in the year.

Some have suggested that an IFQ program can decrease product quality by increasing trip lengths and the average time between catch and landings. Such an effect could offset partially the factors that would tend to increase product quality and prices. However, because an IFQ program would give fishermen and processors control over trip length and other factors that determine product quality and because it would decrease the cost of increasing quality, the net effect is expected to be an increase in quality.

There is naturally uncertainty concerning how much an IFQ program will increase prices. In the benefit cost analysis of the Canadian individual vessel quota (IVQ) program, a $0.50 per pound increase in the wholesale price was said to be a conservative estimate and the effects of a price increase of $0.50 to $1.00 were estimated. Two other estimates of the potential halibut price increase are developed below.

The difference between exvessel prices in the Alaskan and Canadian halibut fisheries in May of 1991 can be used to estimate the potential effect of an IFQ program on exvessel prices. The Canadian fishery opened May 1, 1991 as an IVQ fishery. Most Canadian fisherman stopped fishing during the first one-day halibut openings in Alaska on May 7 and did not resume fishing until late in May when fresh halibut was no longer available from Alaska. Preliminary information indicates that exvessel prices ranged from $3.25 to $3.50 and from $3.50 to $3.75 in Canadian Dollars, respectively, for the first and second sets of Canadian landings and averaged about $2.05 for the first Alaska opening. Using an exchange rate of $1.15 Canadian dollars per US dollar, the Canadian price range was $2.83 to $3.26. This overstates the difference in prices due to the Canadian IVQ program because prices are typically higher for the Canadian fishery. In 1990, the average exvessel prices in US Dollars were $1.78 and $2.24 for the Alaskan and Canadian halibut fisheries. If the 1991 Alaska price is adjusted upward using the 1990 price differential of 25.8%, the Canadian price would be expected to be $2.58. This suggests that the price premium that the Canadian IVQ program produced was from $0.25 to $0.68 per pound. Additional efforts to develop markets for fresh halibut could increase the price premium that the Canadians will be able to obtain. However, if an IFQ program increases substantially the amount of fresh high quality halibut available from Alaska throughout the year, the effects of market development could be more than offset by the increase in the supply of higher quality and fresh halibut and the price premium could decrease from its current level. Therefore, an IFQ program may increase the exvessel price by less than $0.68.

An alternative estimate of the potential price increase that would result with an IFQ program can be generated on the basis of the reduction in processing and cold storage holding costs that would result if halibut landings were coordinated more closely with halibut consumption during the year. The variable cost of freezing halibut is about $0.10 per pound. The handling and storage costs are about $0.07 to store a pound of halibut for six months. If the wholesale price of halibut is $3 and the interest rate is 10%, the interest cost of holding a pound of halibut for six months is $0.15. Therefore, the total cost of freezing halibut and holding it an average of six months is $0.32 per pound. If 75% of landings currently are frozen, and if an IFQ program would result in only 50% being frozen, the cost savings in 1990 would have been $4.2 million ($0.32 per lb x 25% of 52.6 million lbs). This $0.32 savings per pound for 25% of the halibut catch is comparable to a $0.08 savings for each pound of catch. Because this savings would be shared by fishermen to final consumers, it is not known how much of it would be reflected in increased exvessel prices. If they were expected to increase by half of this amount, $0.04 per pound would be a lower bound estimate of the exvessel price increase of an IFQ program because it would exclude any increase due do the higher product quality associated with fresh halibut and the higher quality frozen product that would tend to result with IFQs.

The price increase for sablefish is expected to be less than that for halibut because the potential benefits from the fresh fish market are probably less for sablefish and because the sablefish fishery currently is not as intensive as the halibut fishery. The conclusion presented in the previous Council analyses suggest that a 5% increase in price could be expected. In 1991, this would have been a $0.05 per pound round weight increase in the exvessel price or about a $2.8 million increase in exvessel value.

In summary, it is estimated that an IFQ program would increase halibut exvessel prices by $0.04 to $0.68 per pound. Given the 1990 halibut landings of 52.6 million pounds, the resulting increase in the exvessel value of the fishery would have been from $2.1 million to $35.8 million. The comparable increase for sablefish is about $2.7 million. The new supply of halibut from the EEZ off Russia is expected to increase the price premium for fresh halibut. With the IFQ program, Alaska fishermen will be able to differentiate their product because the halibut from the Russian EEZ will likely be frozen.

2.2.3 Effects of an IFQ Program on Consumers

Because the increases in prices principally will be due to increases in product quality, including the year-round availability of fresh halibut, the higher exvessel prices reflect the ability of fishermen to capture some of the benefits that an IFQ program would provide to processors and consumers. They do not imply that an IFQ program would impose costs on consumers. The combination of increased product quality and increased average prices and the interactions between the markets for fresh and frozen halibut makes it difficult to estimate the net effects of an IFQ program on consumers as a whole. However, consumers as a whole would benefit from the increased quality and quantity of halibut that would result from an IFQ program except in the unlikely event that all the benefits of increased quality and quantity are captured by fishermen, processors, and those who market halibut.

The effects of the sablefish IFQ program are expected to be less on domestic consumers because much of the product is exported. Domestic consumers will benefit if the sablefish IFQ program increases domestic sales. The ability to provide product throughout much of the year may be an important factor in increasing domestic sales.

The net effect on consumers will be widely dispersed and minimal for most consumers because there are many substitutes for both halibut and sablefish and because halibut and sablefish are a small part of the typical family's food budget.

2.2.4 Effects of an IFQ Program on Processing and Marketing Costs

An IFQ program is expected to decrease processing and marketing costs in two ways. First, it provides greater flexibility for processors to select delivery schedules that reduce processing costs. Second, as mentioned above, it will reduce freezing and cold storage costs. It was estimated that the latter savings would be about $0.32 for each pound of halibut that is sold fresh rather than being frozen and held for an average of six months before being consumed. This cost saving could have exceed $4.2 million in 1990. No attempt has been made to quantify the former cost saving. The savings for sablefish by decreasing cold storage costs would be substantially less but could amount to more than $2 million. Because these savings are captured partially by the increase in exvessel prices, adding the price increase and cost saving effects would result in double counting.

2.2.5 Effects of an IFQ Program on Gear Losses and Costs

There are principally two types of costs associated with gear losses in the halibut and sablefish fisheries. They are: (1) the costs of replacing the lost gear and (2) the harvest foregone due to the fishing mortality caused by the lost gear. There are several reasons why an IFQ program is expected to decrease gear losses and the associated costs. First, it would reduce the amount of gear that is on the grounds at any one time and, therefore, reduce the amount of gear that becomes tangled. Second, it would increase the willingness of fishermen to take more time to avoid tangling gear and to retrieve lost or tangled gear. It would do so by decreasing the opportunity cost of the time required either to set gear so that it is less likely to become tangled or to retrieve it. Third, it would eliminate the current gear losses that occur because fishermen set more gear than they can retrieve before the end of the brief halibut openings. Finally, it would allow fishermen to fish at a pace and in areas, time periods, and weather conditions that decrease gear losses.

The IPHC estimated that 1,860 skates were lost during 1990 and that this lost gear killed almost 2 million pounds of halibut (Tables 2.3 and 2.4). It is estimated that an IFQ program would have reduced the cost of lost gear replacement by $2.0 million or $2.4 million, respectively, with partial or full adjustment to IFQs in 1990 (Table 2.1). The exvessel value of 2 million lbs of foregone halibut

catch net of harvesting costs would be from $2.4 million to $4.0 million. If an IFQ program would have decreased the foregone catch by 50%, there would have been an additional saving of $1.2 million to $2.0 million for a total saving of $3.2 million to $4.4 million due to reduced gear losses.

Comparable estimates were not developed for the sablefish fishery. However, because the sablefish fishery currently is less intensive than the halibut fishery, the gear loss cost probably are substantially lower. The change in the cost of replacing gear, but not the cost associated with ghost fishing, is included in the estimate for Section 2.2.10.

2.2.6 Effects of an IFQ Program on Gear Conflicts with Other Fisheries

Although an IFQ program will tend to decrease gear conflicts within the halibut or sablefish fishery, it may increase gear conflicts between halibut or sablefish fishermen and other fishermen by increasing the areas and length of periods in which such conflicts can occur. For example, it is less costly for trawlers to avoid the halibut grounds during the brief halibut openings than to avoid these areas most of the year. Similarly, the areas and times with a high risk of gear conflicts are easier to identify and avoid with the current intensive halibut fishing periods than with an IFQ program. No attempt has been made to estimate the magnitude of this effect.

2.2.7 Effects of an IFQ Program on Other Gear Costs

Another gear cost that would be reduced by an IFQ program is the cost of redundant gear. With IFQs, the opportunity cost of the time required to repair gear or return to port to replace lost or damaged gear would be much less than it currently is with the very brief intensive halibut openings. Therefore, vessels tend to carry more backup gear than they would with an IFQ program. This redundant gear not only includes longline gear, but also includes electronic fishing, navigation, and communications gear. In the benefit cost analysis of the Canadian individual vessel quota (IVQ) program for halibut, it was estimated that the annual saving due to a reduction in redundant gear would be about $1.3 million. If this estimate is used for the Alaska halibut fishery but expanded by a factor that reflects the greater landings in the Alaska fishery, adjusted using the exchange rate, and then decreased by 50% to adjust for the redundancy that may be reasonable even when fishing in an IFQ fishery off Alaska, the resulting estimated cost savings for the Alaska fishery would be $3.0 million. As with the other types of IFQ generated reductions in gear costs, the savings are expected to be substantially less for the sablefish fishery. An estimate of the expected savings is included in the sablefish fishery estimate for Section 2.2.10.

The redundant gear savings would be increased to the extent that the IFQ program would decrease the number of halibut vessels and, therefore, decrease the amount of gear that is purchased specifically for the halibut and sablefish fisheries. No attempt has been made to estimate this additional saving.

2.2.8 Effects of an IFQ Program on Bait Costs

There are two reasons why bait costs will be lower with an IFQ program. First, less bait will be required because fewer hooks will be fished. Second, the cost per unit of bait will be lower either because a lower quality of bait will be used or because the halibut and sablefish fishermen will catch their own bait. The second is explained by the decrease in the incentive to maximize the rate of harvest with an IFQ program. In the benefit cost analysis of the Canadian IVQ program, it was estimated that the saving on bait cost would be about $0.7 million. If this estimate is inflated to account for the larger catch in the Alaska fishery and adjusted using the current exchange rate, it

increases to about $3.0 million. The cost model generated an estimated bait saving of $1 million. An estimate of the expected savings for the sablefish fishery is included in the estimate for Section 2.2.10.

2.2.9 Effects of an IFQ Program on Foregone Opportunities in Other Fisheries or Elsewhere

Due to the very brief halibut and relatively short sablefish openings in most areas, almost all of the vessels and fishermen in the halibut or sablefish fishery also participate in other fisheries (see Chapter 4 for tables and text that summarize cross participation by vessel owners). Therefore, one of the costs of participating in the halibut or sablefish fishery is the foregone opportunity to participate in another fishery or other activities during a halibut or sablefish opening. The optimal time for a fisherman to participate in either of these two fisheries, in terms of this opportunity cost, tends to vary by fisherman depending on the seasonality of the other fisheries and other activities in which he would participate. Therefore, without having the choice of when to fish for halibut or sablefish, some fishermen will have to forego more income from other fisheries or activities than if they could choose when to fish for halibut or sablefish.

An IFQ program would decrease the opportunity cost of participating in either fishery by providing fishermen with substantial flexibility concerning when to fish for halibut or sablefish. No attempt has been made to quantify this benefit.

2.2.10 Effects of an IFQ Program on Harvesting Costs due to Increased Flexibility

As noted above, the halibut cost model provides estimates of some of the effects of the increased flexibility in selecting fishing strategies. These are referred to as the effects of partial adjustment to an IFQ program. The model's estimates of the gear replacement and bait cost savings were discussed above. Additional cost savings due to increased flexibility are as follows in millions: (1) $1.8 to $2.5 for food; (2) $3.1 to $4.0 for fuel; (3) $20.0 to $28.0 for the opportunity cost of labor; and (4) $9.2 to $11.7 for fixed costs (Table 2.1). These additional savings total $34.1 to $46.2 million.

An important part of the change in fishing strategy that would occur with halibut IFQs is an increase in the number of fishing days per vessel day. With the current one-day halibut openings, it is assumed that a trip consists of three preparation days before the opening, one fishing day, and three days to return to port, unload halibut, remove the halibut gear, and recover from the frantic one day of fishing. With IFQs, a trip may include up to seven fishing days with three days at each end of the trip. This change from one fishing day out of seven operating days to up to seven fishing days out of 13 operating days decreases fishing costs and the numbers of vessel days and fisherman days required to harvest the quota. Such a change probably will be accompanied by decrease both in catch per fishing day and in the number of fishing vessels in each size class. The model estimates the effects of IFQs for both 25% and 50% reductions in catch per fishing day.

Most of the vessels in the halibut or sablefish fishery participate in other fisheries; therefore, fixed costs have to be apportioned among the halibut or sablefish fishery and other fisheries. As noted in Section 2.2, due to the method used in the model to allocate fixed costs , total fixed harvesting cost is determined by the numbers of fishing days and total operating days for each class of vessels in each area. It is not determined by the number of vessels. Therefore, the model may under-estimate the cost saving that would occur due to the decrease in the number of vessels with an IFQ program.

The sablefish cost model estimates that can be used to calculate comparable savings indicate that the cost savings from the increased operational flexibility with IFQs would have been about $1.8 million in 1989.

2.2.11 Effects of an IFQ Program on Harvesting Activity due to Increased Flexibility

As noted in the previous section, the increased flexibility provided by an IFQ program (i.e., partial adjustment to an IFQ program) will increase the number of fishing days per operating day and, therefore, decrease the total number of operating days required to harvest a quota even assuming that halibut catch per fishing day decreases by 25% to 50% due to the changes in fishing strategies. Within the range of the number of vessels that are consistent with the characteristics of the fishing trips that are expected to occur for each vessel class and area, the number of vessel and fishermen is indeterminate.

The halibut cost model estimates of the total number of vessel operating days and the total number of fisherman days are 27,769 to 37,135 and 109,147 to 144,948, respectively, with partial adjustment to an IFQ program compared to 68,138 vessel operating days and 265,328 fisherman days without an IFQ program (Table 2.1). If each vessel is fully employed in the halibut fishery, there would be 147 to 192 halibut vessels and 584 to 756 halibut fishermen. However, if on average, each vessel spends only 50 days per year in the halibut fishery, there would be 588 to 768 halibut vessels and 2,336 to 3,072 halibut fishermen. These are in comparison to estimates of 3,769 vessels and 14,721 fishermen without an IFQ program.

The sablefish model estimates do not include comparable estimates. However, it does provide estimates for the combined effects of the more operational flexibility and a redistribution of catch to more efficient vessels (see Section 2.2.13).

2.2.12 Effects of an IFQ Program on Harvesting Costs due to a Redistribution of Effort and Catch to More Profitable Fishing Operations

An IFQ program will decrease harvesting costs by providing each fishing operation with substantially more flexibility in determining how and when to harvest halibut. An IFQ program will also decrease harvesting costs by redistribution fishing effort from high to low cost fishing operations. For the halibut fishery, it has been estimated that this redistribution would have reduced total harvesting cost in 1990, by approximately $9.8 to $12.7 million in total (Table 2.1). This is about $0.20 to $ 0.26 per pound of halibut. Combined with the cost saving due to increased flexibility, the model's estimate of the total harvesting cost saving with an IFQ program is $45.8 to $52.8 million, excluding the bait and gear loss savings included elsewhere.

For the sablefish fishery, it has been estimated that this redistribution would have reduced total harvesting cost in 1989, by approximately $4.9. (Table 2.2).

2.2.13 Effects of an IFQ Program on Harvesting Activity due to a Redistribution of Effort and Catch to More Profitable Fishing Operations

With one exception, the halibut cost model estimates that the 61-90 foot vessel class is the lowest cost vessel class in each area. The exception is that in Area 2C, with a 50% reduction in catch per fishing day, the 36-60 foot vessel class has the lowest cost per pound of halibut landings.

With the redistribution of all effort and catch to the low cost vessel class in each area, it is estimated that there would have been 13,961 to 18,468 halibut fishing vessel operating days and 72,842 to 96,977 fisherman days compared to 27,769 to 37,135 vessel days and 109,147 to 144,948 fisherman days with the partial adjustment to an IFQ program or compared to 68,138 vessel days and 265,328 fisherman days without an IFQ program.

As noted above, a range of numbers of vessels or fishermen could be associated with these estimates of vessel and fisherman days. If each vessel is fully employed in the halibut fishery, there would be 72 to 94 halibut vessels and 376 to 494 halibut fishermen. However, if on average, each vessel spends only 50 days per year in the halibut fishery instead of 200 days, there would be 288 to 376 halibut vessels and 1,504 to 1,976 halibut fishermen. These are in comparison to estimates of 3,796 vessels and 14,721 fishermen without an IFQ program. The redistribution of catch and effort to the most profitable vessel class for each area reduces the required numbers of vessel and fisherman days because landings per vessel day or fisherman day are higher for the most profitable vessel class than for most other vessel classes.

The sablefish model estimated that, at the extreme, an IFQ program in 1989 would have: (1) reduced the number of sablefish vessels from 580 to 47; (2) reduced the number of sablefish fishermen from 2,925 to 256; (3) decreased the number of fishermen days from 83,251 to 58,252; and (4) increased fishermen income per day from $213 to $315. As noted above, these estimated reductions in vessels and fishermen are based on the assumption that the vessels and fishermen in the sablefish fishery will be fully employed in that fishery. Therefore, they greatly overstate the actual reductions that will occur with an IFQ program if the sablefish fishery remains one of several fisheries in which most sablefish vessels and fishermen participate. The estimated percentage reduction in fishermen days may provide a better estimate of the expected reduction in fisherman employment.

There are two reasons why the model may under estimate the effect of an IFQ program on employment opportunities in the halibut fishery. First, no adjustment is made in the number of crew members for a vessel class. Currently, there may be additional crewmen, who are only justified by the need to fish more rapidly. Second, a larger percentage of the halibut quota will be taken as bycatch in other hook and line fisheries. The former would result in a decrease in harvesting cost that is not captured by the cost model and, therefore, not included in the cost savings listed above. An estimate of the latter saving is presented in Section 2.2.21.

Each year the halibut fishery provides very brief employment opportunities for a large number of fishing vessels and a larger number of fishermen. It provides longer employment opportunities for a very small number of vessels and fishermen. With an IFQ program, the halibut and sablefish fisheries will tend to provide longer employment opportunities but for fewer vessels and fishermen.

Some have suggested that IFQs would also reduce employment opportunities by increasing the use of automated gear. It is not clear that this would occur. With IFQs there would be a much lower premium on gear handling speed and a higher premium on product quality. These changes would tend to decrease the advantages of automated gear and increase labor intensive activities, such as bleeding, heading and gutting, and icing.

This change will obviously benefit some and impose costs on others. The magnitude of the cost will on average be relatively small due to the large number of fishermen and vessel owners who receive a small part of their annual income from the halibut fishery. It is difficult to determine whether the cost of eliminating a brief employment opportunity for a large number of people is offset by the benefit of providing a smaller number of people a longer employment opportunity. The same holds true for the sablefish fishery, except that, for most vessels and fishermen, the current employment opportunity is much shorter in the halibut fishery.

In considering the employment effects of an IFQ program, it should be remembered, that many fishermen take a break from other fishing or non-fishing activities to participate in the halibut fishery. Therefore, their alternative to participation in the halibut fishery is not unemployment. For others,

the alternative is a short period of unemployment. This is also true for the sablefish fishery, but to a lesser extent because typically the sablefish seasons are much longer than the halibut seasons.

There will be a transition cost for those whose immediate alternative is unemployment. That cost will be high for an individual who had been heavily dependent on the halibut or sablefish fishery employment opportunity and as a result would have to move or change substantially the way he supports himself and his family.

In addition to providing longer periods of employment for the fishermen who remain in the halibut fishery, an IFQ program will increase their daily earnings. There are two reasons for this. One is the previously mentioned increase in fishing days per total operating days and the resulting increase in landings per operating day. The other is the increase in the exvessel value of landings. The value of landings will increase due to increases both in exvessel prices and in the percentages of halibut, sablefish, and other species removals that are landed.

Over time, as crewshare agreements are changed to reflect the cost of obtaining IFQs or the opportunity cost of using them, some of the benefits that an IFQ program will provide initially to fishermen will be captured by those who own the IFQs. This adjustment could occur very rapidly.

2.2.14 Effects of an IFQ Program on the Bargaining Strengths of Fishermen, Vessel Owners, and Processors

An IFQ program will increase the relative bargaining strength of whomever controls the IFQs. This is because the IFQs will be a required input for landing halibut. If IFQs are freely transferable, a fisherman, vessel owner, or processor could increase his bargaining strength by obtaining an IFQ. The fact that anyone could do this decreases the gain in bargaining strength that an IFQ will provide to any one group.

The initial distribution of quota shares will have an effect on the ability of individuals to obtain IFQs. Those who are given QSs are made wealthier and more able to control IFQs. Therefore, an IFQ program will increase the wealth and bargaining strength of the initial recipients of the QSs.

2.2.15 Effects of an IFQ Program on the Geographic Distribution of Halibut Landings

By increasing the flexibility fishermen will have in determining fishing and landing strategies, an IFQ program can change the geographical distribution of landings. The transferability of IFQs will tend to assure that the distribution of landings reflects most benefits and costs; however, it is difficult to predict what the distribution of landings will be. Some of the effects of an IFQ program will increase the competitiveness of ports close to the halibut grounds but other effects will decrease their competitiveness. It is not known which will prevail. The ports that have relied heavily on tenders for an advantage in obtaining landings or ports that are competitive principally due to the concentrations of landings after each brief opening will tend to be less competitive with an IFQ program. It is possible that the change in competitiveness will eliminate some ports as halibut and sablefish landing sites. If halibut and sablefish landings were sufficiently important to a processor or community at such a port, they could assure continued landings by obtaining IFQs or delivery contracts with those who have IFQs.

The historical dependence of specific communities and regions on the halibut and sablefish fisheries and the potential changes as a result of the proposed IFQ program are discussed more fully in Chapter 3.

2.2.16 Effects of an IFQ Program on the Stability and Use of a Community's Residential Labor Force

An IFQ program would provide greater flexibility in making use of a community's residential labor force. Landings and processing could be scheduled to make the best use of the residential labor force and decrease the use of transient labor. However, it is not known to what extent an IFQ program would change the use of resident and transient labor forces.

2.2.17 Effects of an IFQ Program on the Ability of Additional Communities to Participate in the Halibut and Sablefish Fisheries

Some rural communities adjacent to the halibut and sablefish resources are not yet participating in these fisheries. The residents of these communities typically lack the expertise and financial backing necessary to invest in large fishing vessels and they also may lack convenient access to processing facilities. The shorter the season the more difficult it is for these communities to attract processors or interest existing processors in the landings. Without local processors, local fishermen are unable to use their smaller fishing vessels for halibut or sablefish fishing. Three possible examples of communities such as this, in regards to the halibut fishery, are Atka, St. George, and St. Paul, all in the BS/AI area. These communities have shown interest in longline fisheries and two are expanding harbor facilities. However, they have not participated fully in the halibut or sablefish fishery yet.

Rural coastal community involvement in the halibut fishery, with relatively few exceptions, is not perceived to be a problem at this time. Most of the communities whose residents do not participate are likely to be in areas where the halibut grounds are offshore and out of range of their traditional vessels. These areas are also those with longer seasons so that these residents could have participated in the past if they had been prepared. While they might become interested in the future, the increases in effort from larger vessels is expected to shorten seasons, thereby decreasing the opportunities for new involvement by these communities.

It is important to note that there are many rural Alaska coastal communities that rely heavily on halibut for subsistence purposes. These communities also rely, to some extent, on halibut for income in a commercial sense.

2.2.18 Effects of an IFQ Program on the Economic Stability of the Halibut or Sablefish Fishery and Fishing Communities

On a year to year basis, industry members have no firm idea of whether or not they will be able to secure sufficient product. This is the case in terms of both short and long-term planning. In areas with only a few very short openings, if a vessel breaks down, a fisherman might miss all or a substantial portion of the season. Likewise, increased fishing effort does not allow processors to plan for consistent or orderly processing. The short-term discontinuities make planning difficult. Long-term plans can be made but, unlike some other industries, participants are not guaranteed access to halibut or sablefish. Several towns in southeast Alaska, especially Petersburg, traditionally had longline fleets. These fleets now are partially diversified into other fisheries as a result of short halibut and sablefish seasons. Likewise, with an increase in the number of vessels and stable or decreasing stocks, fishermen who had relied on halibut or sablefish have had to turn to other fisheries in order to maintain their income. In some instances, increased effort or decreased stocks will cause fishermen to leave the fishery or the occupation. As fishermen switch fisheries or occupations their living standards may suffer. This is especially true in communities which offer few alternatives to fishing. In these communities, especially along the Alaskan coast, communities could experience reduced income and population.

The data presented in Table 2.5 demonstrates the volatility of participation in the halibut and sablefish fisheries. Of the 7,992 different vessel owners who participated in the halibut fishery between 1984 and 1990, 38% did so for only one year while only 9% participated all seven years. It is estimated that 1,443 vessel owners participated in the fixed gear sablefish fishery between 1985 and 1990. Of these, 45% participated in only one year and only 6% participated all six years.

The implementation of an IFQ program would result in significant changes in the halibut and sablefish fisheries. Initially, these changes would increase uncertainty and decrease stability. However, once the adjustments are made, IFQs would decrease uncertainty and increase the ability of fishermen and processors to plan their participation in the halibut fishery. By reducing the level of overcapitalization, an IFQ program will also tend to dampen the fluctuations in income and employment associated with changes in quotas and landings.

2.2.19 Effects of an IFQ Program on Other Fisheries

The effects on other fisheries of the proposed IFQ program is the topic of Chapter 4.

2.2.20 Effects of an IFQ Program on Groundfish Discards in the Halibut and Sablefish Fisheries

When there is a premium on the rate of harvest, the costs of taking the time to retain bycatch are higher. As a result, the bycatch of rockfish and other groundfish that might otherwise be retained is discarded in the current open access fishery. The mortality rate for the discarded rockfish is almost 100%, but much lower for other species. An IFQ program is expected to decrease the premium on the rate of harvest and to increase the amount of bycatch that is retained by halibut and sablefish fishermen.

This will provide two types of benefits. It will increase the exvessel value of total catch because more will be retained. It will also results in less uncertainty concerning total fishing mortality for the species taken as bycatch in the halibut and sablefish fisheries.

Because rockfish typically have been discarded, it is not known what the rockfish bycatch rate has been in the halibut fishery. If a bycatch rate of 10% is assumed, as was done for the Canadian halibut fishery, approximately 7.0 million pounds of rockfish were taken in the Alaska halibut fishery in 1990. Using the average 1990 exvessel price of rockfish of $0.24 ($/lb round weight) for all gear or $0.41 for longline gear, the potential exvessel value of the rockfish bycatch in the halibut fishery was from $1.7 million to $2.9 million.

In 1991, data from the weekly processor reports indicate that, excluding halibut, about 15% of the groundfish catch in the BS/AI longline sablefish fishery was discarded. Therefore, the potential increase in the value of catch if discards had been eliminated completely would have been substantially less than 15%. The benefit of increased retention in the sablefish fishery is expected to be less than that in the halibut fishery because the latter is a much more intensive fishery.

No attempt has been made to quantify the benefits of increased information concerning total groundfish mortality in the halibut and sablefish fisheries. However, due to the limited available information concerning some of these bycatch species and due to concerns that some of these species may be at very low levels of abundance, such information could be very valuable in terms of allowing better fishery management decisions to be made.

2.2.21 Effects of an IFQ Program on Halibut (Sablefish) Discard Mortality in the Halibut (Sablefish) Fishery

Halibut discards in the halibut fishery can occur due to the bycatch of sub-legal halibut or due to highgrading. But because there is not a minimum size limit for sablefish, sablefish discards in the sablefish fishery occur only due to highgrading. The effects of an IFQ program on both sources of halibut and sablefish discard mortality are discussed in this section.

An IFQ program is expected to decrease the mortality of sublegal halibut taken as bycatch in the halibut fishery. The IPHC estimated that over 1 million lbs of sublegal halibut were killed in the Alaska halibut fishery in 1990 (Table 2.6). This estimate is based on an estimate of the bycatch of sublegals and a discard mortality rate of 25%. An IFQ program would reduce the opportunity cost of the time required either to decrease the discard mortality rate or to move to areas with lower bycatch rates. If an IFQ program had reduced the amount of sublegal halibut killed by 25% to 50%, and resulted in a 250,000 to 500,000 pound increase in retainable catch, the increase in exvessel value net of harvesting costs would be from $0.3 to $1 million without accounting for the growth potential of the sublegal halibut.

With the current race for fish, the incentive for fishermen to highgrade halibut or sablefish, that is to discard lower priced halibut or sablefish in favor of higher priced fish, is reduced significantly because the opportunity cost of time is very high and because there is no assurance that the fishery will not be closed before there is time to replace the discarded fish. With IFQs the opportunity cost of time, in terms of foregone landings, would be much lower and the potential for the fishery to be unexpectedly closed would be eliminated. Therefore, the incentive to highgrade will be greater with IFQs.

The incentive to highgrade is determined by the relative prices of different sizes and qualities of fish and the cost of replacing lower priced fish with higher priced ones. The latter is determined by cost per unit of catch and the size/quality composition of the catch. The incentive increases with an increase in the price premium for larger or higher quality fish, a decrease in cost per unit of landings, and an increase in the proportion of catch comprised of larger or higher quality fish. Using size composition, size-specific exvessel price, and cost data for the 1989 Gulf of Alaska longline fishery, it was concluded that, typically, there would not have been an incentive to highgrade if IFQs had been in place (Norris, 1990). For instance, if marginal operating costs were $0.10 per pound, vessel profit would increase 6% if sablefish under 4 pounds (eastern dressed weight) were discarded, but in so doing the number of fishing days would increase 70% (Norris, 1990). The fishermen would have made more money, but would have had to work many more days to accomplish it; time that may have been more productively spent on other activities. Norris estimated that at higher marginal operating costs there would be much less (if any) economic incentives to highgrade. However, there probably would be increased highgrading with IFQs because the determinants of the incentive to highgrade can vary among vessels, seasons, areas, and years.

An IFQ program is expected to increase highgrading in the halibut fishery. In 1990, there were two reasons why highgrading halibut by size was not common, except of course for sublegals. First, most halibut openings were so short that there was no time to discard and replace small fish. Second, there was no price premium for specific sizes of halibut. An IFQ program would have decreased the opportunity cost of the time required to replace lower valued halibut; therefore, price differentials based on freshness or other determinants of quality probably would have resulted in increased highgrading with IFQs. With IFQs, the preference for smaller halibut in the fresh markets may prevent the reoccurrence of a price premium for large fish. In the absence of a significant price differential by size, the incentive to highgrade may not increase substantially.

The preliminary indications for the Canadian sablefish IVQ program are that highgrading probably has not been as much of a problem as some expected because, with the IVQs, fishermen are better able to take advantage of fishing grounds with a larger proportion of large fish.

No attempt has been made to quantify the potential increase in highgrading that would occur with an IFQ program.

2.2.22 Effects of an IFQ Program Associated with Halibut Bycatch in the Groundfish Fishery

An IFQ program for halibut will tend to have three types of benefits with respect to the bycatch of halibut in other fisheries. First, it will tend to decrease the cost of harvesting the halibut quota and decrease discard mortality in other fisheries that will be allowed to retain halibut and, perhaps, even in other fisheries that cannot retain bycatch but that can use IFQs to cover their halibut bycatch. Second, it can eliminate or reduce the costs of halibut prohibited species catch (PSC) limit induced closures for some fisheries. Third, it will reduce the number of allocation issues that the Council has to address. The first two are discussed in this section, the third is discussed in Section 2.2.26.

Currently, with one exception, halibut taken as bycatch in other fisheries must be discarded and in some fisheries the discard mortality is estimated to be as high as 75%. The exception is that halibut bycatch can be retained in other hook and line fisheries during the brief halibut openings, but only by vessels that were not fishing with longline gear within 72 hours of the halibut opening. This means, for example, that in the Gulf of Alaska, most of the halibut taken in the longline sablefish, cod, and rockfish fisheries counts against the longline fishery halibut PSC limit, has to be discarded, and may result in the closure of these fisheries before the sablefish and cod TACs are taken.

Reducing Halibut Harvesting Costs and Discards By allowing IFQs to be used in halibut and other hook and line fisheries, the transferability of IFQs can be used to allocated halibut between the halibut fishery and other hook and line fisheries that take halibut as bycatch. This will tend to reduce halibut discards. For example, in the Gulf where there is currently a longline groundfish fishery halibut PSC limit of 750 mt of halibut, there would be no need to have such a limit, instead those who take halibut as bycatch in the longline groundfish fisheries would simply be required to have halibut IFQs to cover their halibut bycatch. This would eliminate a large part of the 750 mt halibut discard mortality that is currently allowed.

For example, if half of the 750 mt of halibut discard mortality in the Gulf longline fishery were of legal size, only the sublegals would have been discarded. This reduction in discard mortality would have allowed an increase in halibut landings of about 620,000 lbs net weight (0.5 x 750 mt x 2,205 lbs per mt x 0.75). With an exvessel price of $1.82 to 2.46 per pound in 1990 with an IFQ program, the exvessel value of the additional halibut landings would have been $1.1 to $ $1.5 million.

It would have also reduced the cost of halibut landings in 1990. The 750 mt halibut PSC limit is in terms of halibut discard mortality and the discard mortality rate was assumed to be 13% in 1990. This means that about 5,800 mt (round weight) or 9.6 million lbs (net weight) of halibut bycatch and discards were associated with the 750 mt of discard mortality. If half of this bycatch were of legal size and were retained, the 4.8 million lbs of halibut would have been harvested at a harvest cost that approaches zero. If the marginal harvesting cost in the halibut fishery is $0.36 to $0.46 per pound with an IFQ program, the retention of the retainable bycatch would have reduced total harvesting costs by $1.7 to $2.2 million. The marginal cost with IFQs is used because the cost saving associated with the reduction in marginal and average fishing costs due to an IFQ program is accounted for elsewhere.

No attempt has been made to generate comparable estimates of the foregone increase in halibut landings and foregone decrease in halibut landing cost due to halibut bycatch mortality in the 1990 BS/AI longline groundfish fisheries or in other groundfish fisheries.

Cost of Halibut PSC Limit Induced Closures In 1990, the 750 mt halibut PSC limit for all fixed gear fisheries in the Gulf did result in a closure of the longline sablefish fishery in the Western Gulf after just over half of its 3,020 mt share of the TAC had been taken. This loss was offset partially because catch exceeded the fixed gear apportionments of the sablefish TACs for the rest of the Gulf. Had halibut IFQs been in place, the 1,500 mt of sablefish catch with an exvessel value of $2.3 million would not have been foregone. The benefits of an IFQ program in terms of preventing such closures would increase substantially if halibut PSC limits for the BS/AI longline fisheries became binding constraints on catch in those fisheries. This type of benefit would also be increased substantially if the IFQ program allowed other fisheries to use halibut IFQs to prevent or postpone halibut PSC induced closures. No attempt has been made to estimate such benefits.

2.2.23 Effects of an IFQ Program Associated with Halibut Bycatch in the Salmon Troll Fishery

The effects of an IFQ Program associated with halibut bycatch in the salmon troll fishery are similar in nature but smaller in magnitude compared to those in the groundfish fisheries. No attempt has been made to quantify these effects for the troll fishery.

2.2.24 Effects of an IFQ Program on Under-Reported Landings

The ability of the NMFS and IPHC, respectively, to manage the sablefish and halibut resources effectively depends on a number of factors including its ability to estimate total removals accurately. Discard mortality is one source of uncertainty that has already been discussed. Another source of uncertainty is the extent of under-reported landings.

An IFQ program will increase the amount of intentional under-reporting of landings. During a halibut or sablefish opening, an individual fisherman or processor currently has little incentive to under-report halibut or sablefish landings because the landings reported by an individual typically will have little effect on whether there will be another opening and on the amount of fish the fisherman or processor can take during the year. However, because a fisherman would have to use some of his IFQ for each pound of halibut or sablefish he lands, the fisherman would have a greater incentive to have his landings under-reported.

The actual incentive to under-report landings and the level of under-reporting would depend on the exvessel price, the price of IFQs, harvesting costs, and the effectiveness of the monitoring and enforcement programs. The effectiveness of these programs will depend on: (1) the amount of money that is made available for them; (2) how efficiently that money is used; and (3) the level of industry cooperation. At this time it is not known how much money will be available, what its source will be, or how effectively it will be used. There is also considerable uncertainty concerning industry cooperation.

Those involved in the development and monitoring of the Canadian IVQ programs for sablefish and halibut have indicated that industry cooperation is a critical element in determining the success of such a program. The types of cooperation that are desired range from accurate and timely submission of information to assisting in the identification and prosecution of individuals who violate the regulations associated with the IFQ program.

It has been suggested that there are two reasons why industry involvement in the development of the IFQ program is critical with respect to industry cooperation. First, it tends to produce a program that the industry considers to be its own and fair. Second, it will decrease the probability of bugs that could result in a loss of confidence in the program.

2.2.25 Effects of an IFQ Program on Ability to Prevent Landings from Exceeding Halibut or Sablefish Quotas

The problem of unreported fishing mortality was addressed in the last section. A separate issue is the ability to prevent reported removals from exceeding quotas. The difficulty of managing an intensive open access fishery within the quotas is demonstrated by the data in Table 2.7. In 1990, catch ranged from 60% to 208% of the area specific quotas and the quotas were exceeded in five out of eight areas.

With IFQs, each person who uses an IFQ is responsible for not exceeding his IFQ. If the penalty for exceeding an IFQ is sufficiently large, few IFQs will be exceeded and it is probable that catches would be closer to the quotas. The probability of this occurring would tend to be greater if IFQs are freely transferable. The Canadian experience indicates that sablefish quota overages were reduced with IVQs. The Canadian halibut IVQ program, which just started in May of 1991, resulted in less than the quota being taken because some fishermen who had planned to fish late in the year did not take their full IVQs due to weather problems and a seasonal decrease in catch per unit of effort for the traditional fishing areas. Fishermen are expected to learn from this experience; therefore, in the future, total landings are expected to approximately equal the quota.

2.2.26 Effects of an IFQ Program on Pressure on the IPHC or Council to Increase Halibut and Sablefish Quotas or Halibut PSC Limits

Competing user groups often place demands on the IPHC and Council to supply them with halibut. The response to such demands probably has not adversely affected halibut stocks but it has placed a large burden on the IPHC and Council processes. Two examples are requests for preferential local access to halibut quotas in Areas 4C and 4E and requests for increased halibut PSC limits.

The need for the Council to respond to allocation issues would be decreased because the IFQ program provides a fair and efficient mechanism for allocating halibut and sablefish quotas among user groups. The market for IFQs will allow anyone who can make more productive use of the resource with hook and line gear an opportunity to bid IFQs away from their existing owner. Therefore, the need for the Council to intervene to assure a productive use of a quota would be reduced and the need to establish halibut PSC limits for hook and line fisheries would be eliminated. The same would be true for halibut PSC limits for other gear groups if halibut IFQs can be used to cover bycatch taken with other gear.

IFQs would not eliminate all allocation requests. For example, some will request the Council to intervene to protect them from the market solution generated by the IFQ program. An IFQ system would, however, provide additional tools for use in responding to such requests.

The potential advantages of a market solution to allocation issues would be reduced by restrictions on the transferability of QSs and IFQs. If a very restrictive IFQ program is implemented, more allocation issues will have to be addressed by the Council and the Council will probably receive more requests to change the IFQ program. Such a program may provide few advantages with respect to the Council process compared to Alternative 1 (the status quo).

Over the short term, (perhaps the first few years after implementation) even a less restrictive IFQ system could increase the demands for Council attention. As with any new management system, an IFQ system would have a number of problems and idiosyncracies that would need to be corrected. Limited access systems established world-wide have required such adjustment after their initial implementation.

It is not clear whether an IFQ program would increase or decrease the pressure on the Council and IPHC to set higher quotas. The longline industry has been a staunch proponent of conservative quotas. The owners of quota shares may even have a greater interest in protecting the stocks, and thus the value of their quota shares. However, in a given year, an increase in a quota would directly translate into an increase in the IFQ of each quota share owner. Therefore, there could be pressure to raise quotas. This would be offset to some extent by decreased pressure to increase PSC limits if IFQs were used to allocate halibut among fisheries.

It is not known what the net effect of an IFQ program would be on the pressure to increase halibut or sablefish removals. But given the history of the IPHC and Council, any such changes are not expected to adversely affect the long term productivity of the halibut and sablefish stocks.

2.2.27 Effects of an IFQ Program on the Ability of the Council and IPHC to Attain OY by Preventing Excessive Fishing on Some Stock Components

Fishing effort and mortality that are concentrated in time and space can decrease the biological and economic productivity of a stock and decrease the probability of attaining OY. An IFQ program would result in effort and fishing mortality being dispersed substantially more in both time and space. All else being equal, this would tend to decrease the possibility that some components of the halibut or sablefish stock are fished too heavily while others are not fished heavily enough. However for halibut, the benefits of a dispersed fishery could be reduced by increased problems with respect to transboundry issues and stock assessment consistency issues. The former issue refers to the interception of halibut migrating to and from spawning grounds. The IPHC has the authority to set fishing seasons and areas if necessary to reduce or eliminate both problems.

2.2.28 Effects of an IFQ Program on Monitoring and Enforcement Costs

It is estimated that the cost of implementing an IFQ program would be about $2 million in preparation for the first IFQ fishery year and about $2.7 million per year thereafter. These costs estimates are discussed more fully in Chapter 5. Part of the startup and ongoing costs would not be duplicated if an IFQ program were extended to for other fisheries.

2.2.29 A Generalized Assessment of the Benefits of an IFQ System

The concepts of supply and demand can be used to demonstrate how an IFQ program will affect the profitability of a fishery and to address the distribution of those profits between those who are initially given QS and those who eventually use the IFQs to harvest sablefish. Such a discussion is included in Appendix IV of the July 19, 1991 Environmental Impact Statement for Halibut IFQ Alternatives.

2.2.30 Constraints on the Benefits of an IFQ Program

It was noted in the analysis of the sablefish IFQ program that if there is an additional constraint on sablefish catch, such as the fixed gear halibut prohibited species catch (PSC) limit in the Gulf, an IFQ program will not entirely replace the race for fish as the allocation mechanism and the benefits of

an IFQ program could be reduced substantially unless the PSC limit is also apportioned as IFQs. Under some circumstances, very low ABCs for some of the rockfish species taken as bycatch in the halibut fishery could impose a similar constraint on the benefits of a IFQ program for the halibut fishery. However, there are management measures that could be used to prevent this from happening.

2.2.31 Summary of Changes in the Nature of the Fishery and the Distribution of Benefits

If there are not significant external benefits or costs associated with the use of part of a halibut or sablefish quota, the private decisions of individuals concerning how to use IFQs and whether to buy or sell IFQs would tend to result in the quotas being used productively from the perspectives of the individuals and society as a whole. This does not mean that everyone would benefit from the implementation of IFQs. As a result of changes in the nature of the fishery, some would benefit and others would suffer losses. Because of the opportunities for participation in multiple fisheries, fleet composition under an IFQ system cannot be determined in advance.

Those persons who take halibut incidentally to other hook and line fisheries, such as the salmon troll or groundfish longline fisheries, would face a decision concerning IFQs. They could either discard halibut bycatch or purchase IFQs and land it. Those catching halibut as bycatch would tend to have lower production costs than those targeting on halibut. Therefore many multi-species fishermen probably would decide to purchase IFQs and land their halibut bycatch. Those fishermen who were not able to purchase sufficient IFQs or deliver an acceptable product given the nature of their fishing operation would continue to discard.

There probably would be changes in the employment of crewmen that will benefit some fishermen by providing improved employment opportunities but impose costs on others by adversely affecting their employment opportunities. The use of IFQs is expected to decrease the total numbers of vessels and fishermen in the halibut and sablefish fisheries. However, those who remained in the fishery would be more fully employed. The demand for specific skills and, therefore, the employment opportunities for fishermen with specific skills could change. The premium on speed would be reduced and the premium on the ability to obtain higher recovery rates and assure the quality of the product would increase. Therefore, those who have the former skills probably would have decreased employment opportunities and those with the latter skills would have a smaller decrease or an increase in their opportunities.

There would be transfers of income to the initial recipients of quota shares from those who either purchase quota shares or IFQs from them. The initial recipients who have left the fishery would clearly benefit from the IFQ program. Many of the other initial recipients would also benefit.

Those who would receive IFQs equal to or greater than their average annual landings would tend to benefit from an IFQ program. Other current participants will receive IFQs that are less than their average annual landings. The ability of such an individual to benefit from the IFQ program would, in most cases, depend upon the efficiency of his vessel and crew and upon his skill in evaluating the IFQ market. Those who would choose to buy additional quota shares and/or IFQs would do so only if the expected benefits exceed the cost, but this does not assure that actual benefits will exceed the cost of acquiring IFQs. Those fishermen who are unable to realize their initial profit expectations after acquiring additional IFQs will have an incentive to increase the value of their product, reduce their costs, or sell their IFQs to more efficient fishermen.

Compared to the status quo, some of those who would increase their participation in the fishery by acquiring QSs and/or IFQs from others would benefit from the IFQ program and some would be

adversely affected by it. The adverse effects would be due to the income transfer that would be made to the initial recipients of the quota shares. In the absence of these transfers, that is if participants in the fishery could have the benefits of IFQs without having to buy quota shares or IFQs, those who use the IFQs would clearly benefit from the IFQ program. This means that, as a whole, the group of initial quota share recipients and eventual IFQ users would benefit from an IFQ program.

2.3 Analyses of Specific Components of the IFQ Program

In establishing an IFQ program, there are four basic questions to be answered. They are listed below.

1. How extensive will the program be in terms of areas, gears, and species?

2. To whom will the IFQs be allocated?

3. What will each person's IFQ equal?

4. What can be done with one's IFQ?

Before arriving at the preferred alternative described in Chapter 1, the Council had analyzed and considered a wide range of options for the specific provisions of an IFQ program. These provisions relate, in essence, to the four basic questions listed above.

In selecting the specific elements of the IFQ program, the Council attempted to do the following:

1. address the problems that have occurred with the current management regime (see Section 2.1);

2. link the initial QS allocations to recent dependence on the halibut and sablefish fixed gear fisheries;

3. broadly distribute QSs to prevent excessively large QSs from being given to some persons;

4. maintain the diversity in the fleet with respect to vessel categories;

5. maintain the existing business relationships among vessel owners, crews, and processors;

6. assure that those directly involved in the fishery benefit from the IFQ program by assuring that the these two fisheries are dominated by owner/operator operations;

7. limit the concentration of quota shares ownership and IFQ usage that will occur over time;

8. limit the adjustment cost to current participants including Alaskan coastal communities;

9. increase the ability of rural coastal communities adjacent to the BS/AI to share in the wealth generated by the IFQ program; and

10. achieve previously stated Council goals and objectives and meet MFCMA requirements.

Because many of these objectives conflict with each other, the Council attempted to select a set of elements that provided a reasonable balance. For example, in considering the transferability of quota shares, which is one of the most critical elements of an IFQ program, the Council was beset with conflicting objectives. On the one hand it realized that some rationalization of the fleet is not only desirable, but inevitable under a quota system. Consolidation is seen as being desirable for the health of the industry. At the same time, the Council wished to place some constraints on the degree of fleet reduction for social reasons. It has sought to achieve this by placing a number of restrictions on the transferability of quota shares and the resulting individual fishing quotas. In particular, the Council wished to see quotas remaining in the hands of fishermen who would use them. It did not wish to see quotas held by absentee landlords with fishermen becoming share-croppers. It also wished to preserve a diverse fleet structure. The Council was especially concerned with the perceived trend for quotas to migrate into the hands of fewer and larger operators. Indeed, international experience has supported this trend. In New Zealand for example, the top 30 quota holders controlled about 80 percent of the aggregate total allowable catches for all species as of 30 April 1991. Of these, the top three quota holders held 53 percent of the total allowable catches. Because this high level of concentration of ownership reflects the historical dominance of the larger companies in the deepwater fisheries which tend to have proportionately large total allowable catches relative to New Zealand's whole commercial fishery, it is not indicative of the expected level of concentration in the halibut and sablefish IFQ fisheries, even in the absence of many of the transferability restrictions the Council is recommending.

2.3.1 The scope of the IFQ program

The IFQ program would apply to all commercial harvest of halibut off Alaska and all commercial harvest of sablefish in the EEZ off Alaska with fixed gear, as defined above. The program is limited to these two fisheries because these fisheries are currently characterized by a number of problems that diminish the net benefits that they can generate and because many participants in these fisheries have requested management changes to resolve the problems. Limiting the program to only these two fisheries will intensify the level of participation and management problems in other fisheries and prevent the use of IFQs to solve allocation issues between fixed gear fisheries and other fisheries that use the halibut and sablefish resources. However, the implementation of an IFQ program is a sufficiently large management change that limiting its initial use in these ways serves numerous purposes, both in industry and management. The extension of the IFQ program beyond these two fisheries would have delayed final Council action substantially.

By including all areas off Alaska for halibut and the EEZ for sablefish, the potential for an IFQ program in only some areas greatly intensifying participation in other areas off Alaska is eliminated. The Southeast Inside sablefish fishery, which is in State waters, is excluded; however, adverse effects on that fishery will be prevented by the State limited entry program that is in place for that fishery.

By allowing halibut and sablefish IFQs to be used in halibut, sablefish, and other fixed gear fisheries, the transferability of IFQs can be used, within limitations, to allocate halibut and sablefish between the fixed gear fisheries that target on these two species and other fixed gear fisheries that take halibut and sablefish as bycatch. The associated benefits were discussed in Sections 2.2.22 and 2.2.26.

2.3.2 To whom will quota shares be allocated?

Initial assignments of halibut quota shares shall be made to each person who owned or leased a vessel with legal fixed gear halibut landings from off Alaska for 1988 through 1990. Similarly, initial assignments of sablefish quota shares shall be made to each person who owned or leased a vessel with legal fixed gear sablefish landings from the EEZ off Alaska for 1988 through 1990. For the purposes of the IFQ program, "person" means any individual who is a citizen of the United States or any corporation, partnership, association, or other entity (whether or not organized or existing under the laws of any state) which meets the requirements set forth in 46 CFR Part 67.03, as applicable.

By limiting those who are given QSs to non-foreign persons, the initial benefits to the Nation will be greater than if some of the initial benefits were given to historical participants from other countries.

The rationale behind assignment of quota shares to vessel owners and lease holders is that those individuals who have borne the greatest financial risk in developing the harvesting sector should be rewarded with the initial allocation of QSs. This manner of assignment would also smooth the transition to managing through the use of IFQs by maintaining essentially the same business relationships within the harvesting sector. In other words, vessel owners and lease holders will continue, at least in the short run, to organize fishing activity, subject to existing levels of processing demand and labor supply. Crew members are expected to become more involved in such decisions through the purchase of quota shares or IFQs.

The inclusion of lease holders in the initial allocation of quota shares is likely to create some implementation problems. Because there is no clear definition of what constitutes a bareboat charter or lease, the potential for creating a derisive and contentious judicial process exists. Also, given a complete lack of historical data regarding vessel leases, the analysis available to the Council and the Secretary prior to adoption of the amendment will be unable to estimate reliably the magnitude and cost of that judicial process.

The contribution of other past participants in the fishery, such as crew members, has been discussed. Including crew members among the initial recipients of QSs would: (1) substantially increase the difficulty of determining what QS to give to each person because neither the State of Alaska nor NMFS has records on participation by crew members and because a decision would have to be made on how to split QSs among owners, skippers, and crewmen; (2) have the potential to increase the bargaining position of crew relative to owners compared to both the status quo and Alternative 2; (3) decrease the value of the QSs given to each person other than a crew member by more broadly distributing QSs; (4) add to the costs associated with limitations on the sale of IFQs; and (5) make the program more equitable or less equitable depending on one's perspective. Typically, crew members who do not have landings recorded in their own names have not been given special consideration when limited access programs have been implemented.

In recognition of the investment that crew members have made in the fishery and in an attempt to assure that the traditional progression from crew member to vessel owner will continue, only bona fide crew member or initial QS recipients would be able to purchase catcher boat QSs and IFQs or to use catcher boat IFQs. A "bona fide fixed gear crew member," is defined as any person that has acquired commercial fish harvesting time at sea (i.e. fish harvesting crew), that is equal to 5 months of any commercial fish harvesting activity in a fishery in state or federally managed waters of the U.S. Additionally any individual who receives an initial allocation of QS will be considered a bona fide crew member. This provides an advantage to crew members at a cost to the initial QS recipients in that crew members will only have to compete among themselves to purchase catcher boat QS or

IFQs. This will tend to reduce the prices of catcher boat QSs and IFQs, but probably not substantially.

Limiting the QS recipients to those with landings for 1988 through 1990 will eliminate those who have not been recent participants. This will: (1) decrease the number of persons who receive QSs; (2) increase the QSs of those who recently have been dependent on the fishery; (3) allow a more rapid adjustment to a rationalized fishery; and (4) be less disruptive in that recent participants will receive IFQs that are closer to their average historical landings.

2.3.3 The initial distribution of quota shares

The amount of the initial halibut (sablefish) quota shares for an area assigned to each person will equal the halibut (sablefish) landings for the person's best five years of 1984 through 1990 (1985 and 1990) for that area. The historical landings of a vessel will be counted as the lease holder's if there is one; otherwise, they will be counted as the vessel owner's. This will be done on a trip by trip basis. The initial assignment of quotas shares to each person by vessel class will be based on the vessel class used in the most recent year through September 25, 1991. Specifically, if a vessel is determined to be in a specific class and that vessel was used in the most recent year of participation by the owner or lease holder, then all qualifying pounds credited to that person during the qualifying years shall be assigned to that vessel class. However, if the owner or lease holder participated in the most recent year using vessels in more than one vessel class, qualifying pounds will be assigned to separate vessel classes in proportion to the landings made with each vessel class.

The beginning year of each of these catch history periods was selected to assure that the initial distribution of QSs reflected the long-standing participation and dependence on the fisheries. Many of those with five or more years of landings would have received IFQs in 1991 that were at least 80% of their average annual landings.

There are two reasons why the end of the qualifying periods is 1990. First, extending it beyond that would have provided an incentive both for additional fishermen to enter the fishery and for previous entrants to adopt extreme fishing methods in order to increase their landings and, therefore, the QSs they would receive if an IFQ program is implemented. This speculative activity would have intensified the race for fish and imposed substantial costs on the fishery in 1991. Second, it would have made it more difficult for a person to calculate what his QS and IFQ would be by area for each of the alternatives being considered.

Extending the qualifying period past 1990 would benefit those who participated in 1991 compared to those who only participated prior to 1991. It would reward those who increased their participation in the 1991 fishery in the hope that the qualifying period would be extended. It could decrease the credibility of the Council process to the extent that potential or actual participants were led to believe that the period would not be extended. It would result in a broader dispersion of QSs and increase the QSs given to current participants. Finally, it would increase the cost of determining the QS to be given to each person because it would require the use of an additional year of landing records and the resolution of the associated additional discrepancies between agency data and vessel owner data.

Each person's worst year or worst two years, respectively, of sablefish or halibut landings during the selected catch history periods will be ignored. This will be done by management area. One reason for doing this is that it is to some extent a substitute for providing special compensation for a person who had unusually low catch in one or two years, respectively, due to the loss of or damage to a vessel, illness, the Exxon Valdez oil spill, or other unusual circumstances. These two methods of dealing with variability in participation will often result in quite different QSs being given to a person

with highly variable participation, particularly if the person had participation in a small number of years. However, if this is an acceptable substitute for special compensation, it could reduce substantially the duration and cost of the appeals process.

Ignoring each person's one or two worst years provides an advantage to those with variable landings compared to those with stable landings. This tends to reduce the QSs of the highliners and increase the QSs of the less productive fishermen because the highliners tend to have consistently high production years where as other fishermen tend to have greater fluctuations in their landings. It also provides increased benefits to those who have landings in few years at the expense of those who have landings in all years of the selected catch history periods.

The recommended treatment of persons with qualifying landings for multiple vessel classes differs between persons with multiple vessel classes for different years but only a single vessel class during their final year and persons with multiple vessel classes their final year. For the former, all qualifying landings are credited to the last vessel class. But for the latter, qualifying landings are apportioned among the vessel classes used during the final year.

The former rule is intended to be less disruptive in that it will allow those persons to use all of the IFQs associated with their initial QSs on the last class of vessel they owned or leased through September 25, 1991. The latter is intended to prevent persons who owned or leased vessels in more than one vessel class during their last year from having the option of which type of QS they would receive. The problem with the latter rule is that it results in quite different treatment for two persons who may have very similar catch histories. For example, if there were two halibut fishermen who each owned a 55 foot boat and landed 50,000 lbs of halibut per year for 1984 through 1990, if each purchased a 70 foot boat in late 1990, but if one fisherman also kept his smaller boat and the other fisherman sold his before 1991, all of the catch history of the former fisherman would be credited toward QSs for 36' - 60' vessel class and all of the other fisherman's catch history would be credited to QSs for the larger than 60' vessel class. Letting those with multiple vessel classes during their last year choose which type of QS they will receive may be beneficial for a small percentage of the initial recipients of QSs and it would eliminate an equity problem without having a significant effect on the overall distribution of QS by vessel class.

Basis of Estimated Distribution of QS and IFQs

Fish tickets and vessel license data through 1990 were used to estimate the initial distributions of QSs and IFQs for halibut and sablefish. There are several reasons why the numbers discussed below are estimates and not precise calculations. The vessel license data used identifies one person as the owner of a vessel for each year; therefore, it does not necessarily reflect the owner associated with each landing for a vessel that was owned by different people during a year. Information on lease holders is not included in the data. Therefore, the number of QS recipients will be greater than estimated and the distribution of the QS recipients could differ. There is uncertainty concerning the residency of some vessel owners, the length of some vessels, and the ownership of some vessels. Vessel ownership and fish ticket data for 1991 were not used to identify the last vessel class(s) of each owner.

These data deficiencies are not expected to significantly affect the comparisons that are made below. However, if an IFQ program is approved, these data deficiencies would be reduced to assure that correct QS is given to each person who qualifies. A final source of error, that cannot be corrected for, is that some of those who would qualify for QSs would not apply for them. All else being equal, this results in the number of QS recipients being overestimated and the IFQs per recipient being

underestimated. The magnitude of the errors would not be known until the application and appeals process is completed.

In making these estimates, residency for 1984 through 1990 is based on the apparent residency of a vessel owner for each year as determined by the owners address. The residency of QS and IFQ recipients is based on the most recent apparent residency of each vessel owner.

Each owner of vessels in more than one vessel class in a year appears in more than one vessel class that year, but is counted only once in determining the total number of owners each year. This means that the numbers of vessel owners by size class sums to more than the total number of owners. Such an owner was placed in his most recent vessel class or the largest class he used in his most recent year for the purposes of assigning QS or IFQ to vessel classes. Therefore, although the historical participation of a single vessel owner may appear in more than one vessel class, his QSs and IFQs are all in one vessel class. The Council's recommendation differs from this in that it would allocate QSs to multiple vessel classes for a person who had multiple vessel classes in his last year. Although this difference may be significant for a small percentage of the initial recipients of QSs, it should not have a significant effect on the estimates discussed in this report.

The estimates of the distributions of IFQs are based on 1991 fixed gear TACs and are not adjusted for the community development quotas that may be deducted from the TACs for some management areas before annual IFQ distributions are made. Because there will be some adjustment between QS owners from the CDQ areas and other areas, the distribution of IFQs for the fisheries as a whole should not be affected significantly.

Comparisons of the distributions of vessel owners and QS recipients

Estimates of the annual distributions of halibut vessel owners by residence and by vessel classes and corresponding estimates of the distributions of QS recipients are presented in Tables 2.8 - 2.10, respectively, for the halibut and sablefish fisheries individually and combined. These estimates are for all management areas combined. Similar tables for each management areas are in Appendix D and tables with information by census district but not by vessel class are presented in Chapter 3.

The following are summary statements for the halibut data in Table 2.8.

1. The annual number of vessel owners who participated in the halibut fishery ranged from a low of 2,479 in 1985 to a high of 3,883 in 1990; however 5,484 vessel owners will be given QSs.

2. The percentage of owners who were Alaska residents ranged from 87.0% in 1990 to 89.4% in 1988 and 87.3% of the QS recipients are Alaska residents.

3. The percentage of vessel owners in the under 36 foot class ranged from a low of 52.0% in 1990 to a high of 63.4% in 1984. The percentage of QS recipients with this class of vessels is 56.3%.

4. The percentage of vessel owners in the 36-60 foot class ranged from a low of 32.1% in 1984 to a high of 44.1% in 1990. The percentage of QS recipients with this class of vessels is 38.2%.

5. The percentage of vessel owners in the over 60 foot class ranged from 3.5% in 1984 to 5.5% in 1986. The percentage of QS recipients with this class of vessels is 5.0%.

6. The percentage of vessel owners in the freezer boat class range from 0% in 1984-86 to 0.2% for 1988 and 1990. They would account for 0.2% of the QS recipients. Note that because no vessels have participated in the halibut fishery as freezer boats, vessels will be assigned to this vessel class on the basis of being freezer boats in other groundfish fixed gear fisheries.

The following are summary statements for the sablefish data in Table 2.9.

1. The annual number of vessel owners who participated in the fixed gear sablefish fishery ranged from a low of 244 in 1985 to a high of 706 in 1988; however 1,094 vessel owners will be given QSs.

2. The percentage of owners who were Alaska residents ranged from 70.1% in 1985 to 76.6% in 1988 and 74.4% of the QS recipients are Alaska residents.

3. The percentage of vessel owners in the under 61 foot class ranged from a low of 67.6% in 1985 to a high of 80.5% in 1988. The percentage of QS recipients with this class of vessels is 79.3%.

4. The percentage of vessel owners in the over 60 foot class ranged from a low of 17.0% in 1988 and 1990 to a high of 29.9% in 1985. The percentage of QS recipients with this class of vessels is 15.4%.

5. The percentage of vessel owners in the freezer boat class range from 2.1% in 1987 to 3.7% in 1989. They would account for 3.6% of the QS recipients.

The following are summary statements for the combined halibut and sablefish data in Table 2.10.

1. The annual number of vessel owners who participated in the fixed gear halibut or sablefish fishery ranged from a low of 2,507 in 1985 to a high of 3,916 in 1990; however 5,626 vessel owners will be given QSs.

2. The percentage of owners who were Alaska residents ranged from 86.5% in 1990 to 88.9% in 1985 and 86.4% of the QS recipients are Alaska residents.

3. The percentage of vessel owners in the under 36 foot class ranged from a low of 51.7% in 1990 to a high of 57.5% in 1985. The percentage of QS recipients with this class of vessels is 55.3%.

4. The percentage of vessel owners in the 36-60 foot class ranged from a low of 37.3% in 1985 to a high of 43.9% in 1990. The percentage of QS recipients with this class of vessels is 38.2%.

5. The percentage of vessel owners in the over 60 foot class ranged from 5.1% in 1985 to 6.1% in 1986. The percentage of QS recipients with this class of vessels is 5.2%.

6. The percentage of vessel owners in the freezer boat class range from 0.2% in 1985 to 0.7% in 1989. They would account for 0.7% of the QS recipients.

Due to the interest there is in the levels of participation in BS/AI halibut and sablefish fisheries by residents of the adjacent communities, a list of the communities or census districts that are considered to be adjacent to each management area, data concerning the historical distributions of halibut vessel

owners and the distributions of QS recipients between local residents and other fishermen for the management areas within the BS/AI area, and similar distribution data for the fixed gear sablefish fishery, respectively, are presented in Tables 2.11, 2.12, and 2.13.

The following summarize some of the halibut data in Table 2.12.

1. There was no participation in the Area 4B or 4D fishery by local residents.

2. Residents of communities adjacent to Area 4C accounted for from 41% of the vessel owners associated with Area 4C landings in 1987 to 78.4% of these owners in 1984 and they would account for 41.5% of the QS recipients for Area 4C.

3. Residents of communities adjacent to Area 4E accounted for from 62.2% of the vessel owners associated with Area 4E landings in 1990 to 94.2% of these owners in 1987 and they would account for 63.9% of the QS recipients for Area 4E.

The following summarize some of the sablefish data in Table 2.13.

1. Residents of communities adjacent to the Aleutian Islands area accounted for from 0.0% of the vessel owners associated with AI Area landings in most years to 2.2% of these owners in 1990 and they would account for 0.7% of the QS recipients for that area.

2. Residents of communities adjacent to the Bering Sea area accounted for from 1.3% of the vessel owners associated with BS area landings in 1987 to 15.7% of these owners in 1988 and they would account for 7.1% of the QS recipients for that area.

Comparisons of the distributions of landings and IFQs

Estimates of the annual distributions of fixed gear halibut and sablefish landings by residence of the vessel owner and vessel classes are presented in Tables 2.14 - 2.16. These tables also contain corresponding estimates of the distributions of IFQs based on the 1991 TACs. These estimates are for all management areas combined. Similar tables for each management area are in Appendix D and tables with information by census district but not by vessel class are presented in Chapter 3. As noted above, for all of the following comparisons, it is assumed that all of the fixed gear halibut and sablefish TACs are apportioned as IFQs. This will overstate the actual IFQs by the proportion of the TACs that are used for community development quotas but should not have a significant effect on the percentage distributions.

The following comparisons can be made among the historical distributions of halibut landings and the distributions of halibut IFQs based on 1991 fixed gear TACs (Table 2.14).

1. The percentage of landings accounted for by Alaska residents ranged from a low of 66.2% in 1984 to a high of 77.6% in 1988 and Alaska residents will receive 72.8% of the halibut IFQs..

2. The percentage of landings accounted for by vessels in the under 36 foot class ranged from a low of 11.1% in 1985 to a high of 16.5% in 1988 and the percentage of IFQs accounted for by this vessel class is 11.1%.

3. The percentage of landings accounted for by vessels in the 36-60 foot class ranged from a low of 53.9% in 1984 to a high of 63.1% in 1990 and the percentage of IFQs accounted for by this vessel class is 56.7.

4. The percentage of landings accounted for by vessels in the over 60 foot class ranged from a low of 22.7% in 1990 to a high of 33.2% in 1985 and the percentage of IFQs accounted for by this vessel class is 31.2%.

5. Prior to 1988, there were too few freezer boats to report their catch. Since then, they accounted for from 0.4% of all halibut landings in 1988 to 1.0% in 1989. They will account for 1.0% of all IFQs. Note again that because no vessels have participated in the halibut fishery as freezer boats, vessels will be assigned to this vessel class on the basis of being freezer boats in other groundfish longline fisheries.

The following comparisons can be made among the historical distributions of sablefish landings and the distributions of sablefish IFQs based on 1991 fixed gear TACs (Table 2.15).

1. The percentage of fixed gear sablefish landings accounted for by Alaska residents ranged from a low of 45.6% in 1985 to a high of 51.9% in 1987. Alaska residents will receive 49% of the fixed gear sablefish IFQs.

2. The percentage of landings accounted for by vessels in the under 61 foot class ranged from a low of 32.9% in 1985 to a high of 59.3% in 1990 and the percentage of IFQs accounted for by this vessel class is 49%.

3. The percentage of landings accounted for by vessels in the over 60 foot class ranged from a low of 25.8% in 1990 to a high of 40.4% in 1985 and the percentage of IFQs accounted for by this vessel class is 34.3%.

4. Freezer boats accounted for from 12.8% of all fixed gear sablefish landings in 1989 to 26.7% in 1985. They will account for 16.6% of all IFQs.

The following summary statements are for the fixed gear halibut and sablefish fisheries combined (Table 2.16). This table indicates the distribution of the exvessel value of the fixed gear halibut and sablefish fisheries combined and the distribution of the exvessel value of the catch associated with the IFQs.

1. The percentage of landings value accounted for by Alaska residents ranged from a low of 60.8% in 1985 to a high of 65.3% in 1986. Alaska residents will receive 64.3% of the exvessel value of catch associated to the IFQs.

2. The percentage of landings value accounted for by vessels in the under 36 foot class ranged from a low of 6.8% in 1989 to a high of 8.6% in 1987 and the percentage of IFQ exvessel value accounted for by this vessel class is 7.4%.

3. The percentage of landings value accounted for by vessels in the 36-60 foot class ranged from a low of 46.3% in 1985 to a high of 60.9% in 1990 and the percentage of IFQ exvessel value accounted for by this vessel class is 53.6%.

4. The percentage of landings value accounted for by vessels in the over 60 foot class ranged from a low of 24.1% in 1990 to a high of 36% in 1985 and the percentage of IFQ exvessel value accounted for by this vessel class is 32.3%.

5. The percentage of landings value accounted for by freezer boats ranges from 5.6% in 1986 to 10.4% in 1985. They will account for 6.6% of all IFQ exvessel value.

Due to the interest there is in the levels of participation in BS/AI halibut and sablefish fisheries by residents of the adjacent communities, data concerning the historical distributions of landings and the distributions of IFQs between local residents and other fishermen for these areas are presented in Tables 2.17 and 2.18.

The following summarize some of the halibut data in Table 2.17.

1. There was no participation in the Area 4B or 4D fishery by local residents.

2. Residents of communities adjacent to Area 4C accounted for from 15.4% of the landings from that area in 1987 to 69.6% in 1988 and they would account for 35.3% of the Area 4C IFQs.

3. Residents of communities adjacent to Area 4E accounted for from 37.0% of the landings from that area in 1990 to 90.8% in 1986 and they would account for 53.2% of the 4E IFQs.

The following summarize some of the sablefish data in Table 2.18.

1. Residents of communities adjacent to the Aleutian Islands were too few in numbers and the data are confidential.

2. Residents of communities adjacent to the Bering Sea area accounted for 2.2% of the BS area landings in 1988 and they would account for 0.6% of the BS IFQs. The data are confidential in the other years.

Table 2.19 summarizes the distribution of halibut landings by management area and area of residence for two periods, 1984-90 and 1988-90. It also includes estimates of the distributions of halibut IFQs based on 1991 TACs. The data in these tables, for example, indicate that residents of S.E. Alaska: (1) accounted for 87.7% of the area 2C landing for 1984-90, (2) accounted for 26.6% of the landings from all areas for the same period, (3) accounted for 90.5% of the area 2C landings for 1988-90, (4) accounted for 28.1% of all landings for that period, and (5) would have received 89.4% of the area 2C IFQs and 25.2% of all IFQs based on 1991 TACs.

Table 2.20 summarizes the distribution of fixed gear sablefish landings by management area and area of residence for two periods, 1985-90 and 1988-90. It also includes estimates of the distributions of halibut IFQs based on 1991 TACs. The data in these tables, for example, indicate that residents of the Kodiak area: (1) accounted for 12.8% of the Central Gulf landing for 1985-90, (2) accounted for 7.0% of the landings from all areas for the same period, (3) accounted for 9.4% of the Central Gulf landings for 1988-90, (4) accounted for 5.3% of all landings for that period, and (5) would have received 11.1% of the Central Gulf IFQs and 6.3% of all IFQs based on 1991 TACs.

Comparisons of concentration of landings and IFQs

Six methods of depicting the distributions of annual landings among individual vessel owners and the corresponding distributions of IFQs are presented in Tables 2.21 - 2.26, Tables 2.27 - 2.32, and Tables 2.33 - 2.38, respectively, for halibut, sablefish, and the two combined. Similar tables by management area will be included in Appendix D if available. For each level of landings and IFQs, these tables indicate the number of vessel owners, the cumulative number of vessel owners, the percentage of vessel owners, the cumulative percentage of vessel owners, the percentage of total landings and IFQs accounted for, and the cumulative percentage of total landings and IFQs accounted for. The second type of table, but by census district of vessel owners, is included in Chapter 3.

For the halibut and sablefish fisheries combined, the distribution of QS recipients is substantially less skewed toward the high end than is the distribution of catch. This is the result of the QS distribution rules that: (1) distribute QS to many more persons than fished in any one year and (2) ignore one or two years of catch history for each person.

One measure of this difference between the annual distributions and the IFQ distribution is provided by a comparison of numbers of persons with annual catch as opposed to IFQs equal to or greater than a specific level. From 1985 to 1990, the number of halibut and sablefish vessel owners with combined halibut and sablefish landings of at least 200,000 lbs range from 85 in 1985 to 158 in 1988; however, based on 1991 TACs, only 109 vessel owners would receive halibut and sablefish IFQs that combined are at or above this level (Table 2.33). The number of vessel owners with a combined catch of more than 100,000 lbs ranged from 161 in 1985 to 283 in 1988 but only 232 would receive IFQs that would exceed 100,000 lbs (calculated using data in Table 3.34).

Another measure of the difference between the annual distributions and the IFQ distribution is provided by a comparison of the percentages of persons with annual catch as opposed to IFQs equal to or greater than a specific level. The percentage of vessel owners with annual combined catch of at least 200,000 lbs ranged from 3.4% in 1985 to 4.5% in 1989 but only 2.0% will receive IFQs that total at least 200,000 lbs (Table 3.35). The percentage of vessel owners with annual catch greater than 100,00 lbs ranged from 6.3% in 1990 to 7.9% in 1986 but only 4.2% will receive IFQs that exceed 100,000 lbs (Table 2.36).

A final measure of the difference between the annual distributions and the IFQ distribution is provided by a comparison of the percentage of catch as opposed to IFQs accounted for by persons with annual catch or IFQs equal to or greater than a specific level. From 1985 through 1990, the percentage of total catch accounted for by vessels owners with at least 200,000 lbs of catch ranged from 49.8% in 1990 to 56.1% in 1989 but those who will receive IFQs of at least 200,000 lbs will account for only 44.7% of the IFQs (Table 2.37). The percentage of catch accounted for by those with annual catch greater than 100,000 lbs ranged from 63.3% in 1990 to 68.4% in 1989 and those who will receive IFQs greater than 100,000 lbs will account for 62.3% of the IFQs (Table 2.38).

The transferability of QSs and IFQs would permit the eventual distribution of IFQs to differ significantly from that of the initial allocation. There would have to be substantial transfers of QSs to the high end for the distribution of IFQs to become as shewed toward the high end as was the historical distribution of catch. To the extent that QS are transferred to full time halibut and sablefish vessels, the distributions will become more concentrated at the high end. However, this would not happen if halibut and sablefish IFQs are used principally either by vessels that take halibut as bycatch or by vessels that continue to participate in a variety of fisheries. The latter two types of operations are expected to be very competitive in bidding for QSs and IFQs. This combined with the

ownership and use limitations recommended by the Council could prevent the distribution of catch from becoming as concentrated at the high end as the historical catch.

Comparisons of landings and IFQs for individual participants.

Because the QS qualification rule uses a three-year qualification period, the number of vessel owners who will receive QSs is substantially greater than the number of vessel owners for any one year. Therefore, most vessel owners will receive an IFQ that is less than their average annual landings or their 1990 landings if they had any. The extent to which people will have to obtain additional IFQ to maintain their average or 1990 landings determines how disruptive an IFQ program will be. For the following comparisons of historical catch and IFQs, the IFQs are based on 1991 TACs.

The number and percentage of vessel owners with an IFQ to average landings ratio for each of several ranges of values are presented in Figures 2.1 and 2.2, respectively, for halibut and sablefish. The average for each person is the person's total catch for the period divided by the number of years the person participated in the halibut (sablefish) fishery between 1984 and 1990 (1985-1990). It is estimated that 31.4% of the halibut vessel owners will receive IFQs less than 20% of their average annual catch, 29.3% will receive IFQs that are from 80% to 100% of their average catch, and 37% will receive IFQs that exceed their average catch (Figure 2.1). For sablefish it is estimated that 24.2% of the vessel owners will receive IFQs less than 20% of their average annual catch, 3.7% will receive IFQs that are from 80% to 100% of their average catch, and 71.5% will receive IFQs that exceed their average catch (Figure 2.2).

The number and percentage of vessel owners with an IFQ to 1990 landings ratio for each of several ranges of values are presented in Figures 2.3 and 2.4 for halibut and sablefish, respectively. Vessel owners with no landings in 1990 are not included. For halibut, 21.1% of the vessel owners would have IFQs equal to less than 20% of their 1990 catch, 15.4% would receive from 20% to 40%, 14.5% would receive 40% to 60%, 14.9% would receive 60% to 80%, 9.0% would receive 80% to 100%, and 25.2% would receive IFQs that exceeded their 1990 catch (Figure 2.3). For sablefish, 24.7% of the vessel owners would have IFQs equal to less than 20% of their 1990 catch, 16.8% would receive from 20% to 40%, 13.7% would receive 40% to 60%, 12.0% would receive 60% to 80%, 8.3% would receive 80% to 100%, and 24.2% would receive IFQs that exceeded their 1990 catch (Figure 2.4).

2.3.4 Vessel classes

The QSs and resulting IFQs will be vessel class specific. The halibut vessels classes are:

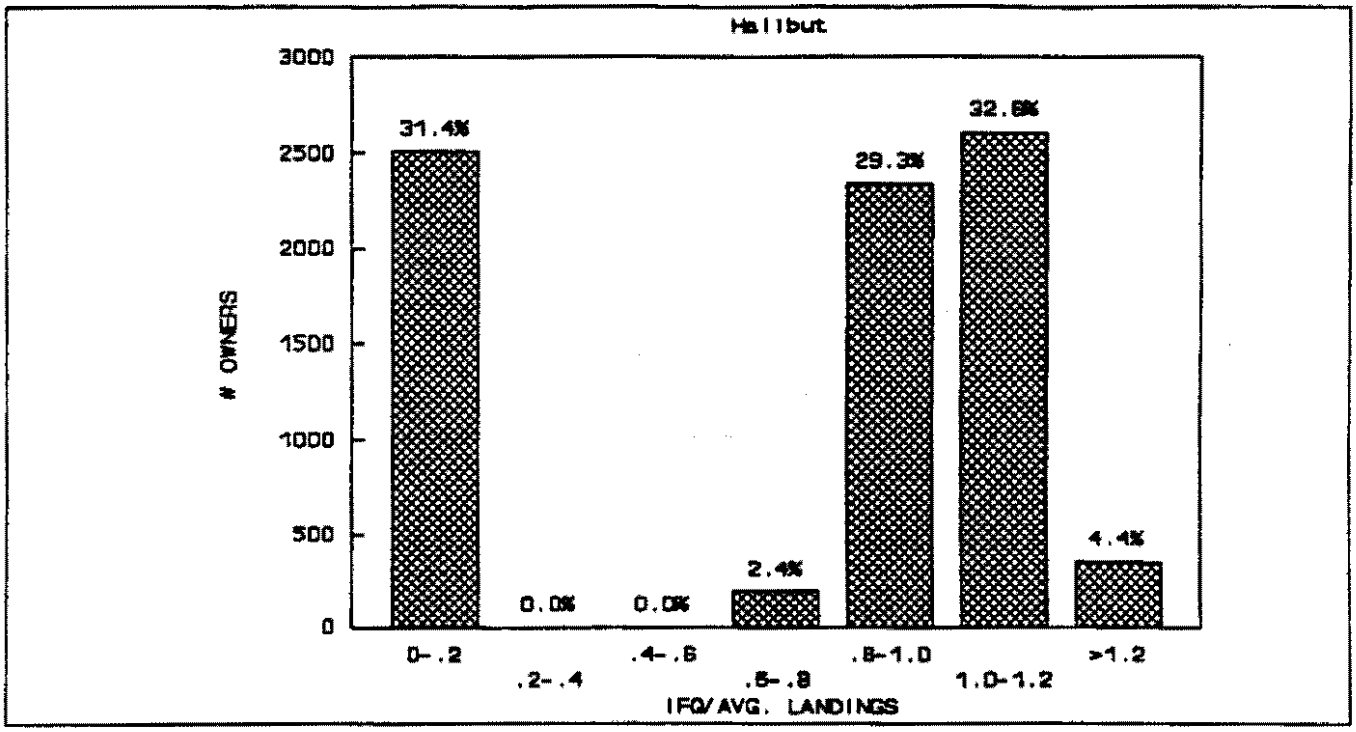
a. catcher boats $\leq$ 35 feet L.O.A.,
b. catcher boats > 35 feet and $\leq$ 60 feet,
c. catcher boats > 60 feet, and
d. freezer boats.

The sablefish vessels classes are:

a. catcher boats $\leq$ 60 feet L.O.A.,
b. catcher boats > 60 feet, and
c. freezer boats.

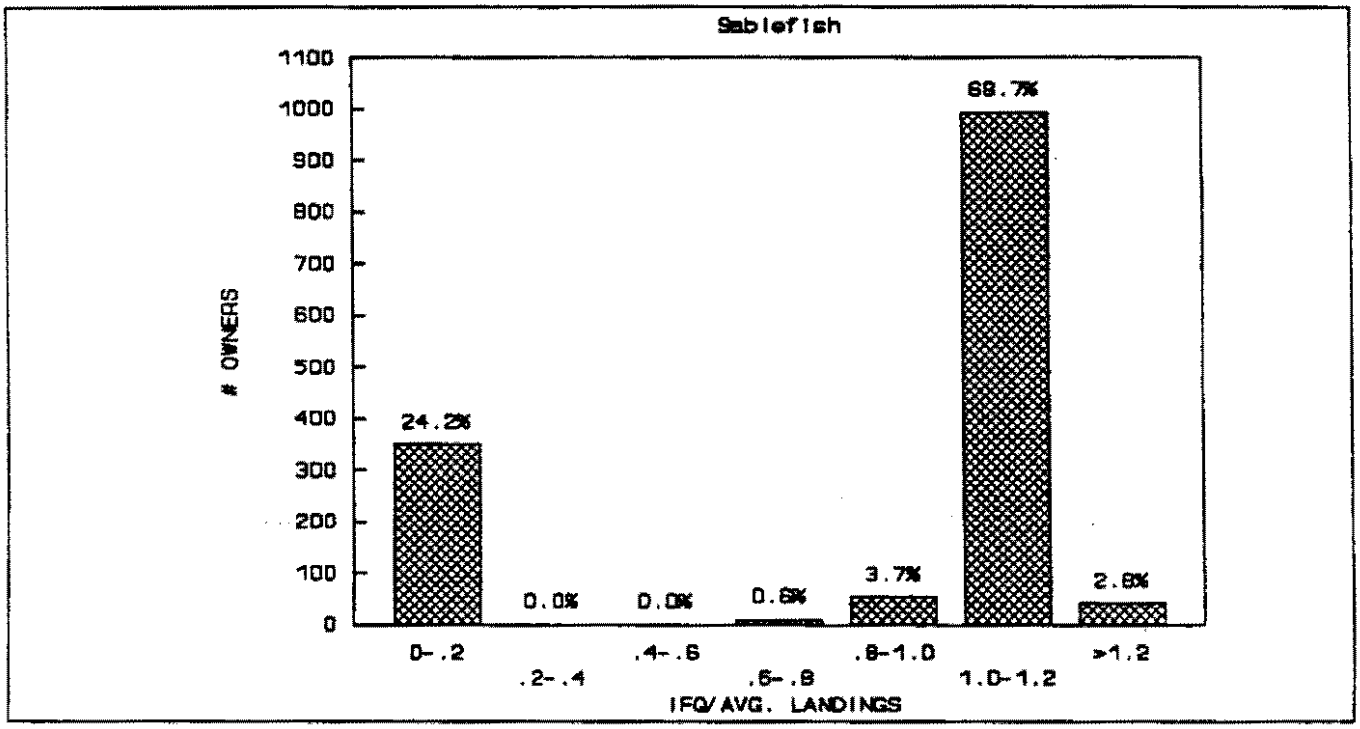
During the qualification period, a vessel is considered to have been a freezer boat in a given year, if during that year it processed any of its commercial fixed gear groundfish landings.

Figure 2.1 Estimated number and percentage of halibut vessel owners by the ratio of IFQs to average landings for QS preferred alternative.



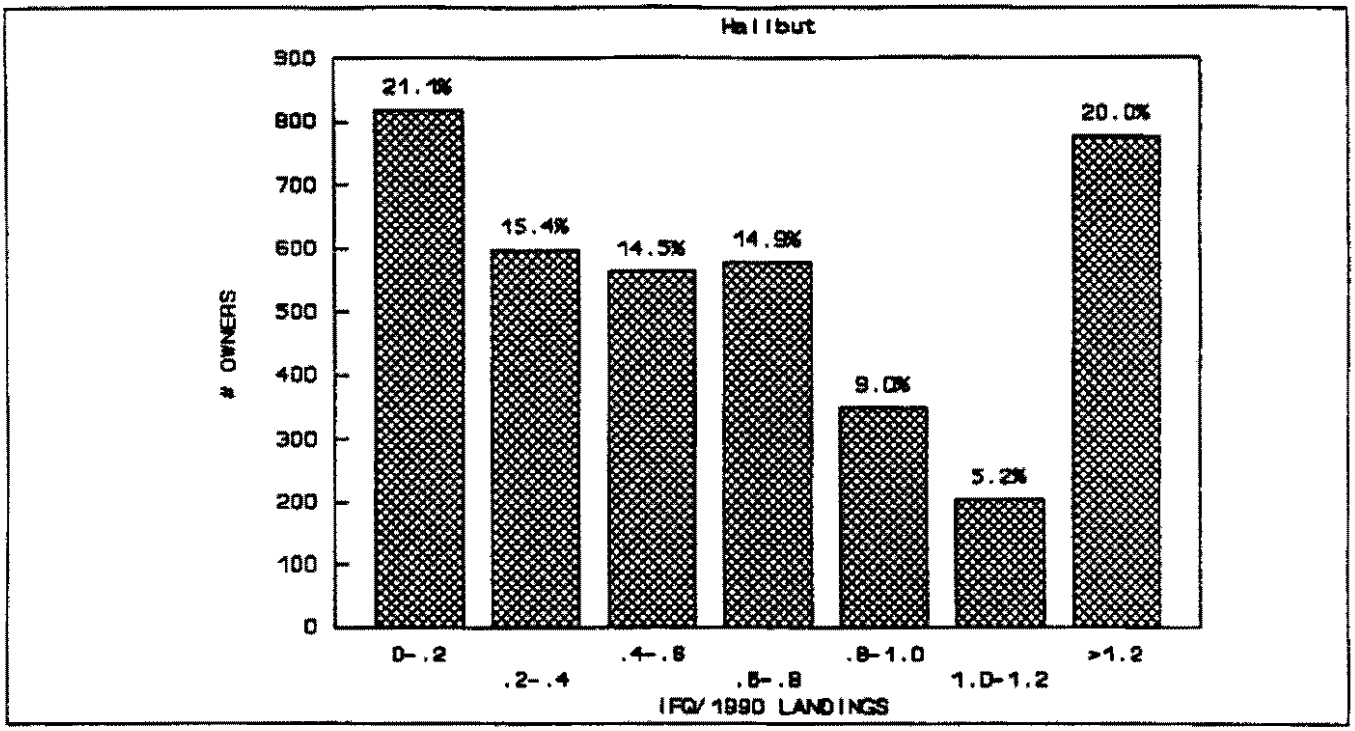
Note: The average landings for each owner is for the number of years fished from 1984-90.

Figure 2.2 Estimated number and percentage of sablefish vessel owners by the ratio of IFQs to average landings for QS preferred alternative.



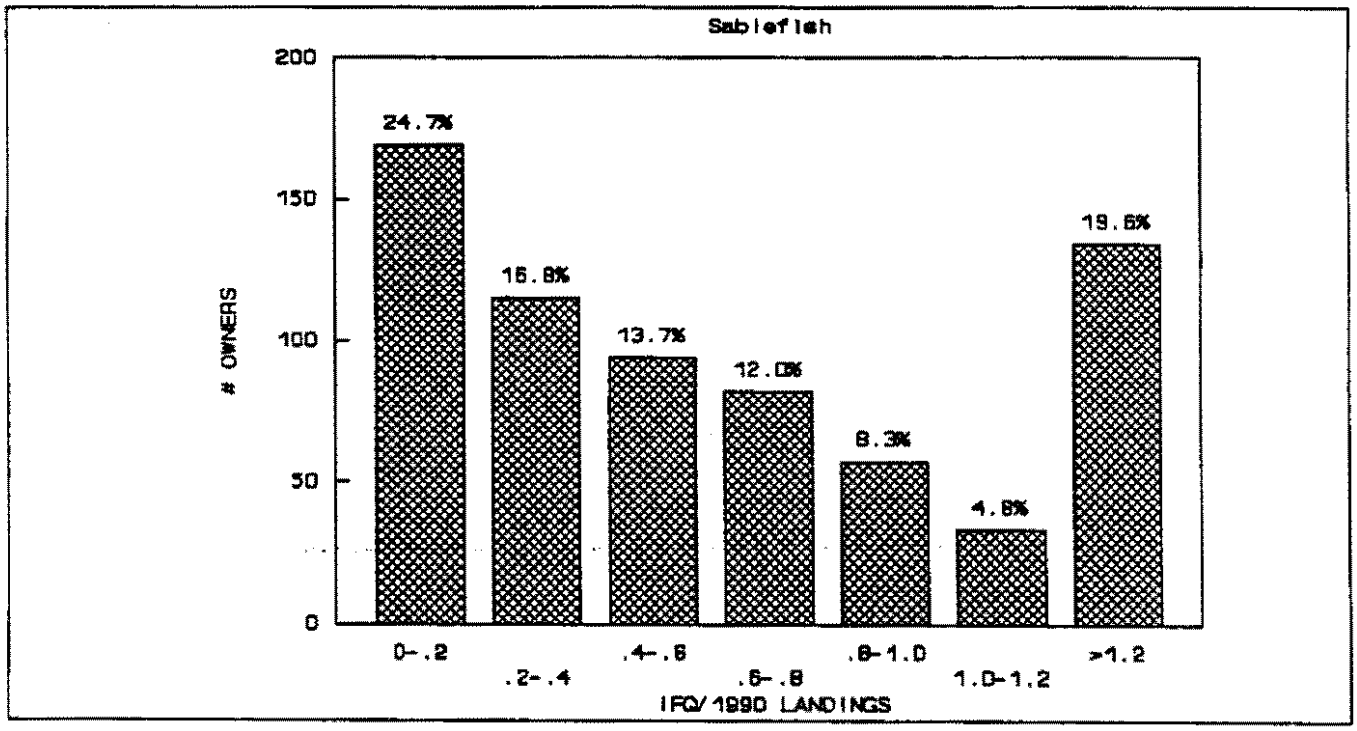
Note: The average landings for each owner is for the number of years fished from 1985-90.

Figure 2.3 Estimated number and percentage of halibut vessel owners by the ratio of IFQs to 1990 landings for QS preferred alternative.



Note: Only owners with 1990 landings are included.

Figure 2.4 Estimated number and percentage of sablefish vessel owners by the ratio of IFQs to 1990 landings for QS preferred alternative.



Note: Only owners with 1990 landings are included.

The underlying purpose of specifying vessel classes is to maintain a diverse fleet, in which all segments continue to exist and the social structures associated with them are maintained. There is a fear that, if all of the IFQs in an area were available to vessels of any vessel class, the owners of large vessels or freezer boats would acquire most of them. There is concern that removing the smaller vessels, which are more closely tied to local communities and which provide an opportunity for more people to participate in the fishery, would have detrimental social and economic impacts both on many areas and on individuals unable to invest in larger vessels.

Using vessel classes would limit the transferability of QSs and IFQs and in so doing would prevent them being transferred to those who would be willing to pay the most for them. To the extent that willingness to pay reflects the value of alternative uses, this means that the benefits derived from the halibut and sablefish fixed gear quotas would be lower. If no redistribution of effort and catch is permitted among vessel classes, the final situation would be similar to what was referred to above as the partial adjustment to an IFQ program. It is estimated that the cost saving foregone by not moving from the partial adjustment to the full adjustment for the halibut fishery would have been $9.8 to $12.7 million in 1990 (Table 2.1). The comparable estimate for the 1989 fixed gear sablefish fishery is $1.2 million. These estimates overstate the expected cost of the vessel class restrictions recommended by the Council because the recommended vessel classes would allow some redistribution of catch within the vessel classes included in the cost models.

Although the halibut cost model estimates that, with one exception, the 61-90 foot class would be the dominant vessel class, the estimates of cost per pound of halibut landings were sufficiently close for other vessel classes in some areas, that it is difficult to estimate what the halibut catch distribution would be with an IFQ program that did not have vessel class restrictions.

The sablefish cost model indicates that the low cost vessel class will vary by area and that the costs may be sufficiently close for different vessel classes that there may not be a dominant vessel class in some areas.

As conditions change, it is certainly possible that the distribution of landings among vessel classes could be quite different from what is projected by the cost models. The use of vessel class-specific QS would assure that the historic distribution would be maintained. It is difficult to compare the benefits and costs of maintaining the historical distribution.

The historical distribution of landings among these vessel class was shaped by a variety of factors including chance and the regulatory environment. Therefore, there is no reason to assume that it is optimal or worthy of being maintained.

Fixing the amount of quota shares and IFQs available to each vessel class would affect the prices of QSs and IFQs for different vessel classes. If, for instance, the owners of larger vessels would be willing to pay more for QSs and IFQs than would the owners of smaller vessels, the restriction would result in a lower price of IFQs for small vessels and a higher price of IFQs for larger vessels. This would be a disadvantage to those who received more QSs than they would use for a small vessel or to those who would buy QSs and IFQs for a large vessel. But it would be an advantage to those who would sell QSs and IFQs for large vessels or buy them for small vessels. The difference in IFQ prices by vessel class would provide a measure of the cost of this restriction.

Establishing the percentage of a fixed gear TAC that can be taken by each vessel class could severely limit the ability of the fleet to respond to changing fishery conditions. The comparative advantage of a particular class of vessels may wax and wane, depending upon changes in input costs, product prices, the availability of halibut or sablefish, and the profitability of alternative fisheries. For

example, the longline Pacific cod fishery could develop to the point that the IFQ available for large vessels would be less than the halibut bycatch of that fishery. If this occurred, halibut would have to be discarded in the cod fishery or the cod fishery would have to be constrained. In the absence of vessel class requirements, these vessels would at least be able to bid with other vessels for the right to land their catch. Alternatively, if vessel classes are used, the problem of insufficient IFQs to cover the bycatch for some vessel classes could be eliminated by allowing IFQs for any vessel class to be used for bycatch by any vessel. This limit may reduce substantially the ability of an IFQ program to solve the halibut bycatch problem in the longline groundfish fishery. It was estimated that the benefit of solving this problem in the Gulf in 1990 would have been $4.6 million in increased sablefish landings and decreased halibut harvesting costs (Section 2.1.22).

If as the cost models suggest, the largest vessels are not necessarily the most profitable in most areas, the vessel class restrictions may reduce the percentage of catch taken by smaller vessels. If, within each class, larger vessels tend to be more profitable, the presence of vessel class restrictions will tend to produce a fleet in which a large number of vessels are clustered at the upper end of each of the smaller vessel classes. It should be noted that the models assume that all halibut or sablefish is taken by vessels that are targeting on that species. If either is taken as bycatch in another fishery, for instance Pacific cod, then the IFQ price could be bid higher by these fishermen. In this case, larger Pacific cod vessels might be more profitable than they otherwise would appear to be in the models.

The other point which should be stressed is that even without vessel class restrictions, no agent is going to be able to enter an area and simply take someone else's IFQs. If vessels of a particular class can use halibut or sablefish more productively, they must still purchase the privilege to land the fish from someone who currently has it. Therefore, fishery participants who are initially given QSs, but subsequently decide to sell them, would be compensated for leaving that fishery, and would only choose to do so if they thought the compensation was adequate.

There is, of course, concern on the part of communities that IFQs would be acquired by those who would not contribute as much the local economy. If a community perceives that it would be better off if it insured a continued availability of IFQs for local fishermen and processors, it could assist local fishermen in retaining or acquiring IFQs. Therefore, IFQs provide a mechanism for quotas to be allocated to the best uses based on the willingness of a fisherman, a community, a state or any other person to pay for the right to harvest part of a quota.

The use of vessel class restrictions also requires that rules be established concerning what types of QSs will be given to a person who had more than one vessel class. The rules recommended by the Council were discussed in Section 2.3.3.

In summary, vessel class restrictions will tend to maintain the historical distribution of catch by vessel class. This will prevent a shift in the distribution of landings to the more profitable vessel classes. In some areas smaller vessels may be more profitable and the restrictions would prevent them from taking an increasing share of the catch. In other areas, larger vessels may be more profitable and the restrictions would prevent them from taking an increasing share of the catch. The restrictions eliminate the free transferability of IFQs among vessels of various classes as a tool for efficiently allocating the quotas among vessel classes. The effects of the restrictions are only likely to be substantial if the distributions of landings by vessel class would differ substantially as a result of these restrictions. In that case, both the costs and benefits of preventing a change in the distribution can be substantial. However, the potential for most of the benefits of alternative uses of the IFQs to be reflected in what different groups are willing to pay for them suggests that the costs of the restrictions typically will exceed their benefits. The options of using different vessel class restrictions in different areas and of exempting, from the vessel class restrictions, vessels that take halibut as bycatch in other

hook and line fisheries could be used to eliminate some of the potential problems associated with vessel class restrictions. If the intent is to assure that the percentage of catch taken by smaller vessels will not decrease, it may be preferable to allow IFQs to be used on a vessel in the specified class or on any smaller vessel.

2.3.5 Transferability of Quota Shares (QSs) and Individual Fishing Quotas (IFQs)

Transferability allows the market place to efficiently reallocate QS and IFQs to those who will use them most productively regardless to whom they were initially given. Transferability may take two forms; (1) permanent transfers of the ongoing right to receive an IFQ annually, and (2) transfers of IFQs. The former would include the sale of QSs. The latter would include the sale of IFQs or the lease of QSs. Because the lease of a QS is equivalent to the sale of the associated IFQ for a fixed number of years, both will be referred to as IFQ sales. IFQs represent a consumable good like fuel or bait, therefore, the concept of leasing IFQs is irrelevant. The Council is recommending the following restrictions on transferability.

1. Freezer boat QS and IFQs may be sold.

2. Catcher boat QS can be sold but only up to 10% of a person's IFQs can be sold each year during the first three years of the program and none can be sold after that. The restriction on selling IFQs does not apply to IFQs that are sold together with their associated QSs.

There has been considerable concern expressed regarding the desirability of allowing IFQs to be sold. Selling IFQs could allow initial recipients of QSs to own and benefit from them, whether or not they continue to fish. Selling IFQs would also allow persons who are otherwise not associated with the fishery to purchase QS as an speculative investment and thereby receive benefits of the IFQ program. The Council's preferred alternative, which would restrict the sale of catcher boat IFQs, address these concerns.

There is some question as to whether a prohibition on the sale of IFQ would be effective. The sale of QS with a contract to repurchase the QS at a fixed date and price is one example of an almost perfect substitute for buying IFQs. However, if it is assumed that selling IFQs can be prohibited effectively, the effects of the options would be as discussed below.

Prohibiting the sale of IFQs would provide a substantial incentive for only active fishery participants to own QSs. Therefore it would increase the concentration of benefits among those who are actively involved in the fishery, but at a substantial cost.

From the standpoint of economic efficiency and the smooth transfer of fishing rights, a prohibition on the sale of IFQs represents a substantial cost in terms of foregone flexibility. Some portions of the fleet will find it desirable to obtain slightly larger IFQs for the current year, without incurring the financial commitment to buy additional QSs. This may be particularly important for fishermen hoping to enter the fishery. Conversely, many who own QSs may find that, within the circumstances of a particular season, they would prefer to fish more actively in other fisheries. The potential for selling IFQs allows them to provide the IFQs to others more interested in fishing for halibut or sablefish during that season, without having to relinquish the right to fish for halibut or sablefish in the future or without having to repurchase QSs to regain that right. If it were effective, the prohibition on IFQ sales could seriously restrict any inseason adjustments by individual fishermen and thus result in significant discards or part of the quotas not being taken due to the difficulty in exactly matching landings to one's IFQ. This problem is reduced by allowing up to a 5% overage with the only penalty being an offsetting reduction in the person's IFQ for the following year.

The prohibition on the sale of IFQ would pose a substantial impediment during the first few years of an IFQ program as fishermen adjust to a new program. Existing and prospective owners of QSs would need a period in which they can evaluate QSs sales value, including amortization of profits over the life of the QSs and the appropriate adjustments for uncertain future market and biomass conditions. It will be far easier for new participants in such a program to calculate how much they would be willing to pay, or accept, for IFQs, than to estimate the net present value of QSs, an asset producing an uncertain stream of returns.

It is not clear that the 10% limit on IFQ sales is sufficient during the first few years of an IFQ program and it is not clear that some mechanism for temporary adjustments will not be desirable after the first three years. Limiting sales of IFQs to 50% probably would be as effective in encouraging the transfer of QSs to those who are actively involved in the fishery but without eliminating the ability of individuals to make substantial adjustments in the IFQs they will use during a season.

In its desire to avoid absentee ownership of quotas, the Council moved to restrict the sale of catcher boat IFQs. In imposing this restriction the Council has tried to balance on the one hand the demand not to allow absentee control, but on the other a call by fishermen to allow flexibility in the coverage of catches not covered by owned quotas.

2.3.6 Restrictions on QS and IFQ ownership and use

The Council has recommended the following restrictions on the ownership and use of QSs and IFQs.

1. Only a person as defined in Section 1.2.2 can acquire or use freezer boat QSs or IFQs.

2. In order to acquire catcher boat QSs or IFQs, the person must:

   a. be a U.S. citizen and
   b. be a bona fide crew member.

3. In order to use catcher boat IFQs, the user must:

   a. own or lease the QS,
   b. be a U.S. citizen,
   c. be a bona fide crew member,
   d. be aboard the vessel during fishing operations, and
   e. sign the fish ticket upon landing.

   The exception to these requirements is identified in item 4.

4. A person that received initial catcher boat QS may utilize a hired skipper to fish its IFQs providing that it owns the vessel upon which the IFQs will be used. Such a person may purchase up to the total share allowed for the area. For the sablefish fishery east of 140° W longitude and for the halibut fishery in Area 2C, the above allowance for hired skippers applies only to corporations or partnerships as defined below and it applies only to the IFQs resulting from their initial QS's. In these areas, the exception dose not apply to IFQs associated with subsequently acquired QSs.

5. **Corporation**: Any corporation that has no change in membership, except a change caused by the death of a corporate member providing the death did not result in any new corporate members. Additionally, corporate membership is not deemed to change if a corporate

member becomes legally incapacitated and a trustee is appointed to act on his behalf, nor is corporate membership deemed to have changed if the ownership shares among existing members changes, nor is corporate membership deemed to have changed if a member leaves the corporation. *(In the case where ownership of shares is initially allocated to a publicly held corporations, the Council did not make a recommendation regarding what constitutes a change in membership of the corporation.)*

6. **Partnership:** Any partnership that has no change in membership, except a change caused by the death of a partner providing the death did not result in any new partners. Additionally, a partnership is not deemed to have changed if a partner becomes legally incapacitated and a trustee is appointed to act on his behalf, nor is a partnership deemed to have changed if the ownership shares among existing partners changes, nor is a partnership deemed to have changed if a partner leaves the partnership.

7. The Secretary may, by regulation, designate exceptions to the restrictions on who may use catcher boat IFQs (item 18) to be employed in case of personal injury or extreme personal emergency which allows the transfer of catcher boat QS/IFQs for limited periods of time.

8. For sablefish no person or individual may own, hold, or otherwise control, individually or collectively more than:

   a. 1% of the combined total for the Gulf of Alaska and Bering Sea/Aleutian Islands QSs or IFQs or
   b. 1% of the QSs or IFQs for the area east of 140° W.

9. For halibut no person or individual may own, hold, or otherwise control, individually or collectively more than:

   a. 0.5% of the total QSs or IFQs from the combined IPHC areas 2C, 3A, and 3B,
   b. 0.5% of the total QSs or IFQs from the combined IPHC areas 4A, 4B, 4C, 4D, and 4E, or
   c. 1.0% of the total QSs or IFQs from IPHC Area 2C.

10. The exceptions to items 8 and 9 are that any person who receives an initial assignment of quota shares in excess of these limits may continue to control and use them. However, such persons shall be prohibited from purchasing, leasing, holding or otherwise controlling additional quota shares or IFQs until that person's quota share falls below the limits set forth in items 23 and 24, at which time each such person shall be subject to the limitations.

11. For sablefish, no more than 1% of the combined Gulf of Alaska and Bering Sea/Aleutian Island fixed gear quota may be taken on any one vessel and no more than 1% of the fixed gear quota east of 140° W. (EY/SO) may be taken on any one vessel. The exception is that persons who received an initial allocation of more than the 1% overall ownership level (or 1% in the area east of 140° W.) may fish their IFQs on a single vessel.

12. For halibut, no more than 0.5% of the combined IPHC area quota may be taken on any one vessel except that persons who received an initial allocation of more than 0.5% overall ownership level may fish their IFQs on a single vessel. *(This differs from the ownership cap in that the vessel limit applies to the whole North Pacific combined area TAC rather than the TAC combined for areas 2C, 3A, 3B, or for areas 4A, 4B, 4C, 4D, and 4E combined.)*

2.3.6.1 A foreign person cannot control QSs and IFQs.

QSs and IFQs can only be transferred to a "non-foreign person" which is defined as any individual who is a U.S. citizen, any corporation, partnership, association, or other entity (whether or not organized or existing under the laws of any State but being owned and controlled by a majority of U.S. citizens), and any Federal, State, or local government or any entity of any such government. U.S. residents that are not U.S. citizens and corporations that are not principally owned and controlled by U.S. citizens, for example, would be prohibited from obtaining QSs or IFQs. (In addition to this restriction, there are other restrictions on transferability and ownership which are detailed in other sections of this document.)

The intent of this restriction is to assure that the benefits of the IFQ program will be received primarily by the Nation and not foreign investors. The definition of person is based on that in the Magnuson Act as modified by the 1987 Anti-Reflagging Act.

Even with this restriction, foreign interests will continue to influence fishing activities and some of the benefits of the fishery will continue to accrue to foreigners. The Japanese are currently very active participants in the seafood industry. They have invested in companies that process and market halibut and sablefish and Japan is the dominant market for sablefish. It would be naive to expect that foreign interests will not continue to be involved in all phases of product preparation. That might include the acquisition of QSs and IFQs through companies that do qualify to purchase them or loans to others who can acquire and use QSs and IFQs.

There are some problems associated with this restriction. For example, it could result in two companies being dealt with quite differently because of a small difference in the percentage of ownership by U.S. citizens. It could be difficult to determine which corporations could acquire QSs because control and ownership can be difficult to define and, perhaps, even more difficult to measure. The eligibility of a corporation to acquire QSs and IFQs could change periodically and unexpectedly as the result of a small change in ownership or control. The latter two problems could make enforcement of this restriction costly or ineffective. Operationally, this requirement would necessitate special monitoring for corporate QS and IFQ owners in addition to the eligibility certification required of all other prospective buyers of QSs and IFQs. Despite these problems, the Anti-Reflagging Act placed similar restrictions on the ownership of fishing vessels operating in domestic fisheries within the EEZ.

2.3.6.2 Other restrictions on who can control QS and IFQs.

There are other restrictions on who may control or use catcher boat QSs and IFQs. They are intended to assure that: (1) those directly involved in the fishery benefit from the IFQ program, (2) the fisheries continue to be dominated by owner/operator operations, and (3) the ownership limits can be enforced more effectively.

These bona fide crew member restrictions would limit the number of people who can purchase catcher boat QSs and IFQs. This would tend to reduce the prices of QSs and IFQs but probably not substantially. The other restrictions would prevent someone, other than an active fisherman, from acquiring additional QSs or IFQs for use on a catcher boat. This would limit the ability for a partnership or corporation to own QSs and IFQs. This would increase the concentration of IFQ program benefits among fishermen, but it would probably decrease the total benefits of the program by restricting the relatively common practice of having a vessel owner who is often not on the vessel and does not sign the fish tickets. This would prevent a person who owns more than one vessel from owning and using IFQs for more than one vessel at a time and in general it would eliminate the

ability of a catcher boat owner to have others operate his vessel(s). Without the grandfather clause for the initial recipients of QSs, the implementation of the IFQ program would be more disruptive and it would change the balance of power between vessel owners and crews because it is common for vessels to be operated by hired skippers.

The State of Alaska vessel registration file indicates whether a vessel is owned by an individual or by a different type of legal entity, such as a partnership of corporation. This information was used in generating Tables 2.39 and 2.40 which summarizes the distributions of vessel owners, annual catch, and IFQs by type of owner and management area for halibut and sablefish, respectively. Vessels with owners who are not individuals are used to approximate the vessels with hired skippers.

The number of halibut vessel owners who were not individuals ranged from 74 in 1984 to 189 in 1990 and 280 of them will receive halibut QSs (Table 2.39). Most of these vessel owners are residents of Alaska. These owners accounted for from 9.4% of the halibut catch in 1984 to 12.1% in 1989 and will receive 10.3% of the IFQs based on the 1991 TACs.

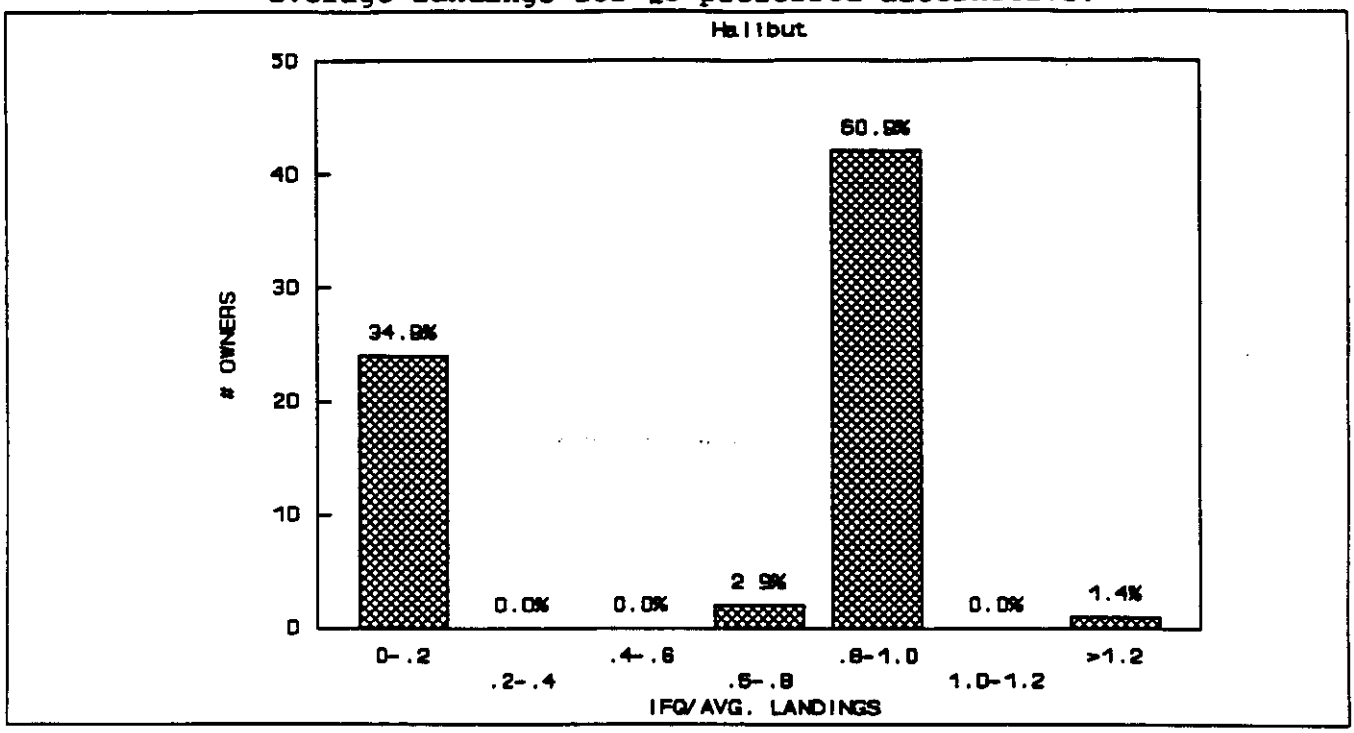
The number of sablefish vessel owners who were not individuals ranged from 23 in 1985 to 86 in 1990 and 135 of them will receive sablefish QSs (Table 2.40). About half of these vessel owners are residents of Alaska. These owners accounted for from 21.3% of the sablefish catch in 1987 to 34.2% in 1985 and will receive 24.6% of the IFQs based on the 1991 TACs.

Over time these restrictions will do much more than maintain the competitive position of owner/operator operations. Eventually, the restrictions will eliminate all other types of operations. Maintaining the competitiveness of owner/operators may be desirable for social or broadly defined economic reasons, including a decrease in the structural changes that might otherwise occur. However, eliminating other types of operations cannot be justified in terms of decreasing the adjustment costs of an IFQ program.

The additional restrictions for IPHC Area 2C and for the area east of 140° W are recommended in response to the concern that owner/operators would not be competitive in bidding for QSs and IFQs in comparison to the other operations that would be grandfathered in. If they are not competitive, the other operations would be able to increase the percentage of QSs and IFQs they control. However, over time most of the other operations would be eliminated by attrition. The restrictions do more than prevent the other types of operations from increasing their share of the total catch. They actually decrease it. Most persons will receive IFQs that are less than their average annual catch; therefore, in these areas of the Eastern Gulf, most persons who use hired skippers will not be able to maintain their average level of catch without buying additional QSs and the additional QSs cannot be used by the hired skipper.

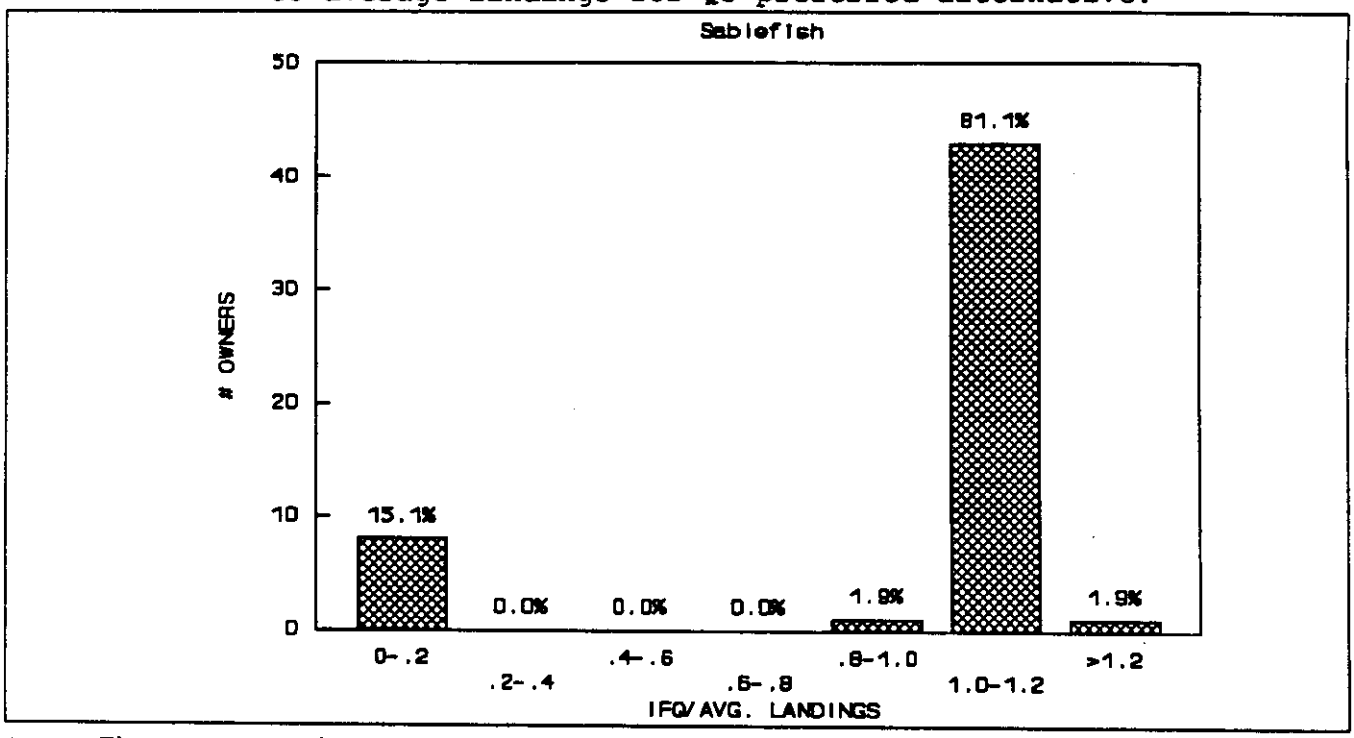
The number and percentage of vessel owners for these Eastern Gulf areas who are not individuals and who have an IFQ to average landings ratio for each of several ranges of values are presented in Figures 2.5 and 2.6, respectively, for halibut and sablefish. The average for each owner is its total catch for the period divided by the number of years it participated in the halibut (sablefish) fishery between 1984 and 1990 (1985-1990). It is estimated that 34.8% of the halibut vessel owners will receive IFQs less than 20% of their average annual catch, 60.9% will receive IFQs that are from 80% to 100% of their average catch, and only 1.4% will receive IFQs that exceed their average catch (Figure 2.5). For sablefish it is estimated that 15.1% of these vessel owners will receive IFQs less than 20% of their average annual catch, 1.9% will receive IFQs that are from 80% to 100% of their average catch, and 83% will receive IFQs that exceed their average catch (Figure 2.6).

Figure 2.5 Estimated number and percentage of area 2C halibut vessel owners who are not individuals by the ratio of IFQs to average landings for QS preferred alternative.



Note: The average landings for each owner is for the number of years fished from 1984-90.

Figure 2.6 Estimated number and percentage of EY/SEO area sablefish vessel owners who are not individuals by the ratio of IFQs to average landings for QS preferred alternative.



Note: The average landings for each owner is for the number of years fished from 1985-90.

The number and percentage of vessel owners who are not individual and who have an IFQ to 1990 landings ratio for each of several ranges of values are presented in Figures 2.7 and 2.8 for halibut and sablefish, respectively. Vessel owners with no landings in 1990 are not included. For halibut, 33.3% of these vessel owners would have IFQs equal to less than 20% of their 1990 catch, 25.9% would receive from 20% to 40%, 14.8% would receive 40% to 60%, 14.8% would receive 60% to 80%, 0.0% would receive 80% to 100%, and 11.1% would receive IFQs that exceeded their 1990 catch (Figure 2.7). For sablefish, 50.0% of these vessel owners would have IFQs equal to less than 20% of their 1990 catch, 25.0% would receive from 20% to 40%, 15.0% would receive 40% to 60%, 0.0% would receive 60% to 80%, 5.0% would receive 80% to 100%, and only 5.0% would receive IFQs that exceeded their 1990 catch (Figure 2.8). This indicates that the additional rules for parts of the Eastern Gulf would be very disruptive and lead to immediate and substantial declines in the catch by vessels that are not owned by individuals if these vessels are typically fished with a hired skipper.

If the intent is to assure that the percentage of catch taken by vessels with hired skippers will not increase, it may be preferable to have separate classes of QSs and IFQs, one class that can only be used by owner-operated boats and another class that can be used by a boat operated by its owner or a hired skipper. The Council's restriction is substantially more disruptive to other fishing operations that currently participate in these fisheries. It also requires additional definitions and enforcement responsibilities.

As with many of the restrictions included in the IFQ program, the effectiveness of this restriction is in doubt. For example, a fishing operation with a hired skipper could fish beyond the IFQ associated with the QS it receives in the initial allocation by having a crew member buy additional QSs.

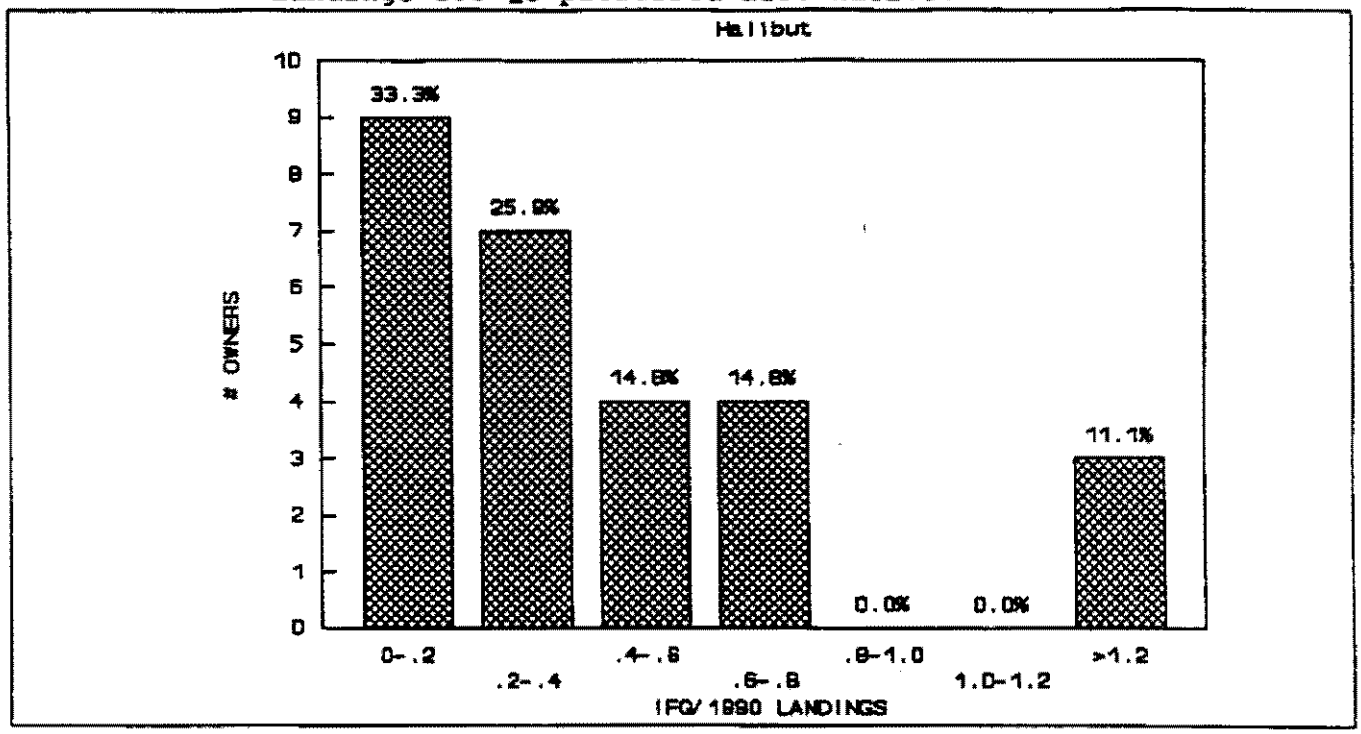
These restrictions prevent what in many fisheries has been the normal progression from owning and operating a vessel to having a hired skipper run the boat so a person can either fish an additional boat or become more involved in the management of the operations. It is difficult to estimate either the benefits or costs of preventing this type of progression, but limiting it probably is easier to justify than eliminating it.

2.3.6.3 Limits on the total QSs and IFQs a person can control or that can be used on a single vessel.

The recommendations to limit the QSs and IFQs that a person can control and the IFQs that can be used on a vessel is the result of the concern that an unrestricted market for quota shares could: (1) result in a few powerful interests controlling most of the landings and (2) result in excessive decreases in the numbers of vessels and fishermen participating in the fixed gear halibut and sablefish fisheries. The Council desires the maintenance of a fishery that has many and diverse participants and one in which harvesters are not at the mercy of "company store" processors or the monopolizing influence of a few other harvesters. This would help assure that both the initial and ongoing benefits of the IFQ program would be broadly distributed and that the market for QSs and IFQs would be competitive.

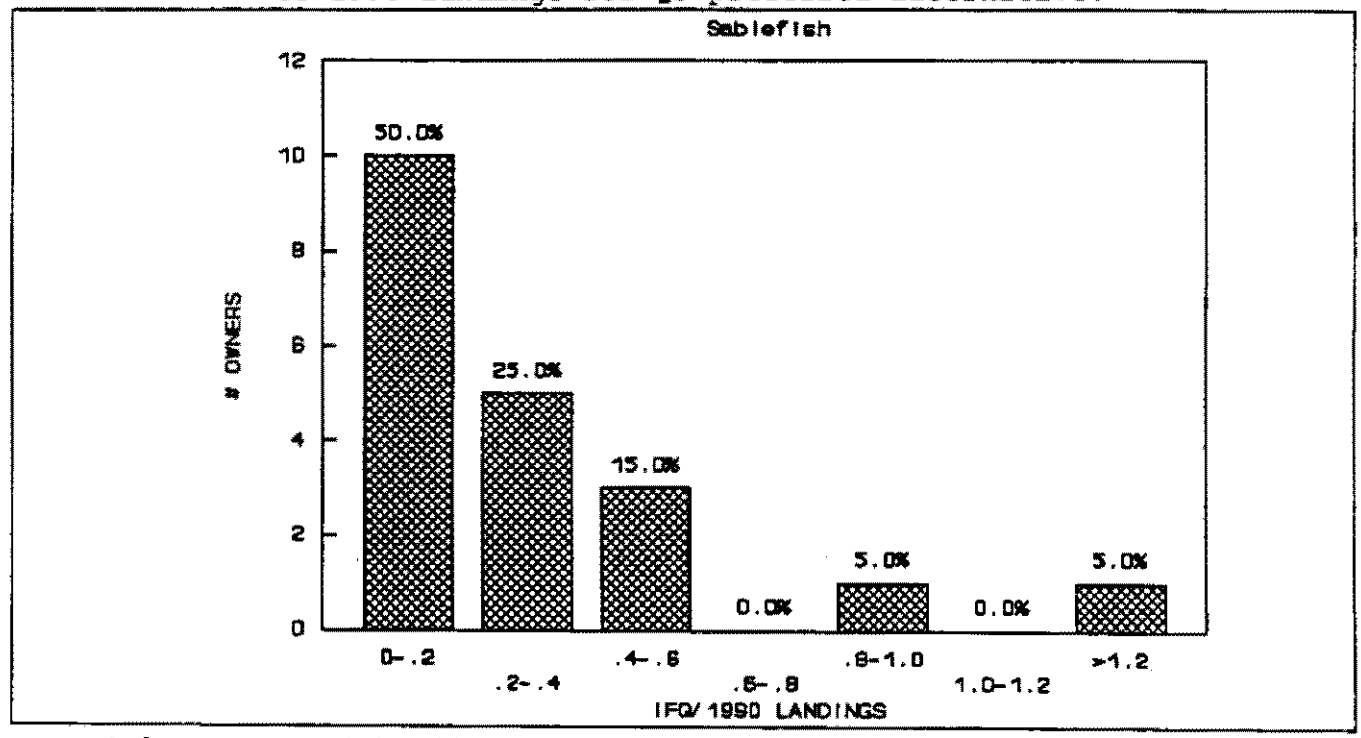
Although this option is well-intentioned and has considerable philosophical support within the fishery, as presented it suffers from several serious problems. The biggest of these is that such a requirement might be very difficult to enforce. Since corporations are allowed to own QSs, there is nothing to prevent one corporation from owning several other companies which could each legally own 0.5% or 1% of the overall quota. Similarly, individual family members could each acquire 0.5% or 1%, allowing the family to control much more than the intended limit. Because the IFQs a person controls depend on both his QSs and the quota for each area, a change in relative quotas among areas can result in someone being in violation of the IFQ rule.

Figure 2.7 Estimated number and percentage of area 2C halibut vessel owners who are not individuals by the ratio of IFQs to 1990 landings for QS preferred alternative.



Note: Only owners with 1990 landings are included.

Figure 2.8 Estimated number and percentage of EY/SEO area sablefish vessel owners who are not individuals by the ratio of IFQs to 1990 landings for QS preferred alternative.



Note: Only owners with 1990 landings are included.

The data in Table 2.41 summarize the distribution of vessel owners and QS recipients with historical catch and IFQs with respect to the proposed ownership limits. The IFQ estimates are based on the 1991 TACs. The data indicate the following.

1. EEZ-wide sablefish limit of 1%

    a. Between 1985 and 1990, the number of vessels owners with annual catch above this limit ranged from 5 in 1985 to 14 in 1988.
    b. 7 QS recipients will receive IFQs that exceed this limit.

2. EY/SEO sablefish limit of 1%

    a. Between 1985 and 1990, the number of vessels owners with annual catch above this limit ranged from 11 in 1985 to 28 in 1990.
    b. 10 QS recipients will receive IFQs that exceed this limit.

3. Areas 2C - 3B combined halibut limit of 0.5%

    a. Between 1984 and 1990, the number of vessels owners with annual catch above this limit ranged from 0 in 1990 to 8 in 1988.
    b. No QS recipients will receive IFQs that exceed this limit.

4. Areas 4A - 4E combined halibut limit of 0.5%

    a. Between 1984 and 1990, the number of vessels owners with annual catch above this limit ranged from 34 in 1984 to 112 in 1987.
    b. 39 QS recipients will receive IFQs that exceed this limit.

5. Areas 2C halibut limit of 1%

    a. Between 1984 and 1990, the number of vessels owners with annual catch above this limit ranged from 0 in 1988 and 1990 to 4 in 1986.
    b. No QS recipients will receive IFQs that exceed this limit.

Basing the limit on the percentage of quota from all areas or a group of areas means that within some areas the concentration of ownership can be substantially greater than the limits set for the aggregate areas. Consequently, even if the proposed restraint were enforceable, using a percentage of overall quota may not be an efficient means of preventing localized concentrations of market power.

Further complicating the issue of concentration of QS are the vessel classes. Because QSs cannot be traded across vessel classes, there are effectively separate markets for QS for each vessel class in each area. For example, if a single owner held 1% of the EEZ-wide sablefish IFQs but in a single area for a single vessel class, then that owner could very definitely control the participation of all vessels in the class and could presumably influence the price of quota shares if not the amount of fish harvested or processed. It is evident that the more restraints placed on the IFQ system, the easier it will be for an individual to control or influence the prosecution of a segment of the fishery.

If the limit is only on the amount of IFQ that a person can control, a number of persons could use their IFQs on the same vessel to allow a vessel to account for more than 0.5% of the halibut catch or more than 1% of the fixed gear sablefish catch. If the limit is on the amount of IFQ that can used

on a vessel, this problem is eliminated but the amount of IFQ that a person can control would not be limited. With limits on both, both problems are eliminated to the extent that the intent of the limit on ownership can be enforced.

These restrictions will prevent the number of QS owners and the number of vessels falling below specific levels if they are enforceable. These levels are as follows:

1. EEZ-wide sablefish, 100 owners and 100 boats;

2. Gulf of Alaska sablefish east of 140° W, 100 owners and 100 boats;

3. Areas 2C-3B halibut, as a whole, 200 owners;

4. Areas 4A-4E, halibut, as a whole, 200 owners;

5. Area 2C halibut, 100 owners; and

6. Areas 2C-4E halibut, as a whole, 200 vessels.

It is not clear that there would be fewer vessels and owners in the absence of these restrictions. This would happen only if operations that specialize in the halibut or sablefish fishery are more profitable with respect to using halibut or sablefish IFQs than are operations that are more diversified. If this is not the case, these restrictions will have not effect, that is, they will not be binding constraints. If this is not the case, the restrictions will increase the numbers of owners and boats but will also decrease the profits generated by the IFQ program. It is difficult to evaluate this tradeoff.

One of the objectives of these restrictions in to moderate decline in employment for fishermen. These restrictions probably will not have a substantial effect on total employment measured in terms of fishermen days. They could increase substantially the number of fishermen among whom that employment is shared. However, it is possible that the restrictions will result in the same fishermen fishing on a number of boats during the year. This has happened in Canada. As a result the number of fishermen involved in the fishery can be less than one would expect given the number of vessels that are required to participate. For example, if there are at a minimum 200 halibut boats and the average crew size is five, one might assume that there will be at least 1,000 halibut fishermen. However, if most fishermen fish on two boats because they are better fishermen who want to capitalize on their skills in the halibut fishery, there may only be 500 halibut fishermen. These restrictions are expected to only be partially effective in meeting their intended purpose(s) and to the extent that they are circumvented, the methods used of circumvention will tend to increase harvesting costs.

2.3.6.4 Other restrictions on the use of IFQs.

Prior to the start of each trip, a "person" would be required to control sufficient IFQ to cover the amount of halibut and sablefish to be caught during that trip. An overage of up to 5%, that would count against the person's next year IFQ, would be permitted. The purpose of this restriction is to prevent speculative fishing that could result in halibut or sablefish discards and unreported landings. If a fisherman thought he could cover his landings by acquiring additional IFQs before he lands the halibut or sablefish, he may catch much more than he has IFQs to cover. If he can in fact find willing sellers of IFQ then there is not a problem. However, if he is unable to acquire sufficient additional IFQs at an acceptable price, he would probably either discard the halibut or attempt to have the landings under-reported. Either would impose costs on the fishery.

This prohibition on speculative fishing could be effective in reducing such costs; however it would be at the cost of foregone flexibility particularly as a fisherman's catch approaches the IFQs he had already acquired for the year. The need for flexibility is dependent on the ability of a fisherman to accurately predict what his catch rate will be during a given trip. The allowable overage that is permitted without a penalty will reduce the adverse effects of this restriction.

The Council discussed holding each fisherman accountable for his landings in excess of his IFQs, and having the penalty for excessive landings increase as a function of the overage. For example, the penalty for an overage of less than 5% of the IFQs he used in an area that year might be set at an equivalent forfeiture of IFQs the following year, with the penalty for a larger overage being greater. A system such as this is used in the New Zealand IFQ fisheries. In determining the preferred tradeoff between providing flexibility to fishermen and assuring that landings do not substantially exceed a quota, it should be noted that: (1) under the current management regime, quotas are typically exceeded by more than 5%; and (2) it is possible to adjust future quotas to correct for a relatively large overage and protect the stocks. The ability to respond appropriately is of course dependent on knowledge of the overages. Therefore, measures that encourage accurate reporting of landings are desirable.

2.3.7 Discards

To reduce waste and to increase the accounting of catch, the Council has made three recommendations with respect to discards.

1. Discard of legal sized halibut is prohibited by persons holding halibut IFQs and by those fishing under the halibut CDQ program. Persons holding freezer boat shares are exempt from this halibut discard prohibition.

2. Discard of sablefish is prohibited by persons holding sablefish IFQs and those fishing under the sablefish community development quota (CDQ) program.

3. Pacific cod and rockfish harvested incidentally during the operation of a QS/IFQ fishery shall be termed bycatch species for the purpose of this program. Other species may be included by NMFS by regulatory amendment if it can be shown that the species is unlikely to survive if discarded and if it can be shown that such retention is beneficial to the nation. Any species identified as a bycatch species that is taken during the operation of a QS/IFQ fishery shall be retained and landed unless designated a prohibited species.

Prohibiting the discard of legal size halibut by those who have IFQs or CDQs to use would prevent highgrading and the discard of halibut in other fixed gear fisheries if it could be enforced effectively. This, in turn, would provide better estimates of total halibut removals, eliminate the costs associated with highgrading, increase halibut utilization, and impose additional costs on fishing operations that would otherwise discard some halibut. Because those who take halibut as bycatch in other fixed gear fisheries should be willing to pay more for IFQ than are halibut fishermen, the former typically will have an incentive to obtain sufficient IFQ to land all their legal size halibut bycatch. Therefore, to the extent it is enforceable, this restriction would tend to have more of an effect on highgrading than on the discards of bycatch.

The exemption for freezer boats is necessary because vessel class restrictions are used and because a very small amount of halibut will be available to the freezer boat class. This exemption and the limited amount of halibut QSs and IFQs available for freezer boats prevent IFQs from being used

to reduce the halibut bycatch problem for fixed gear freezer boats in the groundfish fisheries. This could eliminate a substantial cost savings for the fixed gear and other groundfish fisheries.

This restriction also raises an equity issue. Fishermen who have not used all their halibut IFQs are required to retain halibut taken as bycatch but fishermen who either have used their halibut IFQs or did not have any are allowed to discard without incurring any costs.

Most of these comments also apply to the restriction on sablefish discards. The exemption for freezer boats is not required because a substantial freezer boat IFQs will be available and, therefore, the sablefish IFQ program is much less limited in terms of being able to solve the problems of allocating sablefish between sablefish fixed gear and other fixed gear fisheries.

The restriction on the discards of Pacific cod and rockfish is intended to reduce waste and increase the propensity for fixed gear halibut and sablefish fishermen to land their catch at ports adjacent to the fishing grounds. Because the IFQ programs will tend to eliminate the race for fish, halibut and sablefish fishermen are much more likely to retain marketable cod and rockfish. In fact, many fishermen may use their halibut IFQs to intentionally have joint halibut and rockfish trips.

The requirement that cod and rockfish be retained will only have an effect if fishermen would have otherwise discarded these species. Because fishermen would tend to do so if it is more profitable, the restriction is expected to decrease the profitability of the fixed gear halibut and sablefish fisheries. The requirement that these species be retained does not necessarily mean that they will be delivered in a marketable form. For example, if shorter trips are required to land marketable rockfish, fishermen will not decrease the length of halibut trips to assure the quality of the rockfish unless: (1) the safe carrying capacity of the vessel and the weight of the cod and rockfish shorten the trip or (2) enough rockfish is taken as bycatch that the loss in rockfish exvessel value due to a normal length trip exceeds the profit foregone by returning earlier.

These restrictions would make ports adjacent to the fishing grounds more competitive either because higher quality bycatch species could be delivered to them or because the cost per pound of halibut and sablefish delivered to more distant ports would increase if less could be delivered safely per trip.

The prohibitions on discards probably could not be enforced effectively on vessels without observers and using observers to enforce these prohibitions would have the adverse effects of increasing both the enforcement role of observers and the inequities between vessels with and without observers.

It would be inappropriate to extend the list of bycatch species that must be retained strictly on the basis of the expected discard mortality rate. Otherwise the retention of unmarketable species or sizes of fish would be required. It may be difficult to justify such a requirement.

2.3.8 Duration of the IFQ program

Harvesting privileges would be good for an indefinite period of time but would be subject to periodic change, including revocation, in accordance with appropriate management procedures as defined in the Magnuson Act. Those who control QSs or IFQs need not be compensated for any such change. This is the normal situation. Regulations would have to be changed to alter or eliminate the program.

2.3.9 Unloading Provisions

An IFQ program will increase the incentive a fisherman and a processor will have to underreport halibut landings. The requirements recommended to reduce this problem are: (1) licensing all first point of sale purchasers of halibut and halibut, (2) designating principal ports; (3) requiring notification to NMFS prior to any unloading of halibut and sablefish taken with fixed gear; and (4) requiring area check in and check out.

These elements of the IFQ program are expected to increase the ability of the program to be effectively enforced without imposing substantial costs on fishermen or the communities which are dependent on these fisheries. The designation as principal port means that an enforcement officer is more likely to observe landings. This is not necessarily an advantage for a port because landings can occur anywhere. However, shipments out of Alaska by the fishing vessel or by other means must clear through a principal port. This can be an advantage to the port and in some cases it will impose a substantial cost on a fishing operation. The selection of principal ports and the limited requirements for using them are attempts to balance enforcement cost, costs to the fleet, and the need for effective enforcement.

2.3.10 Individual Fishing Quota Apportionments for Disadvantaged Coastal Communities Adjacent to the Fishing Grounds.

The Council has recommended the use of community development quotas (CDQ) to assist economically disadvantaged coastal communities that are adjacent to the fishing grounds. The specifics of the program are presented in Chapter 1 and Appendix B. A discussion of three issues concerning the merits of the CDQ program is presented in this section.

The purpose of the CDQ program is to assist Western Alaska coastal communities which are struggling economically in developing their ability to generate income from fisheries resources. There are three issues that should be addressed concerning the merits of this program. They are the effectiveness of such a program, the merits of encouraging new investment in a fishery that already has excess harvesting and processing capacity, and the issue of the appropriate funding source for such a program if it is justified.

The principal reason that an IFQ program is being considered at this time is that harvesting and processing capacity far exceed the halibut and sablefish quotas. Efforts to encourage additional investments in such capacity would be counter productive in terms of most of the objectives of the IFQ program. Furthermore, such investments by individuals having no connection with nor experience in the fishery may not be economically sustainable in a highly competitive and evolving industry adjusting to a new IFQ program.

It is not clear that providing a community with CDQs would be sufficient, by itself, to develop an independent fishing industry in a community where one did not previously exist. Since very little shoreside processing is utilized in halibut or sablefish production, it is unlikely that halibut and sablefish would provide a solid base on which to build a diversified fishing economy. It might provide enough incentive to attract a processor for these fisheries or sufficient profits to assist in developing harbor facilities or other fishing infrastructure. It may be quite difficult to identify the situations in which granting CDQs to a community for a limited period of time would allow that community to overcome the disadvantages that have prevented it from successfully participating in the fishery. Once CDQs or other forms of subsidies are given to a community, investments are made, and the community comes to depend on the economic activity associated with its participation in the fishery, it may be very difficult to end the subsidy. This would be particularly true if the community had not

been able to eliminate a sufficient number of problems to be able to continue to participate in the fishery without the subsidy.

The requirements for the approval of such assistance provide some assurance that assistance would only be provided when it is expected to allow a community to become a competitive participant. However, review periods may not be adequate. If CDQs are only made available when they are expected to make a community competitive, it is possible that few communities would receive such assistance.

To a great extent, the issue of how such a subsidy should be funded if it is justified is an equity issue. This means that value judgements and not economic analyses are the key to determining the preferred method of funding.

The CDQ subsidy is to be funded by the owners of all QSs, not just the owners of QSs for adjacent areas. It can be argued that this is more equitable than having only some QS owners pay for the program but less equitable than having the State of Alaska or the Nation as a whole fund the subsidy. However, it could also be argued that by implementing an IFQ program, the Council is generating wealth and there is no reason that all of that wealth should be distributed to those who have participated in the fishery during the last few years as vessel owners or lease holders.

Although the determination of the preferred method of funding is principally an equity issue, it should be noted that if funds are available at little cost to those who decide how they will be used, there is less assurance that they will be used effectively. This suggests that because the State would be involved in determining which communities would receive the subsidies, the subsidies might be more effectively used if the State also funded them. The fact that the Secretary of Commerce would have the final authority to approve or deny assistance for a community, does not eliminate the incentive for the State to be less concerned with how effectively the assistance is used if it is not the primary funding source. This problem is increased by the relative short review schedule for the Secretary.

The State or Federal Government could purchase IFQs and make them available to disadvantaged communities. Alternatively, they could make grants or loans available to allow the communities to purchase IFQs or to take other actions that would contribute to local economic development. The former is a subsidy in kind and the latter is a direct monetary subsidy. Typically, for a given cost to the government, a direct monetary subsidy provides greater benefits to the recipients than does a subsidy in kind because money could, in this example, be used to buy halibut IFQs or, perhaps, be used more productively from the viewpoint of the recipient. That is, a monetary subsidy provides the recipient with more flexibility unless there are restrictions on how the monetary subsidy can be used or unless, in this case, the community could sell the CDQs if other development options were more promising. With respect to community development, the justification for a subsidy in kind, or equivalently a monetary subsidy which could only be used to acquire IFQs, is that the community might otherwise use the subsidy less effectively. It is not clear that it is appropriate to assume that this would happen. A better justification for the subsidy in kind is that, in practice, the choice may be between that type of subsidy and no subsidy at all.

2.3.11 Prior approval for QS and IFQ transfers

All QS and IFQ transfers would have to be reported to NMFS to allow it to monitor both the ownership and use of QSs and IFQs, to assure that they are only transferred to "persons" as defined above, and to monitor compliance with any restrictions on the amount of QS or IFQ a person can control. The IFQ programs as outlined would require that the transfers of QSs and IFQs be pre-

approved by NMFS. Unless NMFS has a very timely process for approving these transfers, this requirement could be quite costly in that it would limit transferability and constrain fishing activity. Because the enforcement of the other restrictions on the transferability and use of QSs and IFQs can be after the fact, it might be less costly to the fishery and NMFS if transfers are monitored after the fact and pre-approval is not required.

2.3.12 Temporary suspension of the halibut PSC limits for the fixed gear fisheries

The Council has recommended the suspension of the halibut fixed gear prohibited species catch (PSC) limits for the first two years of operation of the quota system. In recent years, the fixed gear fishery halibut PSC limit in the GOA has prevented the fixed gear sablefish TAC from being taken. If this would be expected to occur in the future, the IFQ program would not eliminate the race for fish and many of the advantages of the sablefish IFQ program would be decreased. The combination of the IFQ program for halibut that will allow sablefish fishermen to use IFQs to land halibut bycatch and the sablefish IFQ program that will allow sablefish fishermen to fish in ways that will reduce bycatch mortality should solve much of the halibut bycatch problem in the fixed gear sablefish fishery. Therefore, exempting this fishery from the halibut PSC limit can be justified at least on a temporary experimental basis. The same is not true for the other fixed gear fisheries. For example, neither justification would apply to a suspension of the PSC limit for the Pacific cod longline fishery.

2.3.13 Summary of the IFQ program with respect to the 10 problems identified by the Council

The following analysis evaluates the features of the Council's preferred alternative management plan with respect to the ten problems identified by the Council (Section 1.1.1).

Allocation Conflicts

One of the benefits of individual transferable quota systems is that they remove governments and state institutions from resource allocations. It is commonly believed that if the marketplace is left to operate freely, much of the acrimony can be removed from allocation issues. This contention would seem to be borne out by the Canadian and New Zealand experiences. This benefit, however, only flows following the introduction of a quota system. In the development stage, debate on who will be included for initial allocation, and who will not, is likely to be emotive. People excluded at this part of the process may harbor long-lived resentment. In New Zealand part-time fishermen were eliminated from the fishery by administrative means as many as four years prior to the introduction of the quota management system. Some ten years later, these people still bemoan having been disenfranchised, and continue to try and re-enter the fishery without acquiring quotas. There is no intention under the Council's preferred alternative to use these means to remove people from the fishery actively. None-the-less, there will be those who are not eligible to receive an initial allocation of quota shares, and they will continue to be disappointed. Crew members are most notable among these groups.

Underlying a quota system is the notion that quota shares will pass from less efficient to more efficient operators. More efficient operators are generally deemed to be those who will pay a higher price to purchase the quota. It is through having fishery resources exploited by the most efficient that the greatest economic value from the resource will accrue to the United States. The Council has provided for quota shares and individual fishing quotas to be partially transferable, and in so doing has opened the way for quotas to move to those who will utilize them most efficiently. For a number of largely social reasons, however, the Council has imposed a number of restrictions on the operation of the market for quota shares. These can be expected to impede the passage of quotas in the way described. By imposing restrictions on who can own quota, and how much they can own,

the Council has precluded persons from participating in quota ownership who may be more efficient. For example, it may be that someone with no fishing experience may be more efficient than someone with a bare five months. Similarly, people holding either 1 percent of the sablefish total allowable catch for an area or 0.5 percent of halibut may be more efficient than someone holding below the ownership cap. Through the Council's restrictions these people would be precluded from acquiring further quotas.

In a wider philosophical context, one of the fundamental criticisms of the proposed IFQ program is that although the nation's fishery resources are owned by every citizen, the proposed program gives ongoing access rights to a small group. This means that the initial recipients of QS will receive much of the benefits of the program. Although some of the future participants in these fisheries and the public at large will receive some of the benefits, the public at large may be required to pay the additional management and enforcement costs and some current participants or potential future participants will be affected adversely by the program. That is, the distribution of the benefits and costs of the proposed program are considered by some to be inequitable. The ability to more equitably distribute the benefits and costs of an IFQ program appear to be limited by the MFCMA. For example, IFQs cannot be auctioned by the government and fees to cover the cost of implementing, administering, and enforcing the program cannot be collected from those who will own QSs (under current laws). The Council has responded to this problem in two ways. First, it has recommended QS allocation rules that will distribute QS to a large number of persons. Second, it has stated its intent to collect program costs from QS owners as soon as and to the extent it can. Changes in the MFCMA and IFQ program that some perceive to be more equitable will themselves be contentious allocation issues.

Conflicts may arise between vessel classes. One vessel class, operating efficiently, may believe it should have access to quotas being operated in a less efficient manner by another vessel class. In the same vein, there may be some concern from commercial fishermen about allocations being made to small communities. They may feel that they are being asked to make sacrifices in terms of receiving smaller quotas than their traditional catches, yet some who have had the opportunity to participate, but have not done so, are being allocated quotas. If quotas allocated to fishermen are viewed in terms of having been paid for by fishermen's investment, commitment and dependence on the fishery, then small communities are receiving quotas free.

It is not clear, therefore, the extent to which the Council's preferred alternative will alleviate allocation conflicts. Certainly, it has the potential to remove the Council from any continuing involvement of allocation of sablefish and halibut, but it may engender controversies which could surface before the Council for many years.

Gear Conflict

It is assumed that having a prescribed quota to catch will allow fishermen to be more patient and to spread their fishing effort over time and area. This is seen as reducing gear conflicts. Conflict was also seen as being minimized by restricting the allocation and subsequent sale of quotas only to those who had acquired at least five months experience in the fisheries. Only experienced people would be present on the fishing grounds and they would know how to act to avoid unnecessary conflicts.

The preferred alternative is the product of the Council's consideration of multiple objectives. These have the effect of confounding one another. While the above factors may lead to decreased gear conflict, the Council's desire to extend initial allocation of quota shares to as many people as possible, has the potential to include many more fishermen on the grounds than have ever fished in any single year. This may result in continued gear conflict. Similarly the allocation of quotas to small

communities opens the way for inexperienced people to have access to the fisheries. This may lead to gear conflicts. If the quota system operates as the Council intends, those from small communities will gain experience, and the large numbers of initial recipients will consolidate, and the objective of reduced gear conflict should be met. It may not, however, be achieved as expeditiously as is possible.

Deadloss

The allocation of specified quotas to fishermen is expected to result in a closer match between gear used and the quantity of fish to be caught. Even with the large number of initial quota recipients, no-one has an incentive to use gear in excess of what is required to take a quota. Stock losses due to excessive gear can be expected to be minimized under the preferred alternative.

Bycatch Loss

Bycatch loss is expected to be reduced under the Council's preferred alternative. Fishermen will be able to take more time with their fishing and be able to target their activity far more precisely for the species and size of fish they are seeking. The provisions which prevent quota holders from discarding quota species will also minimize bycatch of halibut for those fishing sablefish and vice versa. There are restrictions which prevent the IFQ program from solving additional bycatch problems.

Discard Mortality

Again, the spreading of fishing effort over time and space enabled by a quota system is expected to result in decreased discard mortality. With more time to target precisely, and to handle legally undersized fish carefully, their chances of survival should be far greater. There will be, however, one group of people on the grounds who may not have experience in the two fisheries involved. These are the people fishing under a community development quota. It may take some time before they gain the requisite experience to be able to handle fish carefully. During this period, discard mortality may not decrease to the extent envisaged.

Excess Harvesting Capacity

It has been argued that there are too many boats, and one of the objects of introducing a quota system is to rationalize the fishery in part by reducing the numbers of vessels. It is hoped that following introduction, transfers of quotas will lead to less efficient vessels leaving the industry. The effects of the Council's preferred alternative in terms of quota transfers are not clear. By allowing as many people as possible to participate in the initial allocation of quota shares, the Council has introduced many more people into the two fisheries, thus aggravating the problem of too many vessels. It can be expected that the process of consolidation of the fleet, or rationalization will take considerably longer than it otherwise would.

It is in this respect that the restrictions placed on transferability have their greatest impact. The fact that there are too many vessels has been identified as a problem. The Council has considered the introduction of a quota system as a means to enable vessels to leave the industry, and to receive some recompense through the sale of quota shares for so doing. In the course of developing the preferred alternative, the Council has adopted a number of social motives. These were not specified, however, as mitigating circumstances in the problem definition. One is forced to conclude, therefore, that any impediments to this rationalization detract from the efficacy of the preferred alternative. Clearly the restrictions on ownership caps, vessel category transfers, and especially vessel caps will work to impede or frustrate rationalization or consolidation of the fleet.

The allocation of quotas to small coastal communities can be expected to aggravate the situation of excess harvesting capacity further. Community development quotas can be expected to add additional vessels to the fishery. At best, the communities may purchase and use existing vessels from fishermen choosing to leave the industry. There is, however, no requirement for them to do this. They may choose to build new vessels or acquire vessels from other fisheries, thus adding to the excess harvesting capacity problem. This may be aggravated further if participating communities choose to use small vessels, which is what the Council has envisaged. A large freezer long-liner could fish under charter to a community and then steam to other United States or overseas fisheries. Small vessels, though, having caught their quota would most likely remain in the coastal community and participate in other fisheries. This may lead to overcapitalization in other fisheries, and may pose allocation difficulties in any future comprehensive rationalization plan.

The process of reducing the fishing fleet to a level commensurate with harvestable fish stocks is going to be a painful one. Any attempts to interfere in this process will have two major effects. The first is that it will make the pain last longer. The second effect is that if people are perceived by those who receive uneconomic quotas as having been given an allocation unfairly, either through a community development quota or through having received a quota despite a period away from the fishery, then the pain will be seen as having been distributed unfairly, and may lead to disputes between different groups within the industry.

If one of the objectives is to remove some of the excess harvesting capacity in the industry, then constraints on transferability are going to hinder this process. In this regard, the preferred alternative may not achieve its ends as expeditiously or as fairly as it could.

Product Wholesomeness

It has been assumed that, with more time available for fishing, more care will be taken in product handling, leading to a higher value commodity. The only factor which may detract from this in the preferred alternative is the community development program in which people may be involved who do not have experience in proper handling of fish for market. It can, however, be assumed that the market-place will discipline such operators, and the industry generally, to provide fish tailored for specific markets.

Safety

It is expected that with more time available, and the ability to spread fishing effort spatially, that there will be less congestion and therefore greater safety on the fishing grounds. There are three factors in the preferred alternative which may derogate from this assumption. First, there will be an infusion of many people into the fishery due to the liberal allocation eligibility criteria suggested, and the community development program. Second, the restrictions both on transferability and on the use of hired skippers may prevent fishermen from retiring at a prudent age with respect to safety. Third, to the extent that the vessel class restrictions limit the replacement of smaller vessels with larger and more seaworthy vessels, the safety benefits of the IFQ program will be reduced.

Economic Stability in the Fishery and Communities

The allocation of set quotas is expected to result in fishermen making investment decisions which will more closely match harvesting capacity with sustainable fish yields. This, in turn, is expected to produce a more stable environment for the fishing industry. It is assumed that an individual with a pre-defined quantity of fish to catch will make investment decisions based on that amount of fish.

This state of affairs may come about after a period, but is unlikely in the short term. The introduction of people into the fisheries due to the allocation criteria along with the suggested community development program conspire to give each participant a smaller quota share than his or her current involvement in the fishery. In some cases, this reduced allocation may be substantial. For these individuals an uncomfortable period can be expected to follow implementation during which they must determine their future in the fishing industry. The questions they face concern selling their quota shares and leaving the industry, acquiring further quota shares and participating fully in the industry, participating to the level of their quota shares, and supplementing the livelihood so derived by other means, or sitting on their quota shares, but not participating in the industry. The level of overcapitalization suggests that this discomfort may afflict a large number of people. Until these people have resolved the level of their participation in the fishery, the preferred alternative will not lead to economic stability.

At least some of those affected will choose to appeal their allocation. If the appeal process becomes protracted, they may not make a final decision for some time. If their final decision is that they wish to leave the fishing industry, there will have been a long period during which others who wish to purchase quotas must wait to consolidate their entitlement into an amount which can assure full participation. In short, one of the objects of introducing a quota system is to enable consolidation of the fleet. The impediments to ready transferability of QSs and IFQs can be expected to prolong the transition to a more economically stable fleet.

A further benefit of quota systems is deemed to be the degree of certainty given to participants upon which to base their investment and fishing decisions. It is argued that if people are aware of the quantity of fish available to them that they will be able to make soundly based decisions about the future. The Council's provision to be able to revoke or modify the preferred alternative without compensation detracts from this notion of certainty. Fishermen are less likely to make the long term investments necessary for a sustainable and continuous fishing industry if there is a perceived risk that the Council may change the rules part way through. However, similar or greater risks in the Canadian IVQ programs for halibut and sablefish have not prevented many fishermen from acting as if this risk is minimal.

Rural Coastal Community Development of a Small Boat Fishery

The Council wished to enhance the opportunities for rural coastal communities to participate in the sablefish and halibut fisheries. It was in pursuit of this objective that the western Alaska community development program was inserted into the preferred alternative. Opportunities for small communities will be enhanced by having portions of total allowable catches set aside. No condition is contained in the preferred alternative requiring small communities to fish any quota they are assigned. It is not, therefore, clear whether a community will be permitted to sell its quota and use the proceeds for development. Many of the constraints imposed on transferability have been introduced to preserve a small boat fishery for sablefish and halibut. The practical effect of this is that a portion of the quota shares is reserved for each of the vessel classes.

While the insertion of the western Alaska community development program, and the limits on transferability may meet the objective of enhancing opportunities for these sectors of the industry, they do conflict with some of the other objectives. One of the effects of this will be to add further catching and processing capacity to a fishery which it has been agreed is already overcapitalized. The participation of additional people in the fishery can be expected to aggravate the situation of overcapitalization. It will also dilute the quota shares issued to commercial fishermen. This may result in large numbers of fishermen receiving quotas which are too small to be economically viable.

However, this adverse effect is reduced substantially by the method that will be used to partially compensate those who will receive smaller IFQs in areas where CDQs are used.

The limits on transferability, which are designed in part to protect small vessels in the fishery, are a two edged sword. While they reserve a portion of the quota shares for the small vessel fleet, they also place an effective limit on the maximum amount of quota shares which can be acquired by any one sector of the industry. If it transpires that smaller vessels prove to be more efficient, particularly in the halibut fishery, then they may not have access to all the quota shares they could profitably use.

Summary

The Council has identified ten problems with the halibut and sablefish fisheries. These ten problems spring essentially from the derby style of fishing in which they are prosecuted. The preferred alternative has been analyzed above in terms of its efficacy in meeting these problems. While there is much contained in the preferred alternative which addresses the specific difficulties identified, some of the detailed provisions detract from their solution. Of particular note are the restrictions on transferability of quotas which may inhibit the achievement of an optimum fleet size relative to the total allowable catches for these species.

Conclusion

The preferred alternative should be seen as a tentative beginning. The broad nature of individual transferable quota regimes and experience with such regimes suggest that they are well suited to solving the types of problems experienced in the sablefish and halibut fisheries. Clearly though, important social concerns have been introduced in developing the preferred alternative. A delicate balance is required between preserving social order and meeting the specified problems in a purposeful way.

The preferred alternative regime is unlikely to remove the Council from management of these fisheries. It will require careful monitoring to ensure it is achieving its objectives. At the point where it is shown not to be meeting the goals set, modifications may need to be made. This analysis suggests that the major area of concern, and the area which should accordingly be monitored most closely is the area of transferability.

Table 2.1 Harvesting cost model estimates (Halibut).

Estimating Fishing Activities	Alt. 1	Alt. 2p75	Alt. 2p50	Alt. 2f75	Alt. 2f50
Number of vessels	3,796	147	192	72	94
Number of vessel days	68,138	27,769	37,135	13,961	18,468
Number of fishing days	9,734	12,979	19,468	6,460	9,689
Number of fishermen	14,721	584	756	376	494
Number of fishermen days	265,328	109,147	144,948	72,842	96,977
Labor cost/fishermen day	$166	$166	$166	$166	$166
Estimated costs (millions)					
Variable costs:					
Fuel	$6.7	$2.7	$3.6	$2.0	$2.7
Food	$4.0	$1.6	$2.2	$1.1	$1.5
Bait	$1.7	$0.9	$0.9	$0.7	$0.7
Gear Loss	$4.0	$2.0	$2.0	$1.6	$1.6
Opp. cost of labor	$44.1	$18.1	$24.1	$12.1	$16.1
Total variable costs	$60.4	$25.4	$32.7	$17.5	$22.5
Fixed costs:					
Debt and equity	$7.1	$2.9	$3.9	$2.2	$3.0
Depreciation	$2.8	$1.2	$1.5	$0.9	$1.2
Hull insurance	$1.4	$0.5	$0.7	$0.4	$0.5
Administration	$2.1	$0.9	$1.2	$0.7	$0.9
Repairs	$4.2	$1.7	$2.3	$1.3	$1.8
P&I insurance	$2.2	$0.8	$1.1	$0.5	$0.7
Total fixed costs	$19.9	$8.0	$10.7	$6.1	$8.2
Total costs	$80.3	$33.4	$43.4	$23.6	$30.7
Estimated Costs per pound					
Variable costs:					
Fuel	$0.13	$0.06	$0.07	$0.04	$0.05
Food	$0.08	$0.03	$0.04	$0.02	$0.03
Bait	$0.04	$0.02	$0.02	$0.01	$0.01
Gear loss	$0.08	$0.04	$0.04	$0.03	$0.03
Opp. cost of labor	$0.89	$0.37	$0.49	$0.24	$0.33
Total Variable costs	$1.22	$0.51	$0.66	$0.35	$0.46
Fixed costs:					
Debt and equity	$0.14	$0.06	$0.08	$0.05	$0.06
Depreciation	$0.06	$0.02	$0.03	$0.02	$0.02
Hull insurance	$0.03	$0.01	$0.01	$0.01	$0.01
Administration	$0.04	$0.02	$0.02	$0.01	$0.02
Repairs	$0.09	$0.04	$0.05	$0.03	$0.04
P&I insurance	$0.04	$0.02	$0.02	$0.01	$0.01
Total fixed costs	$0.40	$0.16	$0.22	$0.12	$0.16
Total costs	$0.73	$0.31	$0.39	$0.23	$0.29

Table 2.2 Sensitivity Analysis of Estimated Changes in Revenues, Cost and Profit If the Sablefish Fixed Gear Fishery Had Been Managed Using IFQs

	Basis of comparison. 1989 open access.	IFQs traded to efficient boats, ex-vessel prices and costs remain unchanged.		Efficient boats control IFQs. Ex-vessel prices rise, but costs remain unchanged.		Efficient boats control IFQs. Costs drop, but ex-vessel prices remain unchanged.		All anticipated changes occur. Efficient boats have IFQs, prices are up and costs are down.	
		Total	Change	Total	Change	Total	Change	Total	Change
Total revenue									
1989 open access	$43,930,483								
Unconstrained IFQs		$43,071,812	↓ $0.9	$45,068,049	↑ $1.1	$43,071,812	↓ $0.9	$45,068,049	↑ $1.1
IFQs with vessel classes		$42,907,258	↓ $1.0	$44,881,714	↑ $1.0	$42,907,258	↓ $1.0	$44,881,714	↑ $1.0
Total variable cost									
1989 open access	$29,989,025								
Unconstrained IFQs		$27,066,511	↓ $2.9	$27,945,546	↓ $2.0	$26,094,081	↓ $3.9	$26,973,116	↓ $3.0
IFQs with vessel classes		$27,726,980	↓ $2.3	$28,613,519	↓ $1.4	$26,670,997	↓ $3.3	$27,557,537	↓ $2.4
Total fixed cost									
1989 open access	$7,985,386								
Unconstrained IFQs		$6,057,507	↓ $1.9	$6,057,507	↓ $1.9	$5,237,402	↓ $2.7	$5,237,402	↓ $2.7
IFQs with vessel classes		$6,664,419	↓ $1.3	$6,664,419	↓ $1.3	$5,764,455	↓ $2.2	$5,764,455	↓ $2.2
Total cost									
1989 open access	$37,974,411								
Unconstrained IFQs		$33,124,018	↓ $4.9	$34,003,053	↓ $4.0	$31,331,483	↓ $6.6	$32,210,519	↓ $5.8
IFQs with vessel classes		$34,391,399	↓ $3.6	$35,277,939	↓ $2.7	$32,435,453	↓ $5.5	$33,321,992	↓ $4.7
At-sea economic profit									
1989 open access	$5,956,073								
Unconstrained IFQs		$9,947,794	↑ $4.0	$11,064,996	↑ $5.1	$11,740,329	↑ $5.8	$12,857,530	↑ $6.9
IFQs with vessel classes		$8,515,858	↑ $2.6	$9,603,775	↑ $3.6	$10,471,805	↑ $4.5	$11,559,722	↑ $5.6
Economic profit incl. onshore processing									
1989 open access	$9,027,923								
Unconstrained IFQs		$13,139,394	↑ $4.1	$14,256,595	↑ $5.2	$14,931,928	↑ $5.9	$16,049,130	↑ $7.0
IFQs with vessel classes		$11,781,191	↑ $2.8	$12,869,108	↑ $3.8	$13,737,138	↑ $4.7	$14,825,055	↑ $5.8
Economic profit/lb incl. onshore processing									
1989 open access	$0.20								
Unconstrained IFQs		$0.29	↑ $0.09	$0.31	↑ $0.11	$0.33	↑ $0.13	$0.35	↑ $0.15
IFQs with vessel classes		$0.26	↑ $0.06	$0.28	↑ $0.08	$0.30	↑ $0.10	$0.32	↑ $0.13

Table 2.2 (continued)

	Basis of comparison. 1989 open access.	IFQs traded to efficient boats, ex-vessel prices and costs remain unchanged.		Efficient boats control IFQs. Ex-vessel prices rise, but costs remain unchanged.		Efficient boats control IFQs. Costs drop, but ex-vessel prices remain unchanged.		All anticipated changes occur. Efficient boats have IFQs, prices are up and costs are down.	
		Total	Change	Total	Change	Total	Change	Total	Change
Total number of vessels									
1989 open access	580								
Unconstrained IFQs								46.5	↓ 533.5
IFQs with vessel classes								54.9	↓ 525.1
Total number of fishermen									
1989 open access	2,925								
Unconstrained IFQs								255.7	↓ 2,669.3
IFQs with vessel classes								292.0	↓ 2,633
Total number of crew days									
1989 open access	83,250								
Unconstrained IFQs								58,252	↓ 24,998
IFQs with vessel classes								63,973	↓ 19,277
Average daily income per fisherman									
1989 open access	$213.21								
Unconstrained IFQs								$ 315.45	↑ $ 102.24
IFQs with vessel classes								$ 287.11	↑ $ 73.90

Notes: (1) All numbers are in millions of dollars, excepting estimates of profit per pound, & average daily income per fisherman.
(2) 1989 open access totals are used as a basis of comparison.
(3) Arrows represent the direction of change.

Table 2.3 Skates of hauled and lost gear in the hook-and-line fishery for halibut off Alaska, extracted from logbook data for the years 1987 through 1990.

IPHC Area	1987 Skates hauled	States lost	1988 Skates hauled	Skates lost	1989 Skates hauled	Skates lost	1990 Skates hauled	Skates lost
2C	5,961	211	4,713	85	7,092	134	7,217	241
3A	21,403	1,108	25,787	1,022	22,769	965	31,038	1,188
3B	4,354	198	3,204	63	2,415	78	5,973	159
4A	4,214	172	1,185	57	667	20	2,343	103
4B	3,662	108	4,542	26	3,561	103	1,986	139
4C	915	60	287	5	539	5	634	25
4D	304	0	801	9	675	17	1,274	5
4E 1/	-	-	-	-	-	-	27	0
TOTAL	40,813	1,857	40,519	1,267	37,718	1,322	50,492	1,860

1/ No logbook data collected for Area 4E from 1987 through 1989.

Table 2.4 Estimates, in thousands of pounds, of the amount of halibut killed by lost and abandoned longline gear in the commercial halibut fishery.

IPHC Regulatory Area	1985	1986	1987	1988	1989	1990
2C	n/a	n/a	368	206	193	327
3A	n/a	n/a	1,580	1,506	1,458	1,110
3B	n/a	n/a	341	122	194	216
4	n/a	n/a	257	69	130	231
TOTAL	1,600	3,200	2,546	1,902	1,975	1,884

Table 2.5 Distribution of vessel owners participating in the halibut and sablefish fisheries off Alaska, by the number of years fished during 1984-1990 (for sablefish, it is during 1985-1990)

	Number of Years Fished							
HALIBUT:	1	2	3	4	5	6	7	Total
All Owners	3,007	1,397	973	792	621	483	719	7992
% of Total	38%	17%	12%	10%	8%	6%	9%	100%
From Alaska	2,512	1,200	859	698	549	441	645	6,904
% of Alaska	36%	17%	12%	10%	8%	6%	9%	100%
% of Total	31%	15%	11%	9%	7%	6%	8%	86%
From Other	495	197	114	94	72	42	74	1,088
% of Other	45%	18%	10%	9%	7%	4%	7%	100%
% of Total	6%	2%	1%	1%	1%	1%	1%	14%
SABLEFISH:	1	2	3	4	5	6		Total
All Owners	644	268	188	136	115	92		1,443
% of Total	45%	19%	13%	9%	8%	6%		100%
From Alaska	452	198	151	104	87	60		1,052
% of Alaska	43%	19%	14%	10%	8%	6%		100%
% of Total	31%	14%	10%	7%	6%	4%		73%
From Other	192	70	37	32	28	32		391
% of Other	49%	18%	9%	8%	7%	8%		100%
% of Total	13%	5%	3%	2%	2%	2%		27%

Table 2.6 Estimates, in thousands of pounds, of the amount of sublegal halibut killed by the 1987-1990 commercial halibut fishery.

IPHC Regulatory Area	1987	1988	1989	1990
2C	160	171	153	147
3A	550	665	604	508
3B	246	225	190	257
4	138	94	99	109
TOTAL	1,094	1,155	1,046	1,021

Table 2.7 Halibut longline fishery catch as percentage of the IPHC catch limit by IPHC area and year, 1984-1990.

IPHC area	1984	1985	1986	1987	1988	1989	1990
2C	103%	100%	95%	93%	99%	101%	123%
3A	111%	91%	117%	101%	105%	109%	94%
3B	93%	121%	86%	82%	89%	92%	113%
4A	88%	101%	169%	212%	102%	57%	161%
4B	110%	95%	15%	86%	80%	140%	95%
4C	145%	103%	114%	146%	101%	95%	106%
4D	98%	114%	175%	117%	65%	112%	208%
4E	70%	72%	86%	120%	9%	13%	60%

Table 2.8 - Estimated number of halibut vessel owners (1984-1990) and number of quota share (QS) recipients by vessel class and region of owner residence.

Number and percentages of halibut vessel owners and QS recipients by region of residence.

	YEAR							
	84	85	86	87	88	89	90	QS
Alaska	2,717	2,213	2,653	3,079	3,264	2,936	3,377	4,786
Other states	301	236	344	404	379	407	504	687
Unknown	59	30	4	6	6	3	2	11
All	3,077	2,479	3,001	3,489	3,649	3,346	3,883	5,484
Alaska	88.3%	89.3%	88.4%	88.2%	89.4%	87.7%	87.0%	87.3%
Other states	9.8%	9.5%	11.5%	11.6%	10.4%	12.2%	13.0%	12.5%
Unknown	1.9%	1.2%	0.1%	0.2%	0.2%	0.1%	0.1%	0.2%

Number and percentages of halibut vessel owners and QS recipients by vessel class.

	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft	1,951	1,440	1,658	1,924	2,069	1,791	2,018	3,087
36-60 ft	988	926	1,199	1,412	1,449	1,429	1,713	2,097
> 60 ft	109	112	166	192	178	166	214	274
Unknown CB	64	33	11	11	10	7	4	15
FB	0	0	0	3	6	5	8	11
All	3,077	2,479	3,001	3,489	3,649	3,346	3,883	5,484
<= 35 ft	63.4%	58.1%	55.2%	55.1%	56.7%	53.5%	52.0%	56.3%
36-60 ft	32.1%	37.4%	40.0%	40.5%	39.7%	42.7%	44.1%	38.2%
> 60 ft	3.5%	4.5%	5.5%	5.4%	4.9%	5.0%	5.5%	5.0%
Unknown CB	2.1%	1.3%	0.4%	0.3%	0.3%	0.2%	0.1%	0.3%
FB	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.2%

Table 2.8 continued.

Number of halibut vessel owners and QS recipients by vessel class and region of residence.

	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	1,860	1,386	1,572	1,816	1,958	1,674	1,875	2,875
Other states	91	54	86	108	111	117	143	212
All	1,951	1,440	1,658	1,924	2,069	1,791	2,018	3,087
36-60 ft								
Alaska	817	782	993	1,169	1,233	1,190	1,415	1,722
Other states	171	144	206	243	216	239	298	375
All	988	926	1,199	1,412	1,449	1,429	1,713	2,097
> 60 ft								
Alaska	66	70	112	133	123	111	144	182
Other states	43	42	54	59	55	55	70	92
All	109	112	166	192	178	166	214	274
Unknown CB								
Alaska	4	3	6	4	2	4	2	3
Other states	1	0	1	1	2	0	0	1
Unknown	59	30	4	6	6	3	2	11
All	64	33	11	11	10	7	4	15
FB								
Alaska	0	0	0	1	1	4	4	4
Other states	0	0	0	2	5	1	4	7
All	0	0	0	3	6	5	8	11

Table 2.8 continued.

Percentage of halibut vessel owners and QS recipients by vessel class and region of residence.

	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	95.3%	96.3%	94.8%	94.4%	94.6%	93.5%	92.9%	93.1%
Other states	4.7%	3.8%	5.2%	5.6%	5.4%	6.5%	7.1%	6.9%
36-60 ft								
Alaska	82.7%	84.4%	82.8%	82.8%	85.1%	83.3%	82.6%	82.1%
Other states	17.3%	15.6%	17.2%	17.2%	14.9%	16.7%	17.4%	17.9%
> 60 ft								
Alaska	60.6%	62.5%	67.5%	69.3%	69.1%	66.9%	67.3%	66.4%
Other states	39.4%	37.5%	32.5%	30.7%	30.9%	33.1%	32.7%	33.6%
Unknown CB								
Alaska	6.3%	9.1%	54.5%	36.4%	20.0%	57.1%	50.0%	20.0%
Other states	1.6%	0.0%	9.1%	9.1%	20.0%	0.0%	0.0%	6.7%
Unknown	92.2%	90.9%	36.4%	54.5%	60.0%	42.9%	50.0%	73.3%
FB								
Alaska	0.0%	0.0%	0.0%	33.3%	16.7%	80.0%	50.0%	36.4%
Other states	0.0%	0.0%	0.0%	66.7%	83.3%	20.0%	50.0%	63.6%

Table 2.9 - Estimated number and percentage of sablefish vessel owners (1985-1990) and number of quota share (QS) recipients by vessel class and region of owner residence.

Number and percentage of sablefish vessel owners and QS recipients by region of residence.

	YEAR						
	85	86	87	88	89	90	QS
Alaska	171	332	491	541	474	504	814
Other states	73	123	178	161	161	171	261
Unknown	0	5	10	4	7	9	19
All	244	460	679	706	642	684	1,094
Alaska	70.1%	72.2%	72.3%	76.6%	73.8%	73.7%	74.4%
Other states	29.9%	26.7%	26.2%	22.8%	25.1%	25.0%	23.9%
Unknown	0.0%	1.1%	1.5%	0.6%	1.1%	1.3%	1.7%

Number and percentages of owners and QS recipients by vessel class.

	YEAR						
	85	86	87	88	89	90	QS
<= 60 ft	165	339	523	568	502	546	867
> 60 ft	73	109	136	120	112	116	169
Unknown CB	0	4	10	4	7	9	19
FB	6	11	14	20	24	21	39
All	244	460	679	706	642	684	1,094
<= 60 ft	67.6%	73.7%	77.0%	80.5%	78.2%	79.8%	79.3%
> 60 ft	29.9%	23.7%	20.0%	17.0%	17.4%	17.0%	15.4%
Unknown CB	0.0%	0.9%	1.5%	0.6%	1.1%	1.3%	1.7%
FB	2.5%	2.4%	2.1%	2.8%	3.7%	3.1%	3.6%

Table 2.9 continued.

Number of owners and QS recipients by vessel class and region of owner residence.

	YEAR						
	85	86	87	88	89	90	QS
<= 60 ft							
Alaska	127	268	404	466	406	433	698
Other states	38	70	119	102	96	113	169
Unknown	0	1	0	0	0	0	0
All	165	339	523	568	502	546	867
> 60 ft							
Alaska	43	63	85	74	63	70	107
Other states	30	46	51	46	49	46	62
All	73	109	136	120	112	116	169
Unknown CB							
All	0	4	10	4	7	9	19
FB							
Alaska	1	3	3	4	7	6	9
Other states	5	8	11	16	17	15	30
All	6	11	14	20	24	21	39

Table 2.9 continued.

Percentage of owners and QS recipients by vessel class and region of owner residence.

	YEAR						
	85	86	87	88	89	90	QS
<= 60 ft							
Alaska	77.0%	79.1%	77.2%	82.0%	80.9%	79.3%	80.5%
Other states	23.0%	20.6%	22.7%	17.9%	19.0%	20.7%	19.5%
Unknown	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
> 60 ft							
Alaska	58.9%	57.8%	62.5%	61.7%	56.3%	60.3%	63.3%
Other states	41.1%	42.2%	37.5%	38.3%	43.8%	39.7%	36.7%
Unknown CB							
All	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
FB							
Alaska	16.7%	27.3%	21.4%	20.0%	29.2%	28.6%	23.1%
Other states	83.3%	72.7%	78.6%	80.0%	70.8%	71.4%	76.9%

Table 2.10 - Estimated number of halibut and sablefish vessel owners (1985-1990) and number of quota share (QS) recipients by vessel class and region of owner residence.

Number and percentages of halibut and sablefish vessel owners and QS recipients by region of residence.

	YEAR						
	85	86	87	88	89	90	QS
Alaska	2,228	2,662	3,095	3,290	2,962	3,388	4,859
Other states	249	357	420	404	434	517	736
Unknown	30	9	16	10	10	11	31
All	2,507	3,028	3,531	3,704	3,406	3,916	5,626
Alaska	88.9%	87.9%	87.7%	88.8%	87.0%	86.5%	86.4%
Other states	9.9%	11.8%	11.9%	10.9%	12.7%	13.2%	13.1%
Unknown	1.2%	.3%	.5%	.3%	.3%	.3%	0.6%

Number and percentages of halibut and sablefish vessel owners and QS recipients by vessel class.

	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft	1,442	1,661	1,931	2,082	1,797	2,024	3,112
36-60 ft	936	1,224	1,442	1,501	1,481	1,718	2,147
> 60 ft	129	185	213	201	195	217	291
Unknown CB	33	15	21	14	14	13	35
FB	6	11	14	20	25	24	41
All	2,507	3,028	3,531	3,704	3,406	3,916	5,626
<= 35 ft	57.5%	54.9%	54.7%	56.2%	52.8%	51.7%	55.3%
36-60 ft	37.3%	40.4%	40.8%	40.5%	43.5%	43.9%	38.2%
> 60 ft	5.1%	6.1%	6.0%	5.4%	5.7%	5.5%	5.2%
Unknown CB	1.3%	0.5%	0.6%	0.4%	0.4%	0.3%	0.6%
FB	0.2%	0.4%	0.4%	0.5%	0.7%	0.6%	0.7%

Table 2.10 continued.

Number of halibut and sablefish vessel owners and QS recipients by vessel class and region of residence.

	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	1,388	1,575	1,821	1,970	1,680	1,880	2,897
Other states	54	86	110	112	117	144	215
All	1,442	1,661	1,931	2,082	1,797	2,024	3,112
36-60 ft							
Alaska	790	1,014	1,194	1,273	1,232	1,419	1,759
Other states	146	209	248	228	249	299	388
Unknown	0	1	0	0	0	0	0
All	936	1,224	1,442	1,501	1,481	1,718	2,147
> 60 ft							
Alaska	80	123	143	136	125	145	190
Other states	49	62	70	65	70	72	101
All	129	185	213	201	195	217	291
Unknown CB							
Alaska	3	6	4	2	4	2	3
Other states	0	1	1	2	0	0	1
Unknown	30	8	16	10	10	11	31
All	33	15	21	14	14	13	35
FB							
Alaska	1	3	3	4	8	7	10
Other states	5	8	11	16	17	17	31
All	6	11	14	20	25	24	41

Table 2.10 continued.

Percentage of halibut and sablefish vessel owners and QS recipients by vessel class and region of residence.

	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	96.3%	94.8%	94.3%	94.6%	93.5%	92.9%	93.1%
Other states	3.7%	5.2%	5.7%	5.4%	6.5%	7.1%	6.9%
36-60 ft							
Alaska	84.4%	82.8%	82.8%	84.8%	83.2%	82.6%	81.9%
Other states	15.6%	17.1%	17.2%	15.2%	16.8%	17.4%	18.1%
Unknown	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
> 60 ft							
Alaska	62.0%	66.5%	67.1%	67.7%	64.1%	66.8%	65.3%
Other states	38.0%	33.5%	32.9%	32.3%	35.9%	33.2%	34.7%
Unknown							
Alaska	9.1%	40.0%	19.0%	14.3%	28.6%	15.4%	8.6%
Other states	0.0%	6.7%	4.8%	14.3%	0.0%	0.0%	2.9%
Unknown	90.9%	53.3%	76.2%	71.4%	71.4%	84.6%	88.6%
FB							
Alaska	16.7%	27.3%	21.4%	20.0%	32.0%	29.2%	24.4%
Other states	83.3%	72.7%	78.6%	80.0%	68.0%	70.8%	75.6%

Table 2.11 - Communities adjacent to each management area.

Halibut IPHC areas 4A - 4E:

Area 4E:

- Alakanuk
- Aleknagik
- Barrow
- Bethel
- Chefornak
- Clarks Point
- Clear
- Dillingham
- Egegik
- Emmonak
- Goodnews Bay
- Hooper Bay
- Iliamna
- King Salmon
- Kwigillingok
- Levelock
- Manokotak
- Mekoryuk
- Naknek
- New Stuyahok
- Nightmute
- Nome
- Pilot Point
- Port Heiden
- Quinhagak
- Russian Mission
- South Naknek
- Takotna
- Togiak
- Tok
- Toksook Bay
- Tununak
- Unalakleet

Area 4A:

- Akutan
- Dutch Harbor
- Unalaska

Area 4B:

- Adak (fpo)
- Atka

Area 4C:

- St. George Is.
- St. Paul Is.

Sablefish management areas:

Bering Sea:

- Aniak
- Bethel
- Chignik
- Chignik Lagoon
- Cold Bay
- Dillingham
- Emmonak
- King Cove
- King Salmon
- Kipnuk
- Naknek
- Nelson Is.
- New Stuyahok
- St. Marys
- St. Michael
- Sand Point

Aleutian Islands:

- Adak
- Atka
- Dutch Harbor
- St. George Is.
- St. Paul Is.
- Unalaska

Table 2.12 - Estimated Number of halibut vessel owners (1984-1990) and number of quota share (QS) recipients (local vs. non-local) for area 4B through 4E.

IPHC area	Owners							
	84	85	86	87	88	89	90	QS
4B								
Other	28	41	19	41	31	46	30	88
Unknown	20	11	2	20	28	36	31	67
4C								
Local	29	25	16	16	21	26	30	34
Other	2	3	5	15	3	4	7	20
Unknown	6	8	8	8	4	5	13	28
% Local	78.4%	69.4%	55.2%	41.0%	75.0%	74.3%	60.0%	41.5%
4D								
Other	1	4	26	5	5	6	5	31
Unknown	8	5	18	7	8	5	19	35
4E								
Local	62	54	57	97	19	15	79	99
Other	1	2	2	4	2	2	35	39
Unknown	8	12	2	2	0	0	13	17
% Local	87.3%	79.4%	93.4%	94.2%	90.5%	88.2%	62.2%	63.9%

Table 2.13 - Estimated number of sablefish vessel owners (1985 through 1990) and number of quota share (QS) recipients (local vs. non-local) for the Bering Sea and the Aleutian Islands.

FMP area	Owners						
	85	86	87	88	89	90	IFQ
Aleutian Islands							
Local	0	0	0	1	0	1	1
Other	5	21	19	25	19	15	56
Unknown	5	16	38	39	40	30	80
% Local	0.0%	0.0%	0.0%	1.5%	0.0%	2.2%	.7%
Bering Sea							
Local	2	1	1	8	2	3	11
Other	24	15	39	20	13	19	68
Unknown	20	19	36	23	13	39	75
% Local	4.3%	2.9%	1.3%	15.7%	7.1%	4.9%	7.1%

Table 2.14 - Estimated distributions of Pacific halibut catch off Alaska, (1984-1990), and amount of IFQs, using 1991 TACs, by vessel class and region of owner residence (in thousands of pounds net weight).

Weight and percentage of halibut catch and IFQs by region of residence.

	YEAR							
	84	85	86	87	88	89	90	IFQ
Alaska	23,183	31,868	42,611	42,699	47,359	40,196	38,083	34,580
Other states	11,818	13,285	15,169	13,400	13,643	15,793	14,863	12,915
Unknown	39	27	3	173	9	*	*	6
All	35,040	45,181	57,784	56,271	61,011	56,017	52,946	47,500
Alaska	66.2%	70.5%	73.7%	75.9%	77.6%	71.8%	71.9%	72.8%
Other states	33.7%	29.4%	26.3%	23.8%	22.4%	28.2%	28.1%	27.2%
Unknown	0.1%	0.1%	0.0%	0.3%	0.0%	*	*	0.0%

Weight and percentage of halibut catch and IFQs by vessel class.

	YEAR							
	84	85	86	87	88	89	90	IFQ
<= 35 ft	4,686	4,998	6,637	8,383	10,066	7,569	6,993	5,275
36-60 ft	18,892	25,026	31,884	32,633	34,571	32,923	33,434	26,911
> 60 ft	11,319	14,978	18,945	15,038	16,078	14,902	12,007	14,811
Unknown CB	142	179	318	217	64	70	29	25
FB	0	0	0	*	232	552	483	478
All	35,040	45,181	57,784	56,271	61,011	56,017	52,946	47,500
<= 35 ft	13.4%	11.1%	11.5%	14.9%	16.5%	13.5%	13.2%	11.1%
36-60 ft	53.9%	55.4%	55.2%	58.0%	56.7%	58.8%	63.1%	56.7%
> 60 ft	32.3%	33.2%	32.8%	26.7%	26.4%	26.6%	22.7%	31.2%
Unknown CB	0.4%	0.4%	0.6%	0.4%	0.1%	0.1%	0.1%	0.1%
FB	0.0%	0.0%	0.0%	*	0.4%	1.0%	0.9%	1.0%

*Due to confidentiality restrictions, this information is included in the >60 ft. category.

Table 2.14 continued.

Weight of halibut catch and IFQs by vessel class and region of owner residence.

	YEAR							
	84	85	86	87	88	89	90	IFQ
<= 35 ft								
Alaska	4,304	4,688	6,078	7,632	9,301	6,800	6,127	4,792
Other states	383	309	559	751	764	769	866	484
All	4,686	4,998	6,637	8,383	10,066	7,569	6,993	5,275
36-60 ft								
Alaska	13,013	18,803	24,072	25,185	27,815	24,578	24,598	20,546
Other states	5,879	6,224	7,812	7,449	6,755	8,346	8,836	6,365
All	18,892	25,026	31,884	32,633	34,571	32,923	33,434	26,911
> 60 ft								
Alaska	5,780	8,226	12,288	9,791	10,212	8,260	7,152	9,008
Other states	5,539	6,752	6,657	5,147	5,866	6,643	4,856	5,802
All	11,319	14,978	18,945	14,938	16,078	14,902	12,007	14,811
Unknown CB								
Alaska	*	*	*	*	*	*	*	*
Other states	*	*	*	*	*	*	*	*
Unknown	*	*	*	*	*	*	*	*
All	142	179	318	217	64	70	29	25
FB								
Alaska	0	0	0	*	*	*	177	215
Other states	0	0	0	*	*	*	306	263
All	0	0	0	100	232	552	483	478

*Due to confidentiality restrictions, this information could not be released.

Table 2.14 continued.

Percentage of halibut catch and IFQs by vessel class and region of owner residence.

	YEAR							
	84	85	86	87	88	89	90	IFQ
<= 35 ft								
Alaska	91.8%	93.8%	91.6%	91.0%	92.4%	89.8%	87.6%	90.8%
Other states	8.2%	6.2%	8.4%	9.0%	7.6%	10.2%	12.4%	9.2%
36-60 ft								
Alaska	68.9%	75.1%	75.5%	77.2%	80.5%	74.7%	73.6%	76.3%
Other states	31.1%	24.9%	24.5%	22.8%	19.5%	25.3%	26.4%	23.7%
> 60 ft								
Alaska	51.1%	54.9%	64.9%	65.5%	63.5%	55.4%	59.6%	60.8%
Other states	48.9%	45.1%	35.1%	34.5%	36.5%	44.6%	40.4%	39.2%
Unknown CB								
Alaska	60.1%	84.7%	54.6%	15.9%	37.4%	60.3%	98.7%	76.7%
Other states	12.5%	0.0%	44.3%	4.5%	48.1%	0.0%	0.0%	0.4%
Unknown	27.3%	15.3%	1.1%	79.5%	14.5%	39.7%	1.3%	22.9%
FB								
Alaska	0.0%	0.0%	0.0%	*	*	*	36.7%	45.0%
Other states	0.0%	0.0%	0.0%	*	*	*	63.3%	55.0%

*Due to confidentiality restrictions, this information could not be released.

Table 2.15 - Estimated distribution of sablefish catch off Alaska, 1985-1990, and amount of IFQs, using 1991 TACs, by vessel class and region of owner residence (in thousands pounds round weight).

Weight and percentage of sablefish catch and IFQs by region of residence.

	YEAR						
	85	86	87	88	89	90	IFQ
Alaska	13,001	20,526	30,993	32,166	29,553	27,809	25,191
Other states	15,490	21,839	28,529	31,358	30,594	28,235	26,118
Unknown	0	167	172	94	91	114	58
All	28,491	42,532	59,695	63,618	60,239	56,157	51,367
Alaska	45.6%	48.3%	51.9%	50.6%	49.1%	49.5%	49.0%
Other states	54.4%	51.3%	47.8%	49.3%	50.8%	50.3%	50.8%
Unknown	0.0%	0.4%	0.3%	0.1%	0.2%	0.2%	0.1%

Weight and percentage of sablefish catch and IFQs by vessel class.

	YEAR						
	85	86	87	88	89	90	IFQ
<= 60 ft	9,360	18,304	28,662	30,504	28,715	33,321	25,151
> 60 ft	11,520	16,969	23,220	23,246	21,503	14,492	17,639
Unknown CB	0	87	172	94	91	114	58
FB	7,611	7,172	7,642	9,774	9,929	8,230	8,520
All	28,491	42,532	59,695	63,618	60,239	56,157	51,367
<= 60 ft	32.9%	43.0%	48.0%	47.9%	47.7%	59.3%	49.0%
> 60 ft	40.4%	39.9%	38.9%	36.5%	35.7%	25.8%	34.3%
Unknown CB	0.0%	0.2%	0.3%	0.1%	0.2%	0.2%	0.1%
FB	26.7%	16.9%	12.8%	15.4%	16.5%	14.7%	16.6%

Table 2.15 continued.

Weight of sablefish catch and IFQs by vessel class and region of residence.

	YEAR						
	85	86	87	88	89	90	IFQ
<= 60 ft							
Alaska	5,828	11,194	18,217	19,510	18,679	19,752	15,115
Other states	3,532	7,030	10,444	10,993	10,036	13,569	10,036
Unknown	0	*	0	0	0	0	0.0%
All	9,360	18,304	28,662	30,504	28,715	33,321	25,151
> 60 ft							
Alaska	5,994	7,923	11,100	10,843	8,320	5,632	8,059
Other states	5,526	9,047	12,119	12,403	13,183	8,860	9,580
All	11,520	16,969	23,220	23,246	21,503	14,492	17,639
Unknown CB							
All	0	87	172	94	91	114	58
FB							
Alaska	*	*	*	1,812	2,555	2,425	2,018
Other states	*	*	*	7,962	7,375	5,805	6,502
All	7,611	7,172	7,642	9,774	9,929	8,230	8,520

*Due to confidentiality restriction, this information could not be released.

Table 2.15 continued.

Percentage of sablefish catch and IFQs by vessel class and region of residence.

	YEAR						
	85	86	87	88	89	90	IFQ
<= 60 ft							
Alaska	62.3%	61.2%	63.6%	64.0%	65.0%	59.3%	60.1%
Other states	37.7%	38.4%	36.4%	36.0%	35.0%	40.7%	39.9%
Unknown	0.0%	*	0.0%	0.0%	0.0%	0.0%	0.0%
> 60 ft							
Alaska	52.0%	46.7%	47.8%	46.6%	38.7%	38.9%	45.7%
Other states	48.0%	53.3%	52.2%	53.4%	61.3%	61.1%	54.3%
Unknown CB							
All	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
FB							
Alaska	*	*	*	18.5%	25.7%	29.5%	23.7%
Other states	*	*	*	81.5%	74.3%	70.5%	76.3%

*Due to confidentiality restriction, this information could not be released.

Table 2.16 - Value and percentage of catch of Pacific halibut and sablefish, in thousands of dollars, during 1985 through 1990, and calculated ex-vessel value of the catch associated with IFQs, by year and region of owner residence.

Value and percentage of halibut and sablefish catch and IFQs by year and region of owner residence.

	YEAR						
	85	86	87	88	89	90	IFQ
Alaska	40,174	80,916	96,846	107,727	104,588	104,418	92,949
Other states	25,847	42,771	51,918	65,169	69,787	63,887	51,642
Unknown	24	166	445	156	180	152	69
All	66,046	123,853	149,210	173,052	174,555	168,457	144,660
Alaska	60.8%	65.3%	64.9%	62.3%	59.9%	62.0%	64.3%
Other states	39.1%	34.5%	34.8%	37.7%	40.0%	37.9%	35.7%
Unknown	0.0%	0.1%	0.3%	0.1%	0.1%	0.1%	0.0%

Value and percentage of halibut and sablefish catch and IFQ by vessel class.

	YEAR						
	85	86	87	88	89	90	IFQ
<= 35 ft	4,650	9,800	12,776	13,193	11,818	13,307	10,720
36-60 ft	30,589	63,107	78,982	88,630	91,945	102,597	77,522
> 60 ft	23,769	43,513	48,051	55,618	54,718	40,541	46,749
Unknown CB	160	540	509	223	243	203	107
FB	6,878	6,893	8,892	15,387	15,832	11,809	9,562
All	66,046	123,853	149,210	173,052	174,555	168,457	144,660
<= 35 ft	7.0%	7.9%	8.6%	7.6%	6.8%	7.9%	7.4%
36-60 ft	46.3%	51.0%	52.9%	51.2%	52.7%	60.9%	53.6%
> 60 ft	36.0%	35.1%	32.2%	32.1%	31.3%	24.1%	32.3%
Unknown CB	0.2%	0.4%	0.3%	0.1%	0.1%	0.1%	0.1%
FB	10.4%	5.6%	6.0%	8.9%	9.1%	7.0%	6.6%

Table 2.16 continued.

Value of halibut and sablefish catch and IFQs by vessel class and region of owner residence.

	YEAR						
	85	86	87	88	89	90	IFQ
<= 35 ft							
Alaska	4,374	8,979	11,607	12,031	10,654	11,727	9,725
Other states	276	821	1,169	1,163	1,164	1,580	995
All	4,650	9,800	12,776	13,193	11,818	13,307	10,720
36-60 ft							
Alaska	21,846	45,074	56,410	63,593	64,351	68,945	54,994
Other states	8,743	17,957	22,572	25,037	27,594	33,652	22,528
Unknown	0	77	0	0	0	0	0
All	30,589	63,107	78,982	88,630	91,945	102,597	77,522
> 60 ft							
Alaska	12,753	25,259	26,779	29,267	24,889	20,154	25,730
Other states	11,016	18,254	21,272	26,351	29,829	20,387	21,020
All	23,769	43,513	48,051	55,618	54,718	40,541	46,749
Unknown							
Alaska	135	249	50	30	63	51	37
Other states	0	202	14	38	0	0	0
Unknown	24	89	445	156	180	152	69
All	160	540	509	223	243	203	107
FB							
Alaska	1,065	1,355	2,001	2,808	4,632	3,541	2,463
Other states	5,813	5,538	6,891	12,580	11,200	8,269	7,099
All	6,878	6,893	8,892	15,387	15,832	11,809	9,562

Table 2.16 continued.

Percentage of value of halibut and sablefish catch and IFQs by vessel class and region of owner residence.

	YEAR						
	85	86	87	88	89	90	IFQ
<= 35 ft							
Alaska	94.1%	91.6%	90.9%	91.2%	90.2%	88.1%	90.7%
Other states	5.9%	8.4%	9.1%	8.8%	9.8%	11.9%	9.3%
36-60 ft							
Alaska	71.4%	71.4%	71.4%	71.8%	70.0%	67.2%	70.9%
Other states	28.6%	28.5%	28.6%	28.2%	30.0%	32.8%	29.1%
Unknown	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
> 60 ft							
Alaska	53.7%	58.0%	55.7%	52.6%	45.5%	49.7%	55.0%
Other states	46.3%	42.0%	44.3%	47.4%	54.5%	50.3%	45.0%
Unknown							
Alaska	84.7%	46.1%	9.8%	13.2%	26.0%	25.1%	34.9%
Other states	0.0%	37.5%	2.8%	17.0%	0.0%	0.0%	0.2%
Unknown	15.3%	16.4%	87.5%	69.8%	74.0%	74.9%	64.9%
FB							
Alaska	15.5%	19.7%	22.5%	18.2%	29.3%	30.0%	25.8%
Other states	84.5%	80.3%	77.5%	81.8%	70.7%	70.0%	74.2%

Table 2.17 - Estimated catch of Pacific halibut, (pounds net weight), (1984 through 1990) and amount of IFQ (local vs. non-local) for areas 4B through 4E.

IPHC area	Catch							
	84	85	86	87	88	89	90	IFQ
4B								
Other	292,900	651,397	260,692	734,219	502,164	1,153,281	640,443	724,197
Unknown	813,573	589,072	*	766,245	1,091,167	1,497,296	692,545	975,802
4C								
Local	240,070	257,754	121,214	135,550	491,890	263,378	188,739	211,601
Other	*	*	415,138	596,832	*	63,542	67,326	198,657
Unknown	339,654	361,952	149,833	145,748	215,184	244,136	273,416	189,738
% Local	41.4%	41.6%	17.7%	15.4%	69.6%	46.1%	35.6%	35.3%
4D								
Other	*	134,007	723,851	393,405	125,255	312,917	148,676	224,379
Unknown	395,486	498,566	499,477	309,166	328,012	361,050	856,615	375,621
4E								
Local	28,899	24,603	39,081	76,161	9,104	13,257	22,329	53,183
Other	*	*	3,950	*	*	*	34,124	36,258
Unknown	6,349	11,444	*	13,701	0	0	3,902	10,557
% Local	82.0%	68.3%	90.8%	84.8%	56.5%	40.5%	37.0%	53.2%

*Due to confidentiality restrictions this information could not be released, and is combined in the unknown category.

Table 2.18 - Estimated catch of sablefish, (pounds round weight), (1985 through 1990) and amount of IFQ (local vs. non-local) for the Bering Sea and the Aleutian Islands.

FMP area	Catch						
	85	86	87	88	89	90	IFQ
Aleutian Islands							
Local	0			*		*	*
Other	143,671	975,381	2,106,731	2,399,379	1,435,107	1,279,809	1,379,971
Unknown	2,710,448	4,053,017	5,267,410	4,481,439	3,755,389	2,815,052	3,911,091
% Local	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%
Bering Sea							
Local	*	*	*	51,917	*	*	20,502
Other	2,164,914	1,469,211	2,330,334	430,736	336,450	928,729	1,330,742
Unknown	2,273,134	1,652,031	2,305,887	1,908,215	899,941	1,849,686	2,065,908
% Local	3.2%	0.2%	0.7%	2.2%	0.1%	0.1%	0.6%

*Due to confidentiality restrictions this information could not be released and is combined in the unknown category.

Table 2.19 - Distribution of halibut landings and IFQs by management area and residence of vessel owners.

Distribution of halibut catch for the period of 1984 through 1990

Owner's region of residence	Management area								Percent of total catch
	2C	3A	3B	4A	4B	4C	4D	4E	
Anchorage	0.1%	1.9%	4.2%	1.8%	2.7%	0.8%	1.4%	2.4%	2.9%
Gulf coast	0.2%	13.8%	25.2%	15.3%	8.2%	3.1%	4.2%	0.2%	17.4%
Kodiak	0.0%	27.5%	29.0%	24.2%	23.1%	14.1%	22.7%	4.5%	22.8%
Interior	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Northern AK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Southeast AK	87.7%	7.6%	15.2%	8.8%	7.1%	9.8%	5.9%	5.1%	26.6%
Southwest AK	0.1%	12.8%	0.5%	8.7%	1.5%	40.4%	2.1%	79.3%	3.3%
Washington	10.1%	29.0%	19.4%	30.1%	51.8%	27.9%	62.2%	5.7%	21.2%
Other	1.8%	7.3%	6.3%	11.1%	5.7%	3.6%	1.5%	0.3%	5.7%
Unknown	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	0.0%	2.6%	0.1%
Total	18.4%	15.8%	56.2%	4.2%	2.7%	1.3%	1.4%	0.1%	100.0%

Distribution of halibut catch for the period of 1988 through 1990

Owner's region of residence	Management area								Percent of total catch
	2C	3A	3B	4A	4B	4C	4D	4E	
Anchorage	0.2%	1.7%	4.1%	1.7%	2.0%	1.2%	0.0%	8.2%	2.9%
Gulf coast	0.1%	14.4%	27.5%	23.3%	10.6%	2.2%	9.3%	0.6%	19.6%
Kodiak	0.0%	22.4%	26.6%	14.2%	21.1%	1.8%	8.1%	15.5%	20.1%
Interior	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Northern AK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Southeast AK	90.5%	9.5%	16.6%	8.9%	6.0%	4.2%	5.9%	15.3%	28.1%
Southwest AK	0.1%	13.8%	0.5%	9.2%	1.4%	53.6%	4.3%	55.6%	3.3%
Washington	6.9%	28.7%	18.2%	27.2%	51.9%	29.3%	70.0%	3.5%	19.8%
Other	2.0%	9.4%	6.3%	15.4%	6.9%	7.6%	2.4%	1.0%	6.2%
Unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%
Total	18.0%	13.9%	59.2%	3.2%	3.3%	1.1%	1.3%	0.0%	100.0%

Table 2.19 cont'd

Distribution of halibut IFQs based on 1991 TACs

Owner's region of residence	Management area								Percent of total catch
	2C	3A	3B	4A	4B	4C	4D	4E	
Anchorage	0.2%	1.9%	4.1%	1.9%	2.5%	0.4%	0.0%	11.5%	2.8%
Gulf coast	0.2%	14.7%	26.4%	18.1%	8.9%	2.8%	8.8%	0.3%	18.6%
Kodiak	0.0%	25.7%	28.1%	22.0%	21.6%	14.4%	18.5%	5.1%	22.5%
Interior	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Northern AK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Southeast AK	89.4%	8.2%	15.8%	9.9%	8.1%	11.0%	7.6%	8.8%	25.2%
Southwest AK	0.1%	12.9%	0.4%	7.5%	1.5%	39.8%	2.5%	63.7%	3.6%
Washington	8.5%	28.1%	18.7%	29.4%	50.9%	26.4%	60.2%	9.9%	21.0%
Other	1.5%	8.5%	6.5%	11.2%	6.5%	5.3%	2.4%	0.5%	6.2%
Unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Total	15.6%	18.5%	56.0%	3.6%	3.6%	1.3%	1.3%	0.2%	100.0%

Table 2.20 - Distribution of sablefish landings and IFQs by management area and residence of vessel owners.

Distribution of sablefish catch for the period of 1985 through 1990

Owner's region of residence	Management area							Percent of total catch
	Aleutian	Bering	C. Gulf	EY/SEO	W. Gulf	W.Yakutat	Unknown	
Anchorage	1.7%	1.3%	2.1%	0.3%	0.6%	1.5%	0.1%	1.4%
Gulf coast	11.6%	13.5%	11.0%	1.5%	6.9%	7.9%	12.6%	8.3%
Kodiak	3.1%	8.7%	12.8%	0.6%	3.3%	6.8%	2.2%	7.0%
Northern AK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Southeast AK	9.3%	17.7%	22.4%	76.2%	13.9%	26.5%	26.0%	31.8%
Southwest AK	1.0%	1.3%	0.5%	0.1%	7.2%	0.4%	0.0%	1.2%
Washington	70.3%	53.1%	43.9%	17.6%	63.0%	52.5%	57.9%	45.2%
Other	3.1%	4.4%	7.1%	3.0%	5.0%	4.2%	1.3%	5.0%
Unknown	0.0%	0.0%	0.2%	0.6%	0.0%	0.1%	0.0%	0.2%
Total	10.1%	6.0%	35.1%	20.8%	11.2%	16.6%	0.2%	100.0%

Distribution of sablefish catch for the period of 1988 through 1990.

Owner's region of residence	Management area							Percent of total catch
	Aleutian	Bering	C. Gulf	EY/SEO	W. Gulf	W.Yakutat	Unknown	
Anchorage	0.3%	1.2%	1.9%	0.2%	0.6%	1.9%	0.0%	1.2%
Gulf coast	17.6%	14.8%	11.8%	1.1%	8.8%	8.7%	0.0%	9.2%
Kodiak	3.5%	1.5%	9.4%	0.3%	2.1%	6.2%	0.0%	5.3%
Northern AK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Southeast AK	10.2%	9.0%	25.3%	77.3%	11.6%	25.0%	52.5%	33.4%
Southwest AK	0.3%	0.9%	0.4%	0.0%	3.3%	0.3%	0.0%	0.6%
Washington	64.1%	70.0%	43.6%	17.6%	68.8%	54.0%	47.5%	45.0%
Other	4.0%	2.7%	7.4%	3.0%	4.8%	3.7%	0.0%	5.1%
Unknown	0.0%	0.0%	0.1%	0.4%	0.0%	0.2%	0.0%	0.2%
Total	9.0%	3.6%	38.3%	21.9%	10.2%	17.0%	0.1%	100.0%

Table 2.20 cont'd

Distribution of sablefish IFQs based on 1991 TACs

Owner's region of residence	Management area							Percent of total catch
	Aleutian	Bering	C. Gulf	EY/SEO	W. Gulf	W.Yakut	Unknown	
Anchorage	1.9%	1.3%	2.2%	1.0%	0.6%	1.8%	0.0%	1.6%
Gulf coast	11.2%	12.6%	10.8%	1.7%	6.6%	8.3%	0.0%	8.3%
Kodiak	3.0%	6.1%	11.1%	0.9%	3.1%	6.6%	0.0%	6.3%
Northern AK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Southeast AK	10.0%	18.9%	23.2%	76.3%	14.5%	26.1%	0.0%	31.9%
Southwest AK	0.0%	0.6%	0.5%	0.1%	5.5%	0.4%	0.0%	0.9%
Washington	71.4%	58.3%	45.3%	17.3%	65.3%	52.6%	0.0%	46.4%
Other	2.5%	2.2%	6.7%	2.4%	4.5%	3.9%	0.0%	4.4%
Unknown	0.0%	0.0%	0.1%	0.3%	0.0%	0.1%	0.0%	0.1%
Total	10.3%	6.7%	36.3%	20.2%	10.0%	16.5%	0.0%	100.0%

Table 2.21 Number of halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	272	126	95	101	105	85	147	697
0.1-0.2	195	136	90	99	108	92	125	421
0.2-0.5	353	240	241	287	246	268	358	645
0.5-1.0	391	228	250	298	316	332	297	532
1-2	343	268	297	364	399	370	395	635
2-3	225	196	200	234	264	230	270	423
3-4	161	104	169	201	215	197	208	264
4-5	130	94	134	159	165	159	177	197
5-6	100	89	132	129	160	125	158	221
6-7	76	60	98	120	123	118	138	124
7-8	71	67	93	99	121	85	110	113
8-9	53	56	76	73	83	86	109	97
9-10	50	48	56	79	97	79	86	97
10-20	278	274	431	562	502	455	599	478
20-30	125	151	201	200	246	209	222	168
30-40	62	83	98	122	120	111	152	105
40-50	30	48	63	78	68	83	90	50
50-60	23	35	42	64	66	50	55	44
60-70	23	22	25	36	44	29	33	29
70-80	16	21	26	29	31	24	30	26
80-90	17	16	22	27	28	16	23	17
90-100	11	7	21	20	20	17	17	13
100-110	15	13	16	10	17	11	20	16
110-120	9	12	8	17	14	9	18	20
120-130	4	6	11	10	17	21	10	7
130-140	5	10	8	11	14	15	8	9
140-150	6	5	15	13	5	8	9	7
150-160	1	6	12	8	4	10	2	7
160-170	2	3	12	7	5	11	4	4
170-180	7	4	11	4	7	8	2	3
180-190	1	9	5	5	7	2	3	2
190-200	1	3	5	3	4	4	0	0
≥200	21	39	38	20	28	27	8	13

Table 2.22 Cumulative number of halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	272	126	95	101	105	85	147	697
0.1-0.2	467	262	185	200	213	177	272	1,118
0.2-0.5	820	502	426	487	459	445	630	1,763
0.5-1.0	1,211	730	676	785	775	777	927	2,295
1-2	1,554	998	973	1,149	1,174	1,147	1,322	2,930
2-3	1,779	1,194	1,173	1,383	1,438	1,377	1,592	3,353
3-4	1,940	1,298	1,342	1,584	1,653	1,574	1,800	3,617
4-5	2,070	1,392	1,476	1,743	1,818	1,733	1,977	3,814
5-6	2,170	1,481	1,608	1,872	1,978	1,858	2,135	4,035
6-7	2,246	1,541	1,706	1,992	2,101	1,976	2,273	4,159
7-8	2,317	1,608	1,799	2,091	2,222	2,061	2,383	4,272
8-9	2,370	1,664	1,875	2,164	2,305	2,147	2,492	4,369
9-10	2,420	1,712	1,931	2,243	2,402	2,226	2,578	4,466
10-20	2,698	1,986	2,362	2,805	2,904	2,681	3,177	4,944
20-30	2,823	2,137	2,563	3,005	3,150	2,890	3,399	5,112
30-40	2,885	2,220	2,661	3,127	3,270	3,001	3,551	5,217
40-50	2,915	2,268	2,724	3,205	3,338	3,084	3,641	5,267
50-60	2,938	2,303	2,766	3,269	3,404	3,134	3,696	5,311
60-70	2,961	2,325	2,791	3,305	3,448	3,163	3,729	5,340
70-80	2,977	2,346	2,817	3,334	3,479	3,187	3,759	5,366
80-90	2,994	2,362	2,839	3,361	3,507	3,203	3,782	5,383
90-100	3,005	2,369	2,860	3,381	3,527	3,220	3,799	5,396
100-110	3,020	2,382	2,876	3,391	3,544	3,231	3,819	5,412
110-120	3,029	2,394	2,884	3,408	3,558	3,240	3,837	5,432
120-130	3,033	2,400	2,895	3,418	3,575	3,261	3,847	5,439
130-140	3,038	2,410	2,903	3,429	3,589	3,276	3,855	5,448
140-150	3,044	2,415	2,918	3,442	3,594	3,284	3,864	5,455
150-160	3,045	2,421	2,930	3,450	3,598	3,294	3,866	5,462
160-170	3,047	2,424	2,942	3,457	3,603	3,305	3,870	5,466
170-180	3,054	2,428	2,953	3,461	3,610	3,313	3,872	5,469
180-190	3,055	2,437	2,958	3,466	3,617	3,315	3,875	5,471
190-200	3,056	2,440	2,963	3,469	3,621	3,319	3,875	5,471
≥200	3,077	2,479	3,001	3,489	3,649	3,346	3,883	5,484

Table 2.23 Percentage of halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	8.8	5.1	3.2	2.9	2.9	2.5	3.8	12.7
0.1-0.2	6.3	5.5	3.0	2.8	3.0	2.7	3.2	7.7
0.2-0.5	11.5	9.7	8.0	8.2	6.7	8.0	9.2	11.8
0.5-1.0	12.7	9.2	8.3	8.5	8.7	9.9	7.6	9.7
1-2	11.1	10.8	9.9	10.4	10.9	11.1	10.2	11.6
2-3	7.3	7.9	6.7	6.7	7.2	6.9	7.0	7.7
3-4	5.2	4.2	5.6	5.8	5.9	5.9	5.4	4.8
4-5	4.2	3.8	4.5	4.6	4.5	4.8	4.6	3.6
5-6	3.2	3.6	4.4	3.7	4.4	3.7	4.1	4.0
6-7	2.5	2.4	3.3	3.4	3.4	3.5	3.6	2.3
7-8	2.3	2.7	3.1	2.8	3.3	2.5	2.8	2.1
8-9	1.7	2.3	2.5	2.1	2.3	2.6	2.8	1.8
9-10	1.6	1.9	1.9	2.3	2.7	2.4	2.2	1.8
10-20	9.0	11.1	14.4	16.1	13.8	13.6	15.4	8.7
20-30	4.1	6.1	6.7	5.7	6.7	6.2	5.7	3.1
30-40	2.0	3.3	3.3	3.5	3.3	3.3	3.9	1.9
40-50	1.0	1.9	2.1	2.2	1.9	2.5	2.3	.9
50-60	.7	1.4	1.4	1.8	1.8	1.5	1.4	.8
60-70	.7	.9	.8	1.0	1.2	.9	.8	.5
70-80	.5	.8	.9	.8	.8	.7	.8	.5
80-90	.6	.6	.7	.8	.8	.5	.6	.3
90-100	.4	.3	.7	.6	.5	.5	.4	.2
100-110	.5	.5	.5	.3	.5	.3	.5	.3
110-120	.3	.5	.3	.5	.4	.3	.5	.4
120-130	.1	.2	.4	.3	.5	.6	.3	.1
130-140	.2	.4	.3	.3	.4	.4	.2	.2
140-150	.2	.2	.5	.4	.1	.2	.2	.1
150-160	.0	.2	.4	.2	.1	.3	.1	.1
160-170	.1	.1	.4	.2	.1	.3	.1	.1
170-180	.2	.2	.4	.1	.2	.2	.1	.1
180-190	.0	.4	.2	.1	.2	.1	.1	.0
190-200	.0	.1	.2	.1	.1	.1	.0	.0
≥200	.7	1.6	1.3	.6	.8	.8	.2	.2

Table 2.24 Cumulative percentage of halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	8.8	5.1	3.2	2.9	2.9	2.5	3.8	12.7
0.1-0.2	15.2	10.6	6.2	5.7	5.8	5.3	7.0	20.4
0.2-0.5	26.6	20.3	14.2	14.0	12.6	13.3	16.2	32.1
0.5-1.0	39.4	29.4	22.5	22.5	21.2	23.2	23.9	41.8
1-2	50.5	40.3	32.4	32.9	32.2	34.3	34.0	53.4
2-3	57.8	48.2	39.1	39.6	39.4	41.2	41.0	61.1
3-4	63.0	52.4	44.7	45.4	45.3	47.0	46.4	66.0
4-5	67.3	56.2	49.2	50.0	49.8	51.8	50.9	69.5
5-6	70.5	59.7	53.6	53.7	54.2	55.5	55.0	73.6
6-7	73.0	62.2	56.8	57.1	57.6	59.1	58.5	75.8
7-8	75.3	64.9	59.9	59.9	60.9	61.6	61.4	77.9
8-9	77.0	67.1	62.5	62.0	63.2	64.2	64.2	79.7
9-10	78.6	69.1	64.3	64.3	65.8	66.5	66.4	81.4
10-20	87.7	80.1	78.7	80.4	79.6	80.1	81.8	90.2
20-30	91.7	86.2	85.4	86.1	86.3	86.4	87.5	93.2
30-40	93.8	89.6	88.7	89.6	89.6	89.7	91.4	95.1
40-50	94.7	91.5	90.8	91.9	91.5	92.2	93.8	96.0
50-60	95.5	92.9	92.2	93.7	93.3	93.7	95.2	96.8
60-70	96.2	93.8	93.0	94.7	94.5	94.5	96.0	97.4
70-80	96.8	94.6	93.9	95.6	95.3	95.2	96.8	97.8
80-90	97.3	95.3	94.6	96.3	96.1	95.7	97.4	98.2
90-100	97.7	95.6	95.3	96.9	96.7	96.2	97.8	98.4
100-110	98.1	96.1	95.8	97.2	97.1	96.6	98.4	98.7
110-120	98.4	96.6	96.1	97.7	97.5	96.8	98.8	99.1
120-130	98.6	96.8	96.5	98.0	98.0	97.5	99.1	99.2
130-140	98.7	97.2	96.7	98.3	98.4	97.9	99.3	99.3
140-150	98.9	97.4	97.2	98.7	98.5	98.1	99.5	99.5
150-160	99.0	97.7	97.6	98.9	98.6	98.4	99.6	99.6
160-170	99.0	97.8	98.0	99.1	98.7	98.8	99.7	99.7
170-180	99.3	97.9	98.4	99.2	98.9	99.0	99.7	99.7
180-190	99.3	98.3	98.6	99.3	99.1	99.1	99.8	99.8
190-200	99.3	98.4	98.7	99.4	99.2	99.2	99.8	99.8
≥200	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.25 Percentage of total landings or IFQs accounted for by halibut vessel owners with each level of either landings by year or IFQs.

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	.0	.0	.0	.0	.0	.0	.0	.1
0.1-0.2	.1	.0	.0	.0	.0	.0	.0	.1
0.2-0.5	.4	.2	.1	.2	.1	.2	.2	.5
0.5-1.0	.8	.4	.3	.4	.4	.4	.4	.8
1-2	1.4	.9	.7	.9	1.0	1.0	1.1	1.9
2-3	1.6	1.1	.9	1.0	1.1	1.0	1.3	2.2
3-4	1.6	.8	1.0	1.2	1.2	1.2	1.4	1.9
4-5	1.7	.9	1.0	1.3	1.2	1.3	1.5	1.8
5-6	1.6	1.1	1.3	1.3	1.4	1.2	1.6	2.6
6-7	1.4	.9	1.1	1.4	1.3	1.4	1.7	1.7
7-8	1.5	1.1	1.2	1.3	1.5	1.1	1.6	1.8
8-9	1.3	1.1	1.1	1.1	1.2	1.3	1.7	1.7
9-10	1.3	1.0	.9	1.3	1.5	1.3	1.5	1.9
10-20	11.2	8.6	10.6	14.2	11.7	11.7	16.0	14.1
20-30	8.8	8.2	8.5	8.6	9.8	9.2	10.2	8.7
30-40	6.1	6.3	5.9	7.6	6.8	6.8	10.0	7.7
40-50	3.8	4.8	4.9	6.2	4.9	6.6	7.5	4.7
50-60	3.6	4.2	4.0	6.2	5.9	4.9	5.7	5.1
60-70	4.3	3.2	2.8	4.1	4.7	3.3	4.1	3.9
70-80	3.4	3.5	3.3	3.9	3.8	3.2	4.2	4.1
80-90	4.1	3.0	3.2	4.1	3.9	2.4	3.7	3.0
90-100	3.0	1.5	3.5	3.4	3.1	2.9	3.1	2.6
100-110	4.4	3.0	2.9	1.9	2.9	2.1	4.0	3.5
110-120	3.0	3.1	1.6	3.4	2.7	1.8	3.9	4.9
120-130	1.4	1.7	2.4	2.3	3.5	4.7	2.3	1.8
130-140	1.9	3.0	1.9	2.7	3.1	3.6	2.1	2.5
140-150	2.5	1.6	3.7	3.4	1.2	2.1	2.4	2.2
150-160	.4	2.0	3.2	2.2	1.0	2.8	.6	2.3
160-170	.9	1.1	3.4	2.1	1.3	3.3	1.2	1.4
170-180	3.5	1.5	3.3	1.2	2.0	2.5	.6	1.1
180-190	.5	3.7	1.6	1.6	2.1	.7	1.1	.8
190-200	.5	1.3	1.7	1.1	1.3	1.4	.0	.0
≥200	17.8	25.4	17.8	8.5	12.4	12.6	3.4	6.6

Table 2.26 Cumulative percentage of total landings or IFQs accounted for by halibut vessel owners with each level of either landings by year or IFQs.

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	.0	.0	.0	.0	.0	.0	.0	.1
0.1-0.2	.1	.1	.0	.0	.0	.0	.1	.2
0.2-0.5	.5	.2	.2	.2	.2	.2	.3	.6
0.5-1.0	1.3	.6	.5	.6	.6	.6	.7	1.5
1-2	2.7	1.5	1.2	1.5	1.5	1.6	1.8	3.4
2-3	4.3	2.6	2.1	2.6	2.6	2.6	3.0	5.5
3-4	5.8	3.4	3.1	3.8	3.8	3.8	4.4	7.5
4-5	7.5	4.3	4.1	5.1	5.0	5.1	5.9	9.3
5-6	9.1	5.4	5.4	6.4	6.5	6.3	7.5	11.9
6-7	10.5	6.2	6.5	7.8	7.8	7.7	9.2	13.6
7-8	12.0	7.3	7.7	9.1	9.3	8.9	10.8	15.4
8-9	13.3	8.4	8.8	10.2	10.4	10.2	12.5	17.1
9-10	14.6	9.4	9.7	11.5	11.9	11.5	14.1	19.0
10-20	25.8	18.0	20.4	25.7	23.6	23.2	30.1	33.1
20-30	34.6	26.2	28.9	34.3	33.4	32.4	40.2	41.8
30-40	40.7	32.5	34.8	41.9	40.2	39.2	50.2	49.5
40-50	44.5	37.3	39.7	48.1	45.1	45.8	57.7	54.2
50-60	48.1	41.5	43.7	54.3	51.0	50.7	63.4	59.3
60-70	52.4	44.7	46.5	58.4	55.7	54.0	67.5	63.3
70-80	55.9	48.2	49.8	62.2	59.5	57.2	71.7	67.4
80-90	60.0	51.2	53.0	66.3	63.4	59.6	75.4	70.4
90-100	63.0	52.7	56.5	69.7	66.5	62.5	78.4	73.0
100-110	67.5	55.7	59.4	71.6	69.5	64.5	82.4	76.5
110-120	70.4	58.7	61.0	75.0	72.1	66.4	86.3	81.4
120-130	71.8	60.4	63.4	77.2	75.6	71.1	88.6	83.2
130-140	73.8	63.4	65.2	79.9	78.7	74.7	90.7	85.7
140-150	76.3	65.0	68.9	83.3	79.9	76.8	93.1	87.9
150-160	76.7	67.0	72.1	85.5	80.9	79.5	93.7	90.2
160-170	77.7	68.1	75.6	87.6	82.2	82.8	94.9	91.6
170-180	81.2	69.7	78.9	88.8	84.2	85.3	95.6	92.7
180-190	81.7	73.3	80.5	90.5	86.4	86.0	96.6	93.4
190-200	82.2	74.6	82.2	91.5	87.6	87.4	96.6	93.4
≥200	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.27 Number of sablefish vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	1	4	6	26	14	23	101
0.1-0.2	1	4	15	18	17	22	53
0.2-0.5	6	11	10	25	32	43	68
0.5-1.0	7	13	19	38	14	26	64
1-2	11	11	22	32	29	39	64
2-3	11	13	29	20	10	23	58
3-4	9	10	13	14	16	26	40
4-5	7	4	13	19	9	11	38
5-6	7	15	20	14	13	13	28
6-7	4	6	13	10	14	15	20
7-8	3	6	11	9	10	9	24
8-9	1	8	18	16	8	8	16
9-10	1	8	11	8	8	9	14
10-20	27	68	104	70	75	53	121
20-30	16	43	59	50	53	42	63
30-40	18	28	38	45	40	31	49
40-50	12	22	28	39	28	41	34
50-60	9	17	23	18	32	25	31
60-70	6	15	27	21	14	19	15
70-80	8	20	14	19	15	13	20
80-90	4	8	17	16	13	9	15
90-100	3	5	12	12	9	13	15
100-110	1	7	11	7	11	9	13
110-120	5	8	7	8	5	8	11
120-130	0	8	8	4	8	9	9
130-140	5	4	9	11	10	9	9
140-150	1	11	9	9	3	9	5
150-160	0	7	6	8	9	5	8
160-170	4	5	5	8	8	13	5
170-180	0	6	4	6	6	8	3
180-190	2	7	6	6	6	7	4
190-200	3	2	1	6	6	8	4
≥200	41	56	91	94	97	86	72

Table 2.28 Cumulative number of sablefish vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	1	4	6	26	14	23	101
0.1-0.2	2	8	21	44	31	45	154
0.2-0.5	8	19	31	69	63	88	222
0.5-1.0	15	32	50	107	77	114	286
1-2	26	43	72	139	106	153	350
2-3	37	56	101	159	116	176	408
3-4	46	66	114	173	132	202	448
4-5	53	70	127	192	141	213	486
5-6	60	85	147	206	154	226	514
6-7	64	91	160	216	168	241	534
7-8	67	97	171	225	178	250	558
8-9	78	105	189	241	186	258	574
9-10	79	113	200	249	194	267	588
10-20	106	181	304	319	269	320	709
20-30	122	224	363	369	322	362	772
30-40	140	252	401	414	362	393	821
40-50	152	274	429	453	390	434	855
50-60	161	291	452	471	422	459	886
60-70	167	306	479	492	436	478	901
70-80	175	326	493	511	451	491	921
80-90	179	334	510	527	464	500	936
90-100	182	339	522	539	473	513	951
100-110	183	346	533	546	484	522	964
110-120	188	354	540	554	489	530	975
120-130	188	362	548	558	497	539	984
130-140	193	366	557	569	507	548	993
140-150	194	377	566	578	510	557	998
150-160	194	384	572	586	519	562	1,006
160-170	198	389	577	594	527	575	1,011
170-180	198	395	581	600	533	583	1,014
180-190	200	402	587	606	539	590	1,018
190-200	203	404	588	612	545	598	1,022
≥200	244	460	679	706	642	684	1,094

Table 2.29 Percentage of sablefish vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	.4	.9	.9	3.7	2.2	3.4	9.2
0.1-0.2	.4	.9	2.2	2.5	2.6	3.2	4.8
0.2-0.5	2.5	2.4	1.5	3.5	5.0	6.3	6.2
0.5-1.0	2.9	2.8	2.8	5.4	2.2	3.8	5.9
1-2	4.5	2.4	3.2	4.5	4.5	5.7	5.9
2-3	4.5	2.8	4.3	2.8	1.6	3.4	5.3
3-4	3.7	2.2	1.9	2.0	2.5	3.8	3.7
4-5	2.9	.9	1.9	2.7	1.4	1.6	3.5
5-6	2.9	3.3	2.9	2.0	2.0	1.9	2.6
6-7	1.6	1.3	1.9	1.4	2.2	2.2	1.8
7-8	1.2	1.3	1.6	1.3	1.6	1.3	2.2
8-9	4.5	1.7	2.7	2.3	1.2	1.2	1.5
9-10	.4	1.7	1.6	1.1	1.2	1.3	1.3
10-20	11.1	14.8	15.3	9.9	11.7	7.7	11.1
20-30	6.6	9.3	8.7	7.1	8.3	6.1	5.8
30-40	7.4	6.1	5.6	6.4	6.2	4.5	4.5
40-50	4.9	4.8	4.1	5.5	4.4	6.0	3.1
50-60	3.7	3.7	3.4	2.5	5.0	3.7	2.8
60-70	2.5	3.3	4.0	3.0	2.2	2.8	1.4
70-80	3.3	4.3	2.1	2.7	2.3	1.9	1.8
80-90	1.6	1.7	2.5	2.3	2.0	1.3	1.4
90-100	1.2	1.1	1.8	1.7	1.4	1.9	1.4
100-110	.4	1.5	1.6	1.0	1.7	1.3	1.2
110-120	2.0	1.7	1.0	1.1	.8	1.2	1.0
120-130	.0	1.7	1.2	.6	1.2	1.3	.8
130-140	2.0	.9	1.3	1.6	1.6	1.3	.8
140-150	.4	2.4	1.3	1.3	.5	1.3	.5
150-160	.0	1.5	.9	1.1	1.4	.7	.7
160-170	1.6	1.1	.7	1.1	1.2	1.9	.5
170-180	.0	1.3	.6	.8	.9	1.2	.3
180-190	.8	1.5	.9	.8	.9	1.0	.4
190-200	1.2	.4	.1	.8	.9	1.2	.4
≥200	16.8	12.2	13.4	13.3	15.1	12.6	6.6

Table 2.30 Cumulative percentage of sablefish vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	.4	.9	.9	3.7	2.2	3.4	9.2
0.1-0.2	.8	1.7	3.1	6.2	4.8	6.6	14.1
0.2-0.5	3.3	4.1	4.6	9.8	9.8	12.9	20.3
0.5-1.0	6.1	7.0	7.4	15.2	12.0	16.7	26.1
1-2	10.7	9.3	10.6	19.7	16.5	22.4	32.0
2-3	15.2	12.2	14.9	22.5	18.1	25.7	37.3
3-4	18.9	14.3	16.8	24.5	20.6	29.5	41.0
4-5	21.7	15.2	18.7	27.2	22.0	31.1	44.4
5-6	24.6	18.5	21.6	29.2	24.0	33.0	47.0
6-7	26.2	19.8	23.6	30.6	26.2	35.2	48.8
7-8	27.5	21.1	25.2	31.9	27.7	36.5	51.0
8-9	32.0	22.8	27.8	34.1	29.0	37.7	52.5
9-10	32.4	24.6	29.5	35.3	30.2	39.0	53.7
10-20	43.4	39.3	44.8	45.2	41.9	46.8	64.8
20-30	50.0	48.7	53.5	52.3	50.2	52.9	70.6
30-40	57.4	54.8	59.1	58.6	56.4	57.5	75.0
40-50	62.3	59.6	63.2	64.2	60.7	63.5	78.2
50-60	66.0	63.3	66.6	66.7	65.7	67.1	81.0
60-70	68.4	66.5	70.5	69.7	67.9	69.9	82.4
70-80	71.7	70.9	72.6	72.4	70.2	71.8	84.2
80-90	73.4	72.6	75.1	74.6	72.3	73.1	85.6
90-100	74.6	73.7	76.9	76.3	73.7	75.0	86.9
100-110	75.0	75.2	78.5	77.3	75.4	76.3	88.1
110-120	77.0	77.0	79.5	78.5	76.2	77.5	89.1
120-130	77.0	78.7	80.7	79.0	77.4	78.8	89.9
130-140	79.1	79.6	82.0	80.6	79.0	80.1	90.8
140-150	79.5	82.0	83.4	81.9	79.4	81.4	91.2
150-160	79.5	83.5	84.2	83.0	80.8	82.2	92.0
160-170	81.1	84.6	85.0	84.1	82.1	84.1	92.4
170-180	81.1	85.9	85.6	85.0	83.0	85.2	92.7
180-190	82.0	87.4	86.5	85.8	84.0	86.3	93.1
190-200	83.2	87.8	86.6	86.7	84.9	87.4	93.4
≥200	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.31 Percentage of total landings or IFQs accounted for by sablefish vessel owners with each level of either landings by year or IFQs.

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	.0	.0	.0	.0	.0	.0	.0
0.1-0.2	.0	.0	.0	.0	.0	.0	.0
0.2-0.5	.0	.0	.0	.0	.0	.0	.0
0.5-1.0	.0	.0	.0	.0	.0	.0	.1
1-2	.1	.0	.1	.1	.1	.1	.2
2-3	.1	.1	.1	.1	.0	.1	.3
3-4	.1	.1	.1	.1	.1	.2	.3
4-5	.1	.0	.1	.1	.1	.1	.3
5-6	.1	.2	.2	.1	.1	.1	.3
6-7	.1	.1	.1	.1	.1	.2	.2
7-8	.1	.1	.1	.1	.1	.1	.4
8-9	.3	.2	.3	.2	.1	.1	.3
9-10	.0	.2	.2	.1	.1	.2	.3
10-20	1.4	2.4	2.5	1.6	1.8	1.4	3.5
20-30	1.4	2.5	2.4	1.9	2.2	1.8	3.0
30-40	2.2	2.3	2.1	2.4	2.3	1.9	3.3
40-50	1.9	2.4	2.1	2.8	2.1	3.2	3.0
50-60	1.7	2.1	2.1	1.6	2.9	2.5	3.3
60-70	1.4	2.3	2.9	2.1	1.5	2.2	1.9
70-80	2.1	3.5	1.8	2.3	1.8	1.7	2.9
80-90	1.2	1.6	2.4	2.1	1.8	1.4	2.5
90-100	1.0	1.1	1.9	1.8	1.4	2.2	2.8
100-110	.4	1.7	1.9	1.2	1.9	1.7	2.7
110-120	2.0	2.2	1.3	1.4	.9	1.6	2.5
120-130	.0	2.3	1.7	.8	1.7	2.0	2.2
130-140	2.4	1.3	2.0	2.3	2.2	2.1	2.3
140-150	.5	3.7	2.2	2.0	.7	2.3	1.4
150-160	.0	2.5	1.6	2.0	2.3	1.4	2.4
160-170	2.3	1.9	1.4	2.1	2.2	3.8	1.6
170-180	.0	2.5	1.2	1.7	1.8	2.5	1.0
180-190	1.3	3.0	1.9	1.7	1.8	2.3	1.5
190-200	2.1	.9	.3	1.8	1.9	2.8	1.5
≥200	73.7	56.7	62.9	63.3	63.7	57.8	52.1

Table 2.32 Cumulative percentage of total landings or IFQs accounted for by sablefish vessel owners with each level of either landings by year or IFQs.

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	.0	.0	.0	.0	.0	.0	.0
0.1-0.2	.0	.0	.0	.0	.0	.0	.0
0.2-0.5	.0	.0	.0	.0	.0	.0	.1
0.5-1.0	.0	.0	.0	.1	.0	.1	.2
1-2	.1	.1	.1	.1	.1	.2	.3
2-3	.2	.2	.2	.2	.1	.3	.6
3-4	.3	.2	.3	.3	.2	.4	.9
4-5	.4	.3	.4	.4	.3	.5	1.2
5-6	.5	.5	.6	.5	.4	.6	1.5
6-7	.6	.6	.7	.6	.6	.8	1.8
7-8	.7	.7	.8	.8	.7	.9	2.1
8-9	1.0	.8	1.1	1.0	.8	1.1	2.4
9-10	1.1	1.0	1.3	1.1	.9	1.2	2.6
10-20	2.5	3.4	3.8	2.7	2.8	2.6	6.1
20-30	3.9	5.9	6.2	4.6	4.9	4.5	9.1
30-40	6.0	8.2	8.4	7.1	7.2	6.4	12.4
40-50	8.0	10.5	10.5	9.8	9.3	9.6	15.4
50-60	9.7	12.7	12.6	11.4	12.2	12.1	18.7
60-70	11.1	14.9	15.6	13.5	13.7	14.3	20.6
70-80	13.2	18.5	17.3	15.8	15.5	16.0	23.5
80-90	14.3	20.1	19.8	17.9	17.4	17.4	26.0
90-100	15.3	21.2	21.7	19.7	18.8	19.6	28.8
100-110	15.7	22.9	23.6	20.8	20.7	21.3	31.5
110-120	17.7	25.1	25.0	22.3	21.6	22.9	33.9
120-130	17.7	27.4	26.6	23.1	23.3	24.9	36.1
130-140	20.1	28.7	28.6	25.4	25.5	27.1	38.5
140-150	20.6	32.5	30.8	27.4	26.3	29.4	39.9
150-160	20.6	35.0	32.4	29.4	28.6	30.8	42.3
160-170	22.9	36.9	33.8	31.5	30.8	34.6	43.9
170-180	22.9	39.4	35.0	33.1	32.5	37.1	45.0
180-190	24.2	42.4	36.8	34.9	34.3	39.4	46.4
190-200	26.3	43.3	37.1	36.7	36.3	42.2	47.9
≥200	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.33 Number of sablefish & halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	127	96	102	105	86	151	706
0.1-0.2	135	90	99	111	92	126	421
0.2-0.5	241	239	286	248	275	363	645
0.5-1.0	228	251	295	317	332	295	538
1-2	268	296	361	394	368	395	617
2-3	199	196	231	261	230	267	417
3-4	103	167	191	211	195	201	259
4-5	96	130	156	153	151	177	183
5-6	88	126	125	154	124	154	205
6-7	55	96	109	119	113	141	119
7-8	66	96	86	113	82	105	113
8-9	54	72	70	79	74	100	89
9-10	48	55	67	85	67	80	81
10-20	268	390	499	464	405	541	430
20-30	139	185	216	226	187	200	168
30-40	80	100	119	110	123	124	104
40-50	45	47	77	79	66	74	73
50-60	38	49	55	56	55	51	58
60-70	22	33	50	46	40	36	35
70-80	20	29	30	47	44	30	21
80-90	15	22	33	21	23	36	32
90-100	11	24	23	22	23	23	21
100-110	11	25	13	21	10	16	13
110-120	14	11	17	19	9	17	21
120-130	11	16	12	18	13	13	18
130-140	8	10	9	14	16	6	10
140-150	6	10	12	11	7	14	11
150-160	4	11	9	11	15	8	11
160-170	6	6	10	12	7	11	15
170-180	7	11	3	8	6	7	13
180-190	4	8	10	5	6	8	7
190-200	5	8	12	6	9	5	4
≥200	85	123	144	158	153	141	109

Table 2.34 Cumulative number of sablefish & halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	127	96	102	105	86	151	706
0.1-0.2	262	186	201	216	178	277	1,127
0.2-0.5	503	425	487	464	453	640	1,772
0.5-1.0	731	676	782	781	785	935	2,310
1-2	999	972	1,143	1,175	1,153	1,330	2,927
2-3	1,198	1,168	1,374	1,436	1,383	1,597	3,344
3-4	1,301	1,335	1,565	1,647	1,578	1,798	3,603
4-5	1,397	1,465	1,721	1,800	1,729	1,975	3,786
5-6	1,485	1,591	1,846	1,954	1,853	2,129	3,991
6-7	1,540	1,687	1,955	2,073	1,966	2,270	4,110
7-8	1,606	1,783	2,041	2,186	2,048	2,375	4,223
8-9	1,660	1,855	2,111	2,265	2,122	2,475	4,312
9-10	1,708	1,910	2,178	2,350	2,189	2,555	4,393
10-20	1,976	2,300	2,677	2,814	2,594	3,096	4,823
20-30	2,115	2,485	2,893	3,040	2,781	3,296	4,991
30-40	2,195	2,585	3,012	3,150	2,904	3,420	5,095
40-50	2,240	2,632	3,089	3,229	2,970	3,494	5,168
50-60	2,278	2,681	3,144	3,285	3,025	3,545	5,226
60-70	2,300	2,714	3,194	3,331	3,065	3,581	5,261
70-80	2,320	2,743	3,224	3,378	3,109	3,611	5,282
80-90	2,335	2,765	3,257	3,399	3,132	3,647	5,314
90-100	2,346	2,789	3,280	3,421	3,155	3,670	5,335
100-110	2,357	2,814	3,293	3,442	3,165	3,686	5,348
110-120	2,371	2,825	3,310	3,461	3,174	3,703	5,369
120-130	2,382	2,841	3,322	3,479	3,187	3,716	5,387
130-140	2,390	2,851	3,331	3,493	3,203	3,722	5,397
140-150	2,396	2,861	3,343	3,504	3,210	3,736	5,408
150-160	2,400	2,872	3,352	3,515	3,225	3,744	5,419
160-170	2,406	2,878	3,362	3,527	3,232	3,755	5,434
170-180	2,413	2,889	3,365	3,535	3,238	3,762	5,447
180-190	2,417	2,897	3,375	3,540	3,244	3,770	5,454
190-200	2,422	2,905	3,387	3,546	3,253	3,775	5,458
≥200	2,507	3,028	3,531	3,704	3,406	3,916	5,567

Table 2.35 Percentage of sablefish & halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	5.1	3.2	2.9	2.8	2.5	3.9	12.7
0.1-0.2	5.4	3.0	2.8	3.0	2.7	3.2	7.6
0.2-0.5	9.6	7.9	8.1	6.7	8.1	9.3	11.6
0.5-1.0	9.1	8.3	8.4	8.6	9.7	7.5	9.7
1-2	10.7	9.8	10.2	10.6	10.8	10.1	11.1
2-3	7.9	6.5	6.5	7.0	6.8	6.8	7.5
3-4	4.1	5.5	5.4	5.7	5.7	5.1	4.7
4-5	3.8	4.3	4.4	4.1	4.4	4.5	3.3
5-6	3.5	4.2	3.5	4.2	3.6	3.9	3.7
6-7	2.2	3.2	3.1	3.2	3.3	3.6	2.1
7-8	2.6	3.2	2.4	3.1	2.4	2.7	2.0
8-9	2.2	2.4	2.0	2.1	2.2	2.6	1.6
9-10	1.9	1.8	1.9	2.3	2.0	2.0	1.5
10-20	10.7	12.9	14.1	12.5	11.9	13.8	7.7
20-30	5.5	6.1	6.1	6.1	5.5	5.1	3.0
30-40	3.2	3.3	3.4	3.0	3.6	3.2	1.9
40-50	1.8	1.6	2.2	2.1	1.9	1.9	1.3
50-60	1.5	1.6	1.6	1.5	1.6	1.3	1.0
60-70	.9	1.1	1.4	1.2	1.2	.9	.6
70-80	.8	1.0	.8	1.3	1.3	.8	.4
80-90	.6	.7	.9	.6	.7	.9	.6
90-100	.4	.8	.7	.6	.7	.6	.4
100-110	.4	.8	.4	.6	.3	.4	.2
110-120	.6	.4	.5	.5	.3	.4	.4
120-130	.4	.5	.3	.5	.4	.3	.3
130-140	.3	.3	.3	.4	.5	.2	.2
140-150	.2	.3	.3	.3	.2	.4	.2
150-160	.2	.4	.3	.3	.4	.2	.2
160-170	.2	.2	.3	.3	.2	.3	.3
170-180	.3	.4	.1	.2	.2	.2	.2
180-190	.2	.3	.3	.1	.2	.2	.1
190-200	.2	.3	.3	.2	.3	.1	.1
≥200	3.4	4.1	4.1	4.3	4.5	3.6	2.0

Table 2.36 Cumulative percentage of sablefish & halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs).

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	5.1	3.2	2.9	2.8	2.5	3.9	12.7
0.1-0.2	10.5	6.1	5.7	5.8	5.2	7.1	20.2
0.2-0.5	20.1	14.0	13.8	12.5	13.3	16.3	31.8
0.5-1.0	29.2	22.3	22.1	21.1	23.0	23.9	41.5
1-2	39.8	32.1	32.4	31.7	33.9	34.0	52.6
2-3	47.8	38.6	38.9	38.8	40.6	40.8	60.1
3-4	51.9	44.1	44.3	44.5	46.3	45.9	64.7
4-5	55.7	48.4	48.7	48.6	50.8	50.4	68.0
5-6	59.2	52.5	52.3	52.8	54.4	54.4	71.7
6-7	61.4	55.7	55.4	56.0	57.7	58.0	73.8
7-8	64.1	58.9	57.8	59.0	60.1	60.6	75.9
8-9	66.2	61.3	59.8	61.2	62.3	63.2	77.5
9-10	68.1	63.1	61.7	63.4	64.3	65.2	78.9
10-20	78.8	76.0	75.8	76.0	76.2	79.1	86.6
20-30	84.4	82.1	81.9	82.1	81.7	84.2	89.7
30-40	87.6	85.4	85.3	85.0	85.3	87.3	91.5
40-50	89.3	86.9	87.5	87.2	87.2	89.2	92.8
50-60	90.9	88.5	89.0	88.7	88.8	90.5	93.9
60-70	91.7	89.6	90.5	89.9	90.0	91.4	94.5
70-80	92.5	90.6	91.3	91.2	91.3	92.2	94.9
80-90	93.1	91.3	92.2	91.8	92.0	93.1	95.5
90-100	93.6	92.1	92.9	92.4	92.6	93.7	95.8
100-110	94.0	92.9	93.3	92.9	92.9	94.1	96.1
110-120	94.6	93.3	93.7	93.4	93.2	94.6	96.4
120-130	95.0	93.8	94.1	93.9	93.6	94.9	96.8
130-140	95.3	94.2	94.3	94.3	94.0	95.0	96.9
140-150	95.6	94.5	94.7	94.6	94.2	95.4	97.1
150-160	95.7	94.8	94.9	94.9	94.7	95.6	97.3
160-170	96.0	95.0	95.2	95.2	94.9	95.9	97.6
170-180	96.3	95.4	95.3	95.4	95.1	96.1	97.8
180-190	96.4	95.7	95.6	95.6	95.2	96.3	98.0
190-200	96.6	95.9	95.9	95.7	95.5	96.4	98.0
≥200	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.37 Percentage of total landings or IFQs accounted for by sablefish and halibut vessel owners with each level of either landings by year or IFQs.

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	.0	.0	.0	.0	.0	.0	.0
0.1-0.2	.0	.0	.0	.0	.0	.0	.1
0.2-0.5	.1	.1	.1	.1	.1	.1	.2
0.5-1.0	.2	.2	.2	.2	.2	.2	.4
1-2	.5	.4	.5	.5	.5	.5	.9
2-3	.7	.5	.5	.5	.5	.6	1.0
3-4	.5	.6	.6	.6	.6	.6	.9
4-5	.6	.6	.6	.5	.6	.7	.8
5-6	.7	.7	.6	.7	.6	.8	1.1
6-7	.5	.6	.6	.6	.6	.8	.8
7-8	.7	.7	.6	.7	.5	.7	.9
8-9	.6	.6	.5	.5	.5	.8	.8
9-10	.6	.5	.5	.6	.5	.7	.8
10-20	5.2	5.5	6.2	5.3	5.0	7.0	6.1
20-30	4.6	4.6	4.5	4.4	4.0	4.5	4.2
30-40	3.8	3.5	3.6	3.1	3.6	3.9	3.6
40-50	2.7	2.1	3.0	2.8	2.6	3.1	3.3
50-60	2.8	2.7	2.6	2.5	2.6	2.6	3.3
60-70	1.9	2.1	2.8	2.4	2.2	2.2	2.3
70-80	2.0	2.2	1.9	2.8	2.9	2.0	1.6
80-90	1.7	1.8	2.4	1.4	1.7	2.8	2.7
90-100	1.4	2.3	1.9	1.7	1.9	2.0	2.0
100-110	1.6	2.6	1.2	1.8	.9	1.5	1.4
110-120	2.2	1.2	1.7	1.8	.9	1.8	2.4
120-130	1.9	2.0	1.3	1.8	1.4	1.5	2.3
130-140	1.5	1.3	1.1	1.5	1.9	.7	1.4
140-150	1.2	1.4	1.5	1.3	.9	1.8	1.6
150-160	.8	1.7	1.2	1.4	2.0	1.1	1.7
160-170	1.3	1.0	1.4	1.6	1.0	1.7	2.5
170-180	1.7	1.9	.5	1.1	.9	1.1	2.3
180-190	1.0	1.5	1.6	.7	1.0	1.4	1.3
190-200	1.3	1.5	2.0	.9	1.5	.9	.8
≥200	53.7	51.5	52.5	54.2	56.1	49.8	44.7

Table 2.38 Cumulative percentage of total landings or IFQs accounted for by sablefish and halibut vessel owners with each level of either landings by year or IFQs.

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤0.1	.0	.0	.0	.0	.0	.0	.0
0.1-0.2	.0	.0	.0	.0	.0	.0	.1
0.2-0.5	.1	.1	.1	.1	.1	.1	.3
0.5-1.0	.4	.3	.3	.3	.3	.3	.7
1-2	.9	.7	.7	.7	.8	.9	1.6
2-3	1.6	1.2	1.2	1.3	1.3	1.5	2.6
3-4	2.1	1.8	1.8	1.8	1.8	2.1	3.5
4-5	2.6	2.4	2.4	2.4	2.4	2.8	4.4
5-6	3.3	3.0	3.0	3.1	3.0	3.6	5.5
6-7	3.8	3.7	3.6	3.7	3.6	4.4	6.3
7-8	4.5	4.4	4.2	4.4	4.2	5.2	7.1
8-9	5.1	5.0	4.7	4.9	4.7	5.9	7.9
9-10	5.7	5.5	5.2	5.6	5.3	6.6	8.7
10-20	10.9	11.0	11.4	10.9	10.2	13.6	14.7
20-30	15.5	15.6	15.9	15.3	14.2	18.1	18.9
30-40	19.2	19.1	19.5	18.3	17.8	22.0	22.5
40-50	21.9	21.2	22.5	21.2	20.4	25.1	25.8
50-60	24.7	23.9	25.1	23.6	23.0	27.7	29.1
60-70	26.7	26.0	27.9	26.0	25.2	29.8	31.4
70-80	28.7	28.2	29.8	28.8	28.1	31.9	33.0
80-90	30.4	30.0	32.2	30.3	29.8	34.7	35.7
90-100	31.8	32.3	34.1	31.9	31.6	36.7	37.7
100-110	33.4	34.9	35.3	33.7	32.5	38.2	39.1
110-120	35.6	36.1	37.0	35.5	33.4	40.0	41.5
120-130	37.4	38.1	38.3	37.2	34.8	41.4	43.8
130-140	38.9	39.5	39.3	38.8	36.7	42.2	45.1
140-150	40.1	40.9	40.8	40.1	37.5	44.0	46.7
150-160	40.9	42.6	42.0	41.4	39.5	45.2	48.4
160-170	42.3	43.6	43.4	43.0	40.5	46.9	50.9
170-180	43.9	45.5	43.9	44.1	41.5	48.0	53.2
180-190	44.9	47.0	45.5	44.9	42.4	49.3	54.5
190-200	46.3	48.5	47.5	45.8	43.9	50.2	55.3
≥200	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.39 - Distribution of halibut vessel owners, QS recipients, catch, and IFQs, by type of vessel owner, management area, and owner residence.

Number of non-individual vessel owners and QS recipients.

Management area/ Owner region of residence	Year							
	84	85	86	87	88	89	90	QS
All areas								
Alaska	50	46	60	90	99	93	132	192
Other states	24	24	27	48	40	42	57	88
All areas	74	70	87	138	139	135	189	280
2C								
Alaska	13	12	11	19	23	24	27	45
Other states	7	4	8	10	5	10	8	21
All	20	16	19	29	28	34	35	66
3A								
Alaska	31	31	45	63	75	65	99	150
Other states	16	17	20	35	26	23	43	68
All	47	48	65	98	101	88	142	218
3B								
Alaska	14	22	25	32	8	20	25	54
Other states	14	11	18	21	15	11	13	34
All	28	33	43	53	23	31	38	88
4A - 4E								
Alaska	3	3	8	18	10	11	12	29
Other states	4	3	8	17	7	8	16	27
All	7	6	16	35	17	19	28	56

Table 2.39 continued.

Catch and IFQs (1,000 of pounds) by management area. Non-individuals only.

Management area/ Owner region of residence	Year							
	84	85	86	87	88	89	90	IFQs
2C								
Alaska	86	81	123	182	137	153	134	80
Other states	126	120	216	150	29	59	100	54
All	213	201	339	332	166	213	234	134
3A								
Alaska	1,038	1,584	2,304	2,610	2,981	2,890	1,898	1,896
Other states	938	791	1,253	1,446	1,243	1,182	1,200	1,000
All	1,976	2,374	3,557	4,056	4,224	4,072	3,098	2,896
3B								
Alaska	340	949	520	429	269	973	750	641
Other states	341	527	430	522	605	397	482	489
All	682	1,476	950	951	874	1,370	1,231	1,130
4A - 4E								
Alaska	*	*	565	775	394	714	454	390
Other states	*	*	259	496	211	404	663	356
All	416	481	824	1,271	605	1,118	1,117	745

*Due to confidentiality restrictions, this information could not be released.

Table 2.39 continued.

Percentage of catch and IFQs by management area. Non-individuals only.

Management area/ Owner region of residence	Year							
	84	85	86	87	88	89	90	IFQs
2C								
Alaska	1.5%	0.9%	1.2%	1.7%	1.2%	1.6%	1.4%	1.1%
Other states	2.2%	1.3%	2.0%	1.4%	0.3%	0.6%	1.0%	0.7%
All	3.7%	2.2%	3.2%	3.1%	1.5%	2.2%	2.4%	1.8%
3A								
Alaska	5.3%	7.6%	7.0%	8.4%	7.9%	8.6%	6.5%	7.1%
Other states	4.8%	3.8%	3.8%	4.7%	3.3%	3.5%	4.1%	3.8%
All	10.1%	11.4%	10.8%	13.1%	11.2%	12.1%	10.7%	10.9%
3B								
Alaska	5.3%	8.7%	5.9%	5.6%	3.8%	12.4%	8.6%	7.3%
Other states	5.3%	4.8%	4.9%	6.8%	8.5%	5.1%	5.5%	5.6%
All	10.6%	13.5%	10.8%	12.4%	12.3%	17.5%	14.1%	12.8%
4A - 4E								
Alaska	*	*	10.1%	11.3%	8.4%	14.5%	8.3%	8.3%
Other states	*	*	4.6%	7.2%	4.5%	8.2%	12.2%	7.6%
All	13.2%	11.3%	14.8%	18.5%	12.9%	22.7%	20.5%	15.9%

*Due to confidentiality restrictions, this information could not be released.

Table 2.39 continued.

Catch and IFQs (1,000 of pounds) and percentage of both. Individuals and non-individuals for all management areas.

Management area/ Owner region of residence	Year							
	84	85	86	87	88	89	90	IFQs
Individuals								
Alaska	21,675	29,029	39,099	38,703	43,578	35,465	34,847	31,573
Other states	10,040	11,593	13,011	10,785	11,555	13,750	12,418	11,016
Unknown	39	27	3	173	9	28	0	6
All	31,754	40,649	52,113	49,661	55,142	49,244	47,265	42,595
Alaska	61.9%	64.2%	67.7%	68.8%	71.4%	63.3%	65.8%	66.5%
Other states	28.7%	25.7%	22.5%	19.2%	18.9%	24.5%	23.5%	23.2%
Unknown	0.1%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%
All	90.6%	90.0%	90.2%	88.3%	90.4%	87.9%	89.3%	89.7%
Non-individuals								
Alaska	1,508	2,840	3,513	3,996	3,781	4,731	3,236	3,006
Other states	1,779	1,692	2,158	2,614	2,088	2,042	2,445	1,898
All	3,286	4,532	5,671	6,610	5,869	6,773	5,681	4,905
Alaska	4.3%	6.3%	6.1%	7.1%	6.2%	8.4%	6.1%	6.3%
Other states	5.1%	3.7%	3.7%	4.6%	3.4%	3.6%	4.6%	4.0%
All	9.4%	10.0%	9.8%	11.7%	9.6%	12.1%	10.7%	10.3%

Table 2.40 - Distribution of sablefish vessel owners, QS recipients, catch, and IFQs, by type of vessel owner, management area, and owner residence.

Number of non-individual vessel owners and QS recipients.

Management area/ Owner region of residence	Year						
	85	86	87	88	89	90	QS
All areas							
Alaska	11	17	29	34	32	44	66
Other states	12	23	35	40	38	42	69
All	23	40	64	74	70	86	135
Aleutian Is.							
Alaska	0	2	4	3	4	4	8
Other states	4	5	13	14	16	13	33
All	4	7	17	17	20	17	41
Bering Sea							
Alaska	4	2	9	5	6	4	14
Other states	6	8	12	11	10	18	31
All	10	10	21	16	16	22	45
Central Gulf							
Alaska	9	14	19	26	23	37	56
Other states	6	10	19	22	23	31	47
All	15	24	38	48	46	68	103
East Yakutat							
Alaska	2	3	8	8	10	9	20
Other states	4	3	7	9	9	11	25
All	6	6	15	17	19	20	45
Western Gulf							
Alaska	5	3	3	4	8	4	16
Other states	5	12	10	15	16	12	32
All	10	15	13	19	24	16	48
West Yakutat							
Alaska	2	6	7	5	12	10	24
Other states	2	3	13	11	9	12	24
All	4	9	20	16	21	22	48
Unknown							
Alaska	0	2	0	0	0	0	0
Other states	0	1	3	0	0	1	0
All	0	3	3	0	0	1	0

Table 2.40 continued

Catch and IFQs (1,000 of pounds) by management area. Non-Individuals only.

Management area/ Owner region of residence	Year						
	85	86	87	88	89	90	IFQs
Aleutian Is.							
Alaska	0	*	489	*	753	855	521
Other states	2,627	*	2,491	*	2,815	1,813	2,434
All	2,627	2,859	2,980	3,089	3,567	2,668	2,955
Bering Sea							
Alaska	731	*	374	196	239	568	290
Other states	1,043	*	1,310	1,367	829	1,064	1,278
All	1,774	1,255	1,684	1,563	1,068	1,632	1,568
Central Gulf							
Alaska	717	1,060	1,996	2,035	1,931	2,585	1,636
Other states	1,858	1,387	1,220	3,176	3,295	3,946	2,666
All	2,575	2,447	3,216	5,211	5,226	6,532	4,302
East Yakutat							
Alaska	*	*	353	333	301	589	307
Other states	*	*	320	669	382	511	290
All	527	401	673	1,003	684	1,100	597
Western Gulf							
Alaska	301	*	*	127	675	495	268
Other states	1,391	*	*	2,815	2,725	1,335	1,870
All	1,691	1,917	2,841	2,942	3,400	1,830	2,138
West Yakutat							
Alaska	*	*	406	421	790	376	371
Other states	*	*	795	850	786	1,235	711
All	563	688	1,200	1,272	1,576	1,611	1,083
Unknown							
Alaska	0	*	*	0	0	*	0
Other states	0	*	*	0	0	*	0
All	0	*	*	0	0	*	0

Table 2.40 continued

Percentage of catch and IFQs by management area - Non-Individuals only.

Management area/ Owner region of residence	Year						
	85	86	87	88	89	90	IFQs
Aleutian Is.							
Alaska	0.0%	*	6.6%	*	14.5%	20.9%	9.9%
Other states	92.0%	*	33.8%	*	54.2%	44.3%	46.0%
All	92.0%	56.9%	40.4%	44.9%	68.7%	65.1%	55.9%
Bering Sea							
Alaska	16.5%	*	8.1%	8.2%	19.3%	20.4%	8.5%
Other states	23.5%	*	28.3%	57.2%	67.0%	38.3%	37.4%
All	40.0%	40.2%	36.3%	65.4%	86.4%	58.7%	45.9%
Central Gulf							
Alaska	9.7%	7.8%	10.4%	8.7%	8.8%	10.9%	8.8%
Other states	25.2%	10.2%	6.4%	13.6%	15.0%	16.6%	14.3%
All	34.9%	18.0%	16.8%	22.4%	23.9%	27.5%	23.1%
East Yakutat							
Alaska	*	*	2.8%	2.4%	2.5%	4.4%	3.0%
Other states	*	*	2.6%	4.8%	3.2%	3.8%	2.8%
All	12.1%	4.8%	5.4%	7.2%	5.7%	8.1%	5.8%
Western Gulf							
Alaska	6.8%	*	*	1.9%	8.0%	14.5%	5.2%
Other states	31.3%	*	*	43.1%	32.4%	39.1%	36.3%
All	38.1%	38.7%	40.6%	45.0%	40.5%	53.6%	41.5%
West Yakutat							
Alaska	*	*	4.7%	4.0%	6.9%	4.4%	4.4%
Other states	*	*	9.2%	8.1%	6.9%	14.3%	8.4%
All	11.2%	9.4%	13.8%	12.1%	13.8%	18.7%	12.8%
Unknown							
Alaska	0.0%	*	*	0.0%	0.0%	*	0.0%
Other states	0.0%	*	*	0.0%	0.0%	*	0.0%
All	0.0%	*	*	0.0%	0.0%	*	0.0%

Table 2.40 continued

Catch and IFQs (1,000 of pounds) and percentage of both. Individuals and non-individuals for all management areas.

Owner type/ Owner region of residence	Year						
	85	86	87	88	89	90	IFQs
Non-corporations							
Alaska	10,839	18,349	27,316	28,348	24,864	22,341	21,798
Other states	7,895	14,410	19,486	20,097	19,763	18,321	16,869
Unknown	0	167	172	94	90	114	58
All	18,734	32,926	46,974	48,538	44,718	40,775	38,724
Alaska	38.0%	43.1%	45.8%	44.6%	41.3%	39.8%	42.4%
Other states	27.7%	33.9%	32.6%	31.6%	32.8%	32.6%	32.8%
Unknown	0.0%	0.4%	0.3%	0.1%	0.2%	0.2%	0.1%
All	65.8%	77.4%	78.7%	76.3%	74.2%	72.6%	75.4%
Corporations							
Alaska	2,161	2,177	3,678	3,818	4,690	5,468	3,394
Other states	7,595	7,429	9,043	11,261	10,832	9,914	9,250
All	9,756	9,606	12,721	15,079	15,521	15,382	12,643
Alaska	7.6%	5.1%	6.2%	6.0%	7.8%	9.7%	6.6%
Other states	26.7%	17.5%	15.1%	17.7%	18.0%	17.7%	18.0%
All	34.2%	22.6%	21.3%	23.7%	25.8%	27.4%	24.6%

Table 2.41 Number of vessel owners and QS recipients with different percent levels of catch and IFQs relative to ownership caps.

Halibut Areas 2C 3A 3B (100% = 214,000 lbs)

Percent of Cap	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1%	2,571	1,895	2,293	2,714	2,893	2,643	3,054	4,744
1-25%	208	267	344	388	401	386	445	317
25-50%	99	98	148	155	173	126	160	12
50-75%	27	45	70	58	62	70	30	4
75-100%	13	23	29	8	22	15	3	5
≥100%	10	24	12	2	12	13	0	1

Halibut Areas 4A 4B 4C 4D 4E (100% = 23,500 lbs)

Percent of Cap	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1%	115	92	85	135	46	51	159	327
1-25%	19	18	16	41	33	37	41	89
25-50%	13	15	18	29	29	23	31	63
50-75%	7	5	23	19	35	14	17	30
75-100%	6	4	14	17	14	9	16	18
≥100%	34	52	81	112	58	70	79	59

Halibut Area 2C (100% = 74,000 lbs)

Percent of cap	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1%	995	740	832	946	1,111	1,106	1,041	2,080
1-25%	193	238	296	372	363	344	308	251
25-50%	48	116	140	110	126	90	98	39
50-75%	5	21	23	14	22	10	16	1
75-100%	3	5	6	5	5	2	4	0
≥100%	1	4	4	1	0	1	0	0

Table 2.41 continued

Sablefish All Areas (100% = 617,444 lbs)

Percent of cap	1985	1986	1987	1988	1989	1990	QS Recip.
≤1%	161	296	457	475	425	462	888
1-25%	33	87	111	106	90	98	113
25-50%	23	50	69	71	75	80	62
50-75%	15	14	17	27	33	31	16
75-100%	7	2	14	13	10	7	8
≥100%	5	11	11	14	9	6	7

Sablefish Area EY (100% = 103,679 lbs)

Percent of cap	1985	1986	1987	1988	1989	1990	QS Recip.
≤1%	51	72	96	134	132	100	367
1-25%	28	60	108	71	87	61	148
25-50%	15	56	62	93	91	71	72
50-75%	0	0	0	0	0	0	0
75-100%	5	17	15	25	17	23	15
≥100%	11	12	24	30	22	28	10

3.0 POTENTIAL COASTAL COMMUNITY IMPACTS

The IFQ program recommended by the Council will have a variety of effects on those who participate in the fisheries and on the communities that are involved in the halibut and sablefish fisheries. Communities principally are involved as ports of landing and the location of processing plants or as the place of residence of those directly involved in the fisheries. Of particular concern are the expected effects on landings at various coastal communities adjacent to the fishing grounds and the expected effects on the participation in the fisheries by residents of rural areas adjacent to the fishing grounds.

This Chapter provides information concerning: (1) the historical distribution of fixed gear halibut and sablefish landings by census area and the importance of these landings compared to total landings; (2) the factors that will affect the distributions of landings with the proposed IFQ program; (3) the historical distribution of catch and the initial distribution of QSs and IFQs by residence; and (4) the potential movement of QSs away from rural areas adjacent to the fishing grounds.

3.1 Historical Distribution of fixed gear halibut and sablefish landings by census area and the importance of these landings compared to total landings

Landings made at various ports are an indicator of processing activity rather than of fishing activity. Fishermen who make landings at any given port do not necessarily reside in that port nor do they necessarily spend the money they receive for their fish in the landing port. Landings and exvessel values by fishermen grouped by the fisherman's city of residence are shown in separate tables which follow, and are a more accurate depiction of economic activity derived from the harvesting of fish. In the tables shown in this section, it is therefore more appropriate to view exvessel landings values as a measure of economic activity deriving from processors in that port.

Halibut, sablefish, and other landings measured in pounds and exvessel value for 1988-90 are presented in Table 3.1 by census area of the port of landing. In many cases, there were not enough processors in each port to allow data to be provided by port without violating State and Federal confidentiality rules. Note that deliveries to motherships and floating processors are accounted for separately.

The relative importance of halibut and sablefish landings individually and combined compared to other landings by year and census area is presented in Table 3.2. A geographical representation of this information is provided in Figures 3.1 through 3.3. For example in the Kodiak Island Borough, halibut and sablefish landings accounted for from 6.0% to 12.7% of its total landings by weight and from 15.6% to 31.5% by value. For the Sitka census area, halibut and sablefish landings accounted for from 36.2% to 45.3% of its total landings by weight and from 40.3% to 44.4% by value. For the Alaska areas adjacent to the fisheries, the percentage of landed value accounted for by halibut and sablefish ranged from a low of less than 1% for some areas in Western Alaska to a high of 46.6% in 1989 for the Skagway-Yakutat-Angoon census area.

3.2 Factors that Will Affect the Distributions of Landings with the Proposed IFQ Program

Halibut and sablefish landings are a very important part of the total landings in some areas, and an IFQ program could change the distribution of halibut and sablefish landings among ports and areas.

Figure 3.1 Value of Halibut, Sablefish, and Other Species Harvested Off Alaska in 1988 By Borough or Census Area of Landing

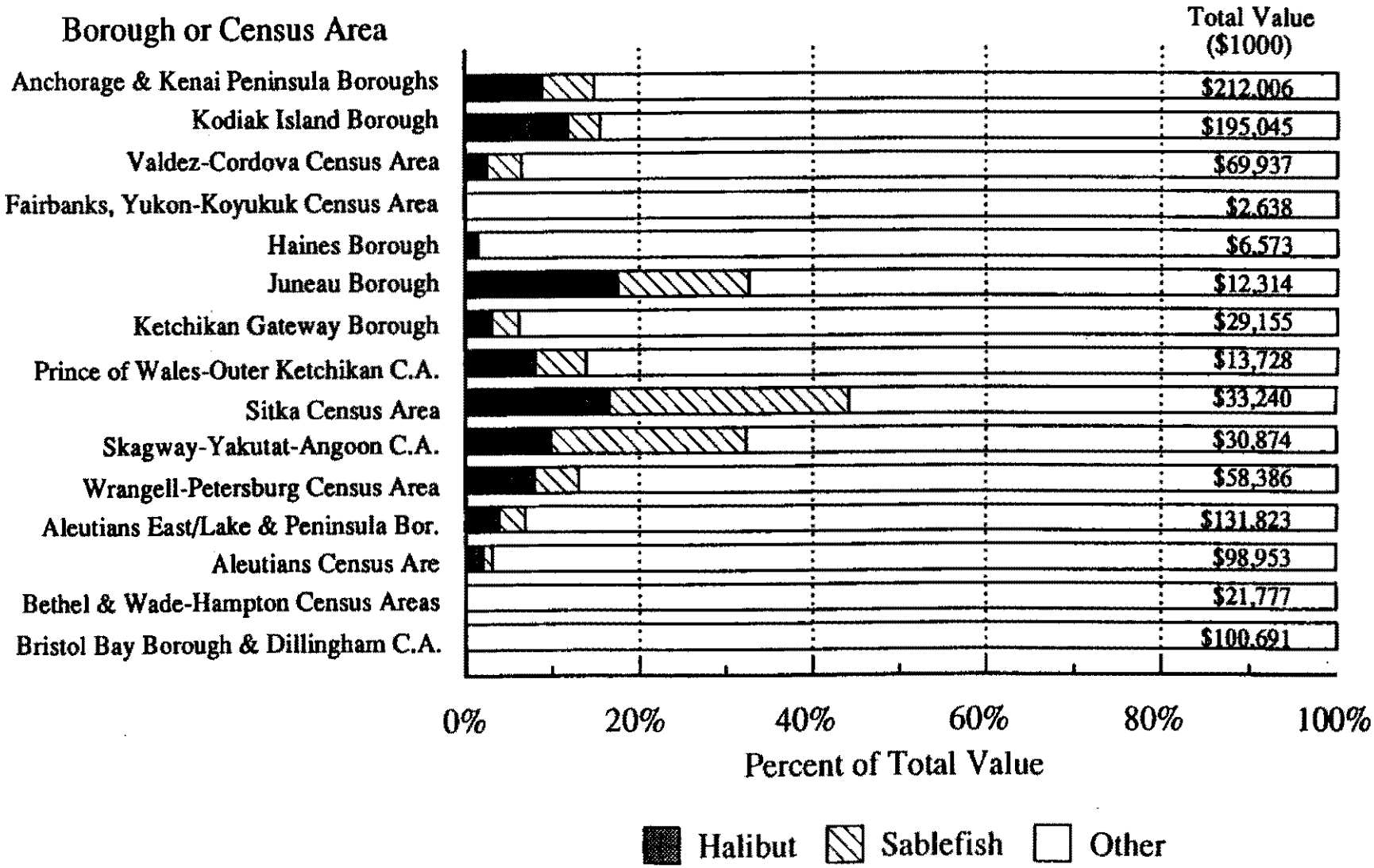


Figure 3.2 Value of Halibut, Sablefish, and Other Species Harvested Off Alaska in 1989 By Borough or Census Area of Landing

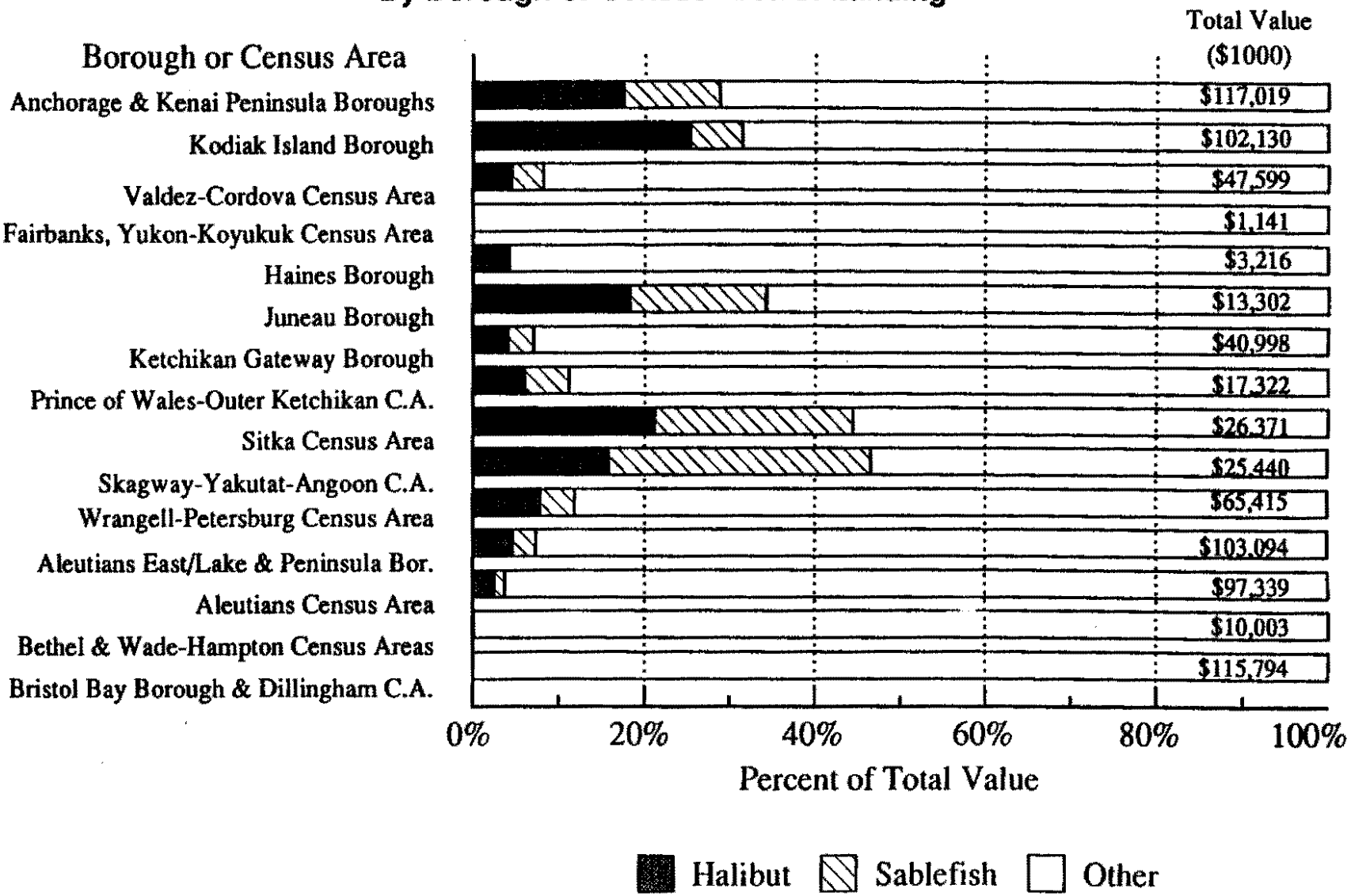
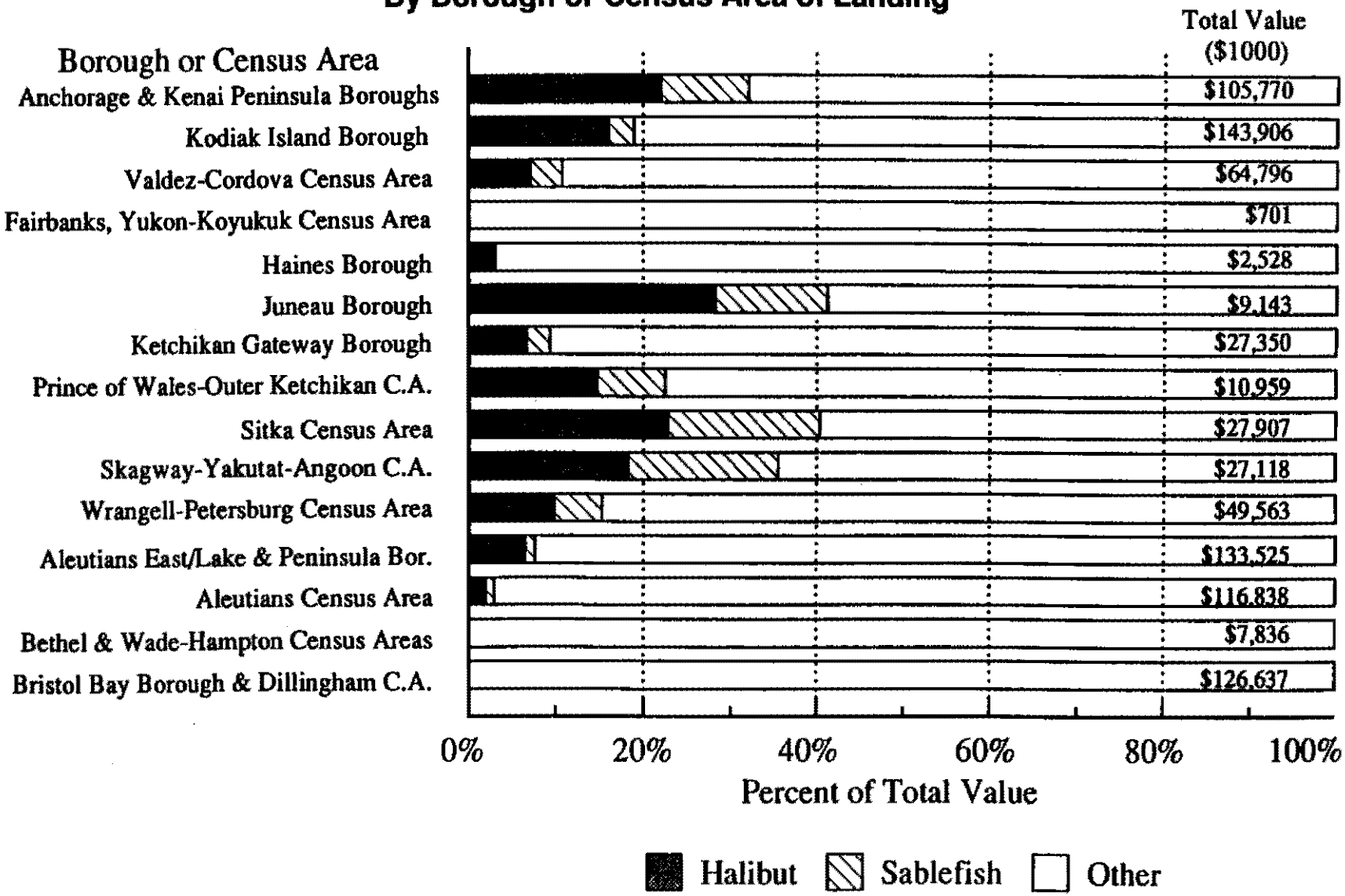


Figure 3.3 Value of Halibut, Sablefish, and Other Species Harvested Off Alaska in 1990 By Borough or Census Area of Landing



The Council addressed this concern over a potential redistribution of landings either from coastal ports in Alaska to other ports or among Alaska ports, by incorporating the following elements in the IFQ program:

1. vessel class restrictions,

2. restrictions on who can acquire and use catcher boat QS and IFQs,

3. restrictions on the amount of QSs or IFQs a person can control or use,

4. restrictions on the amount of IFQs that can be used on each vessel,

5. the initial QS allocation rules,

6. no restrictions on where halibut and sablefish can be landed within Alaska,

7. the requirement that halibut and sablefish must be cleared through a designated port in Alaska before leaving the State,

8. restrictions on the discards of halibut, sablefish, rockfish, and Pacific cod, and

9. the community development quotas (CDQs).

Other characteristics of an IFQ program also will tend to benefit the coastal communities adjacent to the fishing grounds. These are discussed below.

There has been concern raised throughout Alaska that with IFQs fishermen will tend to land their fish outside of Alaska rather than in Alaskan ports. In the past fishermen have indeed landed Alaska-caught halibut in Oregon, Washington and British Columbia, typically receiving more for each pound of fish landed outside of Alaska, in part because the ports are closer to the final markets. During 1988-1990 about 4 million pounds of Alaska-caught halibut annually were landed in other US ports. Two possible explanations of why fishermen would make the four to five day run to Washington and Oregon to deliver their halibut are: (1) the fishermen live in Oregon and Washington or have their vessels repaired there and (2) they receive higher exvessel prices in Oregon and Washington. Below, these issues are examined under the current management regime and then under the proposed IFQ regime.

Under either system fishermen from other states will be allowed to harvest halibut. Under open access, there have been set openings, most recently of 24-hours in the major halibut areas. In these fisheries no more hooks may be pulled after the 24 hour period ends. At that point all fishermen head to the landing port of their choice. The first fishermen to reach the landing port have either quit fishing early and foregone some catch or have fished closer to the port. Their fish is unloaded first and may in fact receive a higher price because it can be sold fresh. Soon however, a backlog of boats jams the ports and many who arrive later must wait three to four days before unloading. Those who arrive late may receive a lower price because their fish has been sitting on ice longer.

The fisherman from Seattle who arrives late into port is faced with a three-day wait at the processor, during which time he incurs crew and vessel costs. After delivering the fish he must either return to Seattle or gear up for a different fishery if he intends to continue to fish. If it happens to be a late opening, for example in the cleanup fishery, other fishing activity may be concluded. The fisherman

may choose to make the four to five day run to Seattle, and deliver the fish. Since he has to make the run anyway, he saves the cost of waiting in port for several days to unload, his fish will be no less fresh, and he may be able to get a higher price in Seattle. These are strong incentives to land fish in Seattle or perhaps in British Columbia.

In an IFQ fishery, the same fisherman is faced with many more choices as to when and where he will fish. He may use his entire quota on halibut trips, he may choose to fish for both halibut and Pacific cod or for both halibut and rockfish, or he may use his halibut IFQ to keep his halibut bycatch while trolling for salmon. If he decides to use his quota in the halibut fishery, probably before going fishing, he will contact different processors for the best price. Processors in Seattle, used to receiving fresher fish from the IVQ fishery in British Columbia may not be as willing to accept 4 to 5-day older fish from Alaska. Alaska processors who know they can deliver the freshest fish to the market may be able to get the highest price and therefore may be willing to pay the most for it. Regardless, the fisherman knows he will not have to wait up to a week outside the processor's door. With this in mind, he would probably be better off landing his fish at a port adjacent to the fishing grounds, than to run his fish down to Washington or British Columbia.

One of the major benefits of IFQs is that the number of fishing days per trip can be increased from one day, which is typical in many areas with the open access fishery, to up to seven days with IFQs. With these longer more efficient trips, the additional days required to land halibut in Seattle will be even more costly in terms of decreased product quality. Therefore, the longer trips that will occur with IFQs will provide an added incentive to land halibut at ports adjacent to the fishing grounds.

If it were not for these product quality issues, the limits on the amount of IFQ that can be used by a person and a vessel could increase landings in Seattle. For a vessel that can take this limit in one trip at the end of its multi-fishery fishing year off Alaska, and that is based in Seattle or has annual maintenance done there, landing its limit in Seattle would be relatively attractive if it were not for the associated product quality problem.

Now consider the fisherman who uses his halibut quota in conjunction with other species. Halibut is a fish with an extraordinarily long shelf life and can easily undergo the rigors of a 4 to 5-day trip to market. Other species are not so robust. Rockfish and Pacific cod need to be processed within 48 hours of harvesting, and sablefish, though more durable than these, must nevertheless be frozen within 7-8 days of harvesting. A fisherman who decided to combine his halibut quota with another species will be much less likely to take his halibut down to Seattle, if the other species on board can't make the trip. Processors that want to stay in business probably will be willing to take a mixed landing of fish.

Processors in remote ports, especially those not served by air transportation (or by inexpensive air transportation), may find it difficult to compete in the markets for fresh halibut. Such processors will be at a competitive disadvantage under IFQs. This is and always has been a cost of doing business in Alaska. Under the open access fisheries for halibut, these kinds of communities are able to attract fishermen because they are able to offer the same prices as those in larger ports because most of the product will be frozen and inexpensive air transportation is not crucial.

There are features of an IFQ program that will tend to benefit coastal communities. A more constant and steady flow of raw product, as would be promoted under an IFQ system, could result in several important types of benefits. First, local residents as opposed to transient workers can be used for processing halibut and sablefish. Second, with landings distributed throughout the year, there is an increased opportunity for local fishermen to participate in the fisheries, more of the exvessel earnings of local fishermen will remain in the local community, and the local economy will

be substantially less seasonal. Third, there will tend to be more value-added processing and processing of species that would have otherwise been discarded. This is because when the supply of raw product exceeds the available processing capacity, processors tend to produce only those products which give them the most revenue per hour, but when the supply of raw product slows, processors are more likely to use facilities and workers which produce less revenue per working hour, but more revenue overall, because they employ the facility over a longer period of time.

Communities that have not been able to attract a processor with large freezing capacity would tend to be more competitive with IFQs. Much less freezing capacity is necessary when landings are more evenly distributed throughout the year and no freezing capacity is needed if the halibut is going to fresh markets. The change in the comparative advantage in favor of small processors with limited or no freezing capacity is demonstrated by the dramatic change that occurred in Canada this year with their IVQ program. The processing of halibut switched from being done almost exclusively by one company to being done almost exclusively by a large number of small processors who prepared the halibut for fresh markets. The change would be expected to be in the same direction in Alaska but not as dramatic because the shift to fresh halibut is not expected to be as complete for the Alaska fishery.

Another potential advantage to some coastal communities adjacent to the fishing grounds is that large processors may not be willing to operate at less than peak capacity, preferring to shut the plants down in low use period. This might open the way for smaller processors to become more viable. For example, a small halibut processor who fillets and ships 1,000 lbs per day direct to restaurants over a period of 6 months (180,000 lbs) would doubtless bring in as much economic activity as a large freezing facility which produces 180,000 lbs in a single day. The small processing facility would much more likely employ local residents than the large plant.

IFQs also provide a community with the opportunity to assure its continued involvement in the halibut and sablefish fisheries. With IFQs, they can assist local fishermen in acquiring QSs. To the extent that there are external benefits of having local fishermen own QSs, a community can assure that this source of market failure is eliminated by providing such assistance. Similarly, if the State or Nation determines that the individual decisions of fishermen to buy and sell QSs will ignore costs and benefits to specific communities, it can assist local fishermen or local communities in acquiring QSs. The restrictions on the ownership of QS and the use of IFQs by a governmental entity, such as a town, limits but does not eliminate the ability of a town to assure that local fishermen have adequate QSs.

Finally, the IFQ program is expected to increase the benefits that can be derived from the fisheries by increasing retained catch, increasing exvessel and wholesale prices, and by decreasing harvesting and processing costs. Much of the benefits will be captured by the initial recipients of the QSs and some of the benefits will go to those who acquire QS subsequent to the initial allocation. These benefits will increase the wealth of these individuals and, thereby, tend to benefit the communities in which they live. As demonstrated by the data presented in the next section, residents of coastal communities adjacent to the fishing grounds will receive a very large proportion of the halibut and sablefish QSs.

3.3 Historical Distribution of Catch and the Initial Distribution of QSs and IFQs by Residence of Vessel Owners

Landings and exvessel values of halibut, sablefish, and other species, are a measure of the income derived from actual fishing activities. In the followings tables we have grouped vessel owners by their reported city of residence. Because of confidentiality restrictions we grouped cities into Boroughs

or U.S. Census districts in Alaska. To the extent that we can report it, the tables in effect describe the relative dependency of the community on the two IFQ species compared to the harvest and value of all other species, including groundfish, salmon, herring, and shellfish.

Tables 3.3 - 3.5 summarize: (1) the number of vessel owners associate with those landings; (2) the percentage of vessel owners with each type of landings; and (3) the percentage of the exvessel value accounted for by each type of landings. The number of vessel owners with halibut or sablefish landings by areas in Alaska ranged from 0 for several areas and years to 781 in 1990 for the Kenai Peninsula Borough (Table 3.3). The percentage of the total number of vessel owners in an area who had halibut or sablefish landings ranged from 0 for several areas and years to 86.7% in 1988 for Ouzinkie in the Kodiak Island Borough (Table 3.4). Finally, the percentage of the total exvessel value of all vessel owners in an area accounted for by halibut and sablefish combined ranged up to 87.2% in 1989 for Ouzinkie in the Kodiak Island Borough. For many areas, each of these measures of the relative importance of the halibut and sablefish fisheries compared to all fisheries fluctuated substantially during 1988 through 1990.

Tables 3.6 - 3.9 contain estimates of: (1) the annual number of halibut vessel owners and the number of halibut QS recipients by census area in Alaska; (2) the corresponding percentage distribution of vessel owners and QS recipients by census area; (3) annual catch and IFQs based on 1991 TACs by census area in Alaska; and (4) the corresponding percentage distribution of the annual catch and IFQs by census area. Tables 3.10 - 3.13 contain similar data for the fixed gear sablefish fishery and Tables 3.14 - 3.17 contain these data for the two fisheries combined. For the combined fisheries, landings and IFQs are measured in terms of exvessel value rather than pounds to allow more meaningful summations for the two fisheries.

The following examples of the data contained in these tables are for the two fisheries combined. With the exception of exvessel price data that were extracted from a separate data set to generate the estimates in Tables 3.16 and 3.17, the data in Tables 3.3 - 3.17 are from the data set used to generate the Tables in Chapter 2.

With very few exception, the number of halibut and sablefish QS recipients for each census area is greater than the number of vessel owners in any one year from 1985 - 1990, often the number is substantially larger (Table 3.14). For example, although the number of owners per year for Prince of Wales-Outer Ketchikan ranged from 80 to 166, the number of QS recipients is 236 which is 42% greater than 166. For the State as a whole, the number of recipients is also 42% greater than the maximum annual number of vessel owners. This is the result of the three year qualifying period that is being used to determine who will receive QSs and the fact that a large number of people enter or leave these fisheries each year.

The percentage of the total number of halibut and sablefish vessel owners who lived in each area typically varied annually and the percentage of QS recipients accounted for by each area is usually within the range of its annual percentages (Table 3.15) For example, Sitka accounted for from 7.3% to 8.7% of the owners and will account for 7.3% of the QS recipients.

The exvessel earnings of halibut and sablefish vessel owners for each area varied substantially during the 6-year period and, with few exceptions, the exvessel value for 1990 is more than the exvessel value of the IFQs based on 1991 TACs and prices (Table 3.16). This is the result of lower TACs in 1991. Kodiak is the most notable exception. The exvessel values of the 1990 landings and of the IFQs for residents of the Kodiak Island Borough are $18.6 million and $24.1 million, respectively.

The percentage of the total exvessel value of halibut and sablefish accounted for by residents of each area typically varied annually and the percentage of IFQ exvessel value accounted for by each area is usually within the range of its annual percentages (Table 3.17) For example, Wrangell-Petersburg accounted for from 8.9% to 11.1% of the total exvessel value and will account for 9.8% of the exvessel value of the IFQ landings.

Table 3.18 presents the cumulative number of vessel owners by census area and by year with halibut landings within each of five landings intervals. It also includes the corresponding number of QS recipients. Table 3.19 presents similar information for the fixed gear sablefish fishery. To meet State and Federal confidentiality rules, the cumulative number of persons in the highest interval was placed in the next highest interval if the difference was less than four. The number of persons in any one interval above the lowest is the difference between the cumulative number for that level and the cumulative number for the next lower interval. For census areas with principally confidential data, brief summaries are provided.

The data in Table 3.18, for example, indicates that for the Kenai Peninsula Borough: (1) there were 726 halibut vessel owners in 1990: (2) 187 of those owners had landings of less than or equal to 1,000 lbs.; (3) 627 of them had landings of less than 20,000 lbs; (4) 99 (726 - 627 = 99) had landings of at least 20,000 lbs.; (5) 710 will receive IFQ of less than 5,000 lbs; and (6) 100 will receive IFQs of at least 20,000 lbs.

3.4 Potential Movement of QSs Away from Rural Areas Adjacent to the Fishing Grounds

The Tables in the previous section include estimates of the initial distributions of QS by census area. The concern has been raised that, although the initial distribution may be acceptable, the transferability of QS may result in a very different pattern of QS ownership. More specifically, the concern is that the percentages of QS owned by Alaska residents of coastal communities adjacent to the fishing grounds will decrease substantially and such a change may decrease landings in these communities. The likelihood of this happening is the topic of this section.

The levels of transfers of Alaska limited entry permits from Alaska residents to nonresidents and from local rural residents to others provides some indication as to whether this should be a major concern for the Council's recommended IFQ program. The following statistics on permit transfers are taken from CFEC Report Number 91-6, Changes in the Distribution of Alaska's Commercial Fisheries Permits 1975-1990.

1. Alaskan residents were issued 10,922 permit (81.1% of the total).

2. Nonresidents were issued 2,540 permits (18.9%).

3. Alaskan rural local residents were issued 6,142 permits (45.6%).

4. Since 1975, 367 permits of Alaskan residents were revoked.

5. 70 permits of nonresidents were revoked.

6. As a net result of transfer activity, Alaskan residents held 169 fewer permits than they had been issued and nonresidents held 169 more.

7. The migration of permit holders to places outside Alaska caused a permit decrease to Alaskan residents of 221 permits and an increase to nonresidents of 221 permits.

8. Combining the effects of revocation, transfer and migration, by the end of 1990, Alaskan residents held 10,165 permits (78.0), nonresidents held 2,860 (22.0%), and rural local residents held 5,137 (39.45). (Note: the term "local" and "nonlocal" refer to whether residency is adjacent to fishing grounds, "local" indicating that residency is adjacent to the grounds.)

9. The numbers of permits owned by rural nonlocal Alaskan residents and urban nonlocal Alaskan residents increased, but the numbers owned by each other group of Alaskan residents decreased.

10. Despite the net outflow of permits from rural local Alaskan residents, this remains the dominant owner group.

These statistics indicate that there has been a relatively small net transfer of permits from Alaskan residents to nonresidents but a substantially larger net transfer from rural local Alaskan residents to other Alaskan residents. The information presented below considers whether a similarly large transfer away from rural local residents would be expected with the IFQ program recommended by the Council.

Much of the following discussion of the potential drain of QS from coastal communities is based on a November 1, 1990 memorandum from Linda J. Snow, an analyst for the Alaska State Legislature, to Alaska State Representative George Jacko. The subject of the memorandum is Rural Fishing Permit Drain: Causes and Economic Consequences, Research Request 90.344. Although the memorandum focuses on Bristol Bay salmon permits, it provides information that can be used to form expectations concerning the potential transfers of halibut and sablefish QSs. Individual comments from the memorandum are followed by an explanation of its implications for QS transfers.

1. Most of the Alaskans who purchased permits from outside their area of residence were from medium-size port communities, rather than from large urban areas. This seems to indicate that the current generation of Alaskan fishermen are not mostly "moonlighting urbanites", but, increasingly, professional fishermen.

This type of transfer, to professional fishermen, is an expressed goal of the Council.

2. The "B" loans have been used to purchase Bristol Bay set net, Kodiak set net and Alaska Peninsula set net permits from local owners.

Loan programs can be changed so they do not encourage undesired transfers of QS.

3. Thirty-four percent of those who sold limited entry permits had made no landings during the prior year, and 61 percent of those who did fish had earnings below the median for that permit type. This evidence indicates that many sellers are "marginal" fishermen. The balance of permit transfers resulted mostly from retirement, failing health, or death.

Because the permits allow a vessel to fish, those who have a more capable vessel or those who are willing to work that vessel longer and harder will be able to get the most out of owning a permit. This is not the case with IFQs. A "marginal" fisherman in terms of his level of catch due to his boat, the extent he wants to use his boat, and other attributes of the fishing operation is at a disadvantage in a permit fishery. But he is not at a disadvantage in an IFQ fishery because he can use an amount of IFQ that is consistent with these attributes. All that is necessary is that he can catch fish at a competitive cost.

4. Statistics show that there was an initial outflow of permits from rural local owners during the first several years of limited entry. .... We were told ... that the main reason for this initial outflow was a basic misunderstanding of the system by rural permit holders. Many rural permit holders were not aware that the permits were issued on a one-time basis only and that no others could be issued. .... Apparently some rural fishermen were not aware that they could not obtain another permit, or that they could be excluded from the fishery without one. Other permits are said to have been sold because the owners believed that the Ostrosky case would be won, and that the permit system would be abolished.

After the years of experience with the State's limited entry program, there should be a much better understanding of what one is giving up when he sells his QSs. Therefore, the initial outflow with an IFQ program would tend to be substantially less than that which occurred with the salmon permits.

5. The outflow of permits slowed in the early 1980s .... those most inclined to sell had already done so, leaving permits with the more serious fishermen.

This suggests that: (1) the lesson was learned concerning the value of what was being sold; and (2) among rural area residents, the transfers were in a direction desired by the Council.

6. During 1986 and 1987, another large outflow of permits from rural local permit holders occurred in the Bristol Bay drift gill net fishery.... According to John Mitchell, a permit broker from Western Alaska Brokerage company, this outflow had two causes. First, many rural local fishermen had come to realize that they could not effectively compete in the fishery against the urban Alaska and nonresident fishermen who were better capitalized and had larger crews. Second, Bristol Bay drift gill net permits had increased dramatically in price, rising to $121,120 in 1986, and up again to $130,265 in 1987.

As noted in response to comment 3, the fishing power of a fishing operation and its total catch is important with a license limitation program but not with IFQs. Therefore, an operation with a low level of catch that will not be competitive with the former program can be very competitive with the latter. If fishermen with low levels of annual catch under a license limitation program could share a permit or buy part of a permit, they would be much more competitive and the cost of buying or retaining part of a permit would be much more feasible than buying or retaining a whole permit. With IFQs, fishermen with low levels of catch can purchase or retain the equivalent of part of a permit. Therefore, an IFQ program would eliminate or greatly reduce the two causes of the increase in permit outflows in 1986 and 1987.

7. Commercial fishing is a very unpredictable business. Earnings vary greatly from year to year. This fact confounds payback schedules when loans are outstanding. In a bad year, a rural fisherman may not be able to breakeven from out-of-pocket fishing expenses .... Without an alternative source of income, a rural fisherman may be unable to make his permit or boat payments. If the permit is collateral for the loan, he may lose it. He may voluntarily sell the permit to get out of debt, with the same result.

IFQs would reduce the uncertainty by providing a fisherman with the right to take a known percentage of the TAC. This could reduce these losses.

8. House Bill 285 (Sixteenth Alaska Legislature) would require three years experience in a fishery before a fisherman would be eligible to purchase a permit in that fishery. .... A three-year experience would tend to favor local residents ....

The bona fide crew member requirement would tend to have the same type of effect; however, it is much less stringent.

9. The CFEC could relax its prohibition on leasing permits. Leasing permits would possibly allow access to the fishery by nonresidents, but it could allow rural permit holders an alternative to selling their permits, and allow other rural residents the opportunity to fish without purchasing a permit.

IFQs provide some of the flexibility associated with leasing permits in that, as noted above, they are in some ways comparable to permits that can be shared. The Council has recommended that a limited amount of a person's QSs may be leased.

10. Native corporations and nonprofit organizations could be allowed to purchase permits and/or hold them as collateral. .... if these agencies could hold permits as collateral, they would be more willing to loan money on them.

QSs may be held as collateral; therefore, an additional problem with respect to outflows is eliminated with the Council's recommended IFQ program.

11. Some have suggested that fishing gear and the size of the fishing boats should be further restricted. This might enhance the ability of rural fishermen to compete in the fishery.

The Council's IFQ program includes vessel class restrictions and ownership and use limits that will tend to make rural fishermen more competitive. And as noted above, the harvesting capacity of an operations is much less important with IFQs than with a license limitation program.

12. Share cropping or fishing on a percentage-of-earnings basis is another financing technique which would make debt payments more manageable.

This would be allowed to a limited extent with the Council's IFQ program.

Based on the experience with the State's license limitation program and some critical differences between that program and the IFQ program recommended by the Council, the net transfer of QSs from Alaskan residents to nonresidents is not expected to be substantial and the net transfer from local rural residents to other Alaskan residents is expected to be substantially less than it has been for Alaskan limited entry permits. In addition to being supported by the comments that were made above, the latter conclusion is supported by the following: (1) the community development quotas that are part of the IFQ program will increase the participation of local rural residents; and (2) unlike the State's limited entry programs, the IFQ program is for fisheries that have not been dominated by local rural residents.

In evaluating the IFQ program, it should be recognized that although there may be net QS transfers that decrease the net benefits of the IFQ program, the IFQ program is expected to provide net benefits to rural local residents and to Alaskan residents as a whole. Many would agree, that despite the permit drain that has occurred with the State's limited entry program, the program has benefited many rural communities.

Table 3.1 Catch, in thousands of pounds, and value, in thousands of dollars, of halibut, sablefish, halibut and sablefish, other species and all species by year and borough or census area of landing, 1988-1990.

	Catch			Value		
	1988	1989	1990	1988	1989	1990
Anchorage & Kenai Peninsula Boroughs						
Halibut	15,776	13,817	13,023	19,058	20,449	23,286
Sablefish	12,345	14,309	14,195	12,482	13,254	10,648
Sub-total	28,121	28,126	27,219	31,540	33,703	33,934
Other	122,964	80,134	88,030	180,465	83,316	71,837
All Species	151,086	108,261	115,248	212,006	117,019	105,770
Kodiak Island Borough						
Halibut	19,093	17,188	12,995	23,275	25,902	23,065
Sablefish	7,328	7,216	5,811	7,135	6,275	4,193
Sub-total	26,421	24,404	18,806	30,410	32,177	27,258
Other	269,367	167,370	292,680	164,635	69,952	116,648
All Species	295,788	191,774	311,485	195,045	102,130	143,906
Valdez-Cordova Census Area						
Halibut	1,553	1,466	2,696	1,802	2,156	4,664
Sablefish	2,943	1,905	3,117	2,814	1,745	2,321
Sub-total	4,496	3,370	5,813	4,616	3,901	6,985
Other	52,271	59,833	110,584	65,321	43,698	57,811
All Species	56,767	63,203	116,397	69,937	47,599	64,796
Fairbanks and N.W. Arctic Boroughs and Yukon-Koyukuk Census Area						
Other	3,325	2,463	1,538	2,638	1,141	701
Haines Borough						
Halibut	86	96	44	100	136	78
Other	3,360	2,402	2,380	6,473	3,080	2,450
All Species	3,446	2,498	2,424	6,573	3,216	2,528
Juneau Borough						
Halibut	1,869	1,709	1,461	2,158	2,430	2,582
Sablefish	1,821	1,915	1,488	1,858	2,128	1,189
Sub-total	3,689	3,624	2,949	4,016	4,559	3,771
Other	5,453	15,939	9,189	8,297	8,743	5,372
All Species	9,143	19,562	12,138	12,314	13,302	9,143
Ketchikan Gateway Borough						
Halibut	781	1,200	1,036	904	1,700	1,836
Sablefish	976	1,259	932	926	1,198	739
Sub-total	1,757	2,460	1,968	1,831	2,898	2,575
Other	23,030	76,244	45,629	27,324	38,101	24,775
All Species	24,788	78,704	47,597	29,155	40,998	27,350
Prince of Wales-Outer Ketchikan Census Area						
Halibut	965	739	910	1,117	1,047	1,612
Sablefish	842	985	1,088	792	892	850
Sub-total	1,806	1,725	1,998	1,909	1,939	2,462
Other	11,337	32,425	18,919	11,819	15,383	8,497
All Species	13,143	34,149	20,917	13,728	17,322	10,959

Table 3.1 continued

	Catch			Value		
	1988	1989	1990	1988	1989	1990
Sitka Census Area						
Halibut	4,646	3,857	3,638	5,515	5,581	6,363
Sablefish	8,677	6,387	6,037	9,139	6,134	4,893
Sub-total	13,323	10,244	9,675	14,654	11,715	11,256
Other	16,074	18,076	14,651	18,586	14,656	16,651
All Species	29,398	28,320	24,326	33,240	26,371	27,907
Skagway-Yakutat-Angoon Census Area						
Halibut	2,627	2,795	2,793	3,056	4,017	4,951
Sablefish	6,891	8,000	6,126	6,911	7,830	4,693
Sub-total	9,518	10,795	8,920	9,967	11,847	9,644
Other	11,973	12,322	13,162	20,907	13,593	17,474
All Species	21,491	23,117	22,082	30,874	25,440	27,118
Wrangell-Petersburg Census Area						
Halibut	3,917	3,666	2,840	4,666	5,148	4,874
Sablefish	2,908	2,980	3,257	2,974	2,602	2,679
Sub-total	6,826	6,647	6,097	7,640	7,749	7,554
Other	49,604	114,895	73,982	50,746	57,665	42,009
All Species	56,429	121,542	80,079	58,386	65,415	49,563
Aleutians East and Lake and Peninsula Boroughs						
Halibut	4,241	3,281	4,993	5,144	4,806	8,741
Sablefish	4,589	3,047	2,037	4,018	2,787	1,537
Sub-total	8,830	6,328	7,030	9,162	7,593	10,278
Other	156,055	201,774	345,519	122,661	95,501	123,246
All Species	164,885	208,102	352,548	131,823	103,094	133,525
Aleutians Census Area (balance of)						
Halibut	1,780	1,781	1,300	2,037	2,480	2,295
Sablefish	1,138	1,310	1,528	1,016	1,153	1,106
Sub-total	2,918	3,092	2,828	3,053	3,632	3,401
Other	392,952	469,149	556,207	95,900	93,706	113,437
All Species	395,871	472,241	559,035	98,953	97,339	116,838
Bethel and Wade-Hampton Census Areas						
Halibut	5	5	3	4	11	4
Other	22,068	14,399	8,475	21,772	9,992	7,832
All Species	22,073	14,404	8,478	21,777	10,003	7,836
Bristol Bay and Dillingham Census Areas						
Halibut	0	0	33	0	0	46
Other	63,608	106,144	125,593	100,691	115,794	126,591
All Species	63,608	106,144	125,626	100,691	115,794	126,637
Unspecified Alaska Ports						
Halibut	26	34	0	43	79	0
All Washington Ports						
Halibut	3,194	3,652	3,448	5,200	6,598	7,830
Sablefish	793	463	22	958	440	828
Sub-total	3,988	4,115	4,069	6,158	7,038	8,657
Other	37,759	36,328	63,991	41,112	41,028	73,422
All Species	41,747	40,442	68,060	47,269	48,066	82,079

Table 3.1 continued

	Catch			Value		
	1988	1989	1990	1988	1989	1990
All Oregon Ports						
Halibut	222	498	401	362	1,169	924
Other	0	0	117	0	0	32
All Species	222	498	518	362	1,169	956
Floating Processor/Mothership						
Sablefish	19,229	15,319	13,019	18,132	16,271	14,019
Other	1,128,377	2,253,318	4,336,781	357,000	493,893	851,838
All Species	1,147,606	2,268,638	4,349,801	375,133	510,164	865,856
All British Columbia Ports						
Halibut	77	36	1,061	126	63	2,155
Sablefish	0	22	204	0	18	218
Sub-total	77	57	1,265	126	81	2,373
Other	1,400	0	707	468	0	316
All Species	1,477	57	1,972	594	81	2,689
Unknown Ports						
Halibut	40	69	0	65	126	0
Other	10,338	2,897	5,305	14,677	3,614	12,043
All Species	10,378	2,967	5,305	14,742	3,741	12,043
All Ports						
Halibut	60,899	55,889	52,676	74,631	83,899	95,307
Sablefish	70,481	65,119	59,461	69,157	62,727	49,912
Sub-total	131,380	121,008	112,137	143,787	146,625	145,219
Other	2,381,318	3,666,110	6,113,440	1,311,494	1,202,857	1,672,981
All Species	2,509,346	3,784,622	6,224,038	1,452,600	1,348,263	1,817,500

Table 3.2 Percentage of catch and value of halibut, sablefish, halibut and sablefish, other species and all species by year and borough or census area of landing, 1988-90.

	% of Catch			% of Value		
	1988	1989	1990	1988	1989	1990
Anchorage & Kenai Peninsula Boroughs						
Halibut	10.4%	12.8%	11.3%	9.0%	17.5%	22.0%
Sablefish	8.2%	13.2%	12.3%	5.9%	11.3%	10.1%
Sub-total	18.6%	26.0%	23.6%	14.9%	28.8%	32.1%
Other	81.4%	74.0%	76.4%	85.1%	71.2%	67.9%
Kodiak Island Borough						
Halibut	6.5%	9.0%	4.2%	11.9%	25.4%	16.0%
Sablefish	2.5%	3.8%	1.9%	3.7%	6.1%	2.9%
Sub-total	8.9%	12.7%	6.0%	15.6%	31.5%	18.9%
Other	91.1%	87.3%	94.0%	84.4%	68.5%	81.1%
Valdez-Cordova Census Area						
Halibut	2.7%	2.3%	2.3%	2.6%	4.5%	7.2%
Sablefish	5.2%	3.0%	2.7%	4.0%	3.7%	3.6%
Sub-total	7.9%	5.3%	5.0%	6.6%	8.2%	10.8%
Other	92.1%	94.7%	95.0%	93.4%	91.8%	89.2%
Fairbanks and N.W. Arctic Boroughs and Yukon-Koyukuk Census Area						
Other	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Haines Borough						
Halibut	2.5%	3.8%	1.8%	1.5%	4.2%	3.1%
Other	97.5%	96.2%	98.2%	98.5%	95.8%	96.9%
Juneau Borough						
Halibut	20.4%	8.7%	12.0%	17.5%	18.3%	28.2%
Sablefish	19.9%	9.8%	12.3%	15.1%	16.0%	13.0%
Sub-total	40.4%	18.5%	24.3%	32.6%	34.3%	41.2%
Other	59.6%	81.5%	75.7%	67.4%	65.7%	58.8%
Ketchikan Gateway Borough						
Halibut	3.1%	1.5%	2.2%	3.1%	4.1%	6.7%
Sablefish	3.9%	1.6%	2.0%	3.2%	2.9%	2.7%
Sub-total	7.1%	3.1%	4.1%	6.3%	7.1%	9.4%
Other	92.9%	96.9%	95.9%	93.7%	92.9%	90.6%
Prince of Wales-Outer Ketchikan Census Area						
Halibut	7.3%	2.2%	4.3%	8.1%	6.0%	14.7%
Sablefish	6.4%	2.9%	5.2%	5.8%	5.2%	7.8%
Sub-total	13.7%	5.1%	9.6%	13.9%	11.2%	22.5%
Other	86.3%	94.9%	90.4%	86.1%	88.8%	77.5%
Sitka Census Area						
Halibut	15.8%	13.6%	15.0%	16.6%	21.2%	22.8%
Sablefish	29.5%	22.6%	24.8%	27.5%	23.3%	17.5%
Sub-total	45.3%	36.2%	39.8%	44.1%	44.4%	40.3%
Other	54.7%	63.8%	60.2%	55.9%	55.6%	59.7%

Table 3.2 continued

	% of Catch			% of Value	
	1988	1989	1990	1988	1989	1990
Skagway-Yakutat-Angoon Census Area						
Halibut	12.2%	12.1%	12.6%	9.9%	15.8%	18.3%
Sablefish	32.1%	34.6%	27.7%	22.4%	30.8%	17.3%
Sub-total	44.3%	46.7%	40.4%	32.3%	46.6%	35.6%
Other	55.7%	53.3%	59.6%	67.7%	53.4%	64.4%
Wrangell-Petersburg Census Area						
Halibut	6.9%	3.0%	3.5%	8.0%	7.9%	9.8%
Sablefish	5.2%	2.5%	4.1%	5.1%	4.0%	5.4%
Sub-total	12.1%	5.5%	7.6%	13.1%	11.8%	15.2%
Other	87.9%	94.5%	92.4%	86.9%	88.2%	84.8%
Aleutians East and Lake and Peninsula Boroughs						
Halibut	2.6%	1.6%	1.4%	3.9%	4.7%	6.5%
Sablefish	2.8%	1.5%	0.6%	3.0%	2.7%	1.2%
Sub-total	5.4%	3.0%	2.0%	7.0%	7.4%	7.7%
Other	94.6%	97.0%	98.0%	93.0%	92.6%	92.3%
Aleutians Census Area (balance of)						
Halibut	0.4%	0.4%	0.2%	2.1%	2.5%	2.0%
Sablefish	0.3%	0.3%	0.3%	1.0%	1.2%	0.9%
Sub-total	0.7%	0.7%	0.5%	3.1%	3.7%	2.9%
Other	99.3%	99.3%	99.5%	96.9%	96.3%	97.1%
Bethel and Wade-Hampton Census Areas						
Halibut	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Other	100.0%	100.0%	100.0%	100.0%	99.9%	100.0%
Bristol Bay and Dillingham Census Areas						
Halibut	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Unspecified Alaska Ports						
Halibut	100.0%	100.0%	0.0%	100.0%	100.0%	0.0%
All Washington Ports						
Halibut	7.7%	9.0%	5.1%	11.0%	13.7%	9.5%
Sablefish	1.9%	1.1%	0.9%	2.0%	0.9%	1.0%
Sub-total	9.6%	10.2%	6.0%	13.0%	14.6%	10.5%
Other	90.4%	89.8%	94.0%	87.0%	85.4%	89.5%
All Oregon Ports						
Halibut	100.0%	100.0%	77.4%	100.0%	100.0%	96.6%
Other	0.0%	0.0%	22.6%	0.0%	0.0%	3.4%
Floating Processor/Mothership						
Sablefish	1.7%	0.7%	0.3%	4.8%	3.2%	1.6%
Other	98.3%	99.3%	99.7%	95.2%	96.8%	98.4%

Table 3.2 continued

	% of Catch			% of Value		
	1988	1989	1990	1988	1989	1990
All British Columbia Ports						
Halibut	5.2%	62.2%	53.8%	21.2%	77.9%	80.1%
Sablefish	0.0%	37.8%	10.4%	0.0%	22.1%	8.1%
Sub-total	5.2%	100.0%	64.2%	21.2%	100.0%	88.3%
Other	94.8%	0.0%	35.8%	78.8%	0.0%	11.7%
Unknown Ports						
Halibut	0.4%	2.3%	0.0%	0.4%	3.4%	0.0%
Other	99.6%	97.7%	100.0%	99.6%	96.6%	100.0%

Table 3.3 Number of vessel owners with halibut, sablefish, halibut or sablefish, and any landing by residence and year, 1988-90.

	Halibut			Sablefish			H & S			All species		
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990
Anchorage Borough												
Anchorage	213	138	184	40	19	26	229	144	190	590	456	516
Other	30	24	34	3	2	4	31	24	34	72	59	123
All Cities	243	162	218	43	21	30	260	168	224	662	515	639
Matanuska-Susitna Borough												
All Cities	43	42	47	5	5	7	45	42	47	129	119	109
Kenai Peninsula Borough												
Anchor Point	59	54	66	9	9	14	60	58	68	91	80	95
Clam Gulch	15	18	16	0	0	1	15	18	16	35	33	35
Homer	275	269	296	47	37	59	290	282	310	448	418	501
Nikiski	6	10	12	0	0	2	6	10	12	18	20	26
Seldovia	30	18	27	8	5	9	33	19	30	58	45	58
Seward	59	35	58	30	13	29	66	41	68	113	80	104
Other	288	245	275	23	6	11	296	247	277	564	426	550
All Cities	732	649	750	117	70	125	766	675	781	1,327	1,102	1,369
Kodiak Island Borough												
Kodiak	354	317	404	71	49	62	377	333	425	666	559	698
Ouzinkie	13	12	20	0	0	0	13	12	20	15	16	24
Port Lions	22	13	22	0	0	1	22	13	23	29	24	28
Other	17	14	23	0	1	2	17	14	23	55	27	50
All Cities	406	356	469	71	50	65	429	372	491	765	626	800
Valdez-Cordova Census Area												
Cordova	68	32	105	19	9	26	72	35	112	416	338	425
Other	43	21	34	8	7	7	43	25	35	114	61	77
All Cities	111	53	139	27	16	33	115	60	147	530	399	502
Fairbanks-North Star Borough												
All Cities	21	20	21	1	0	1	21	20	21	50	42	57
SE. Fairbanks Census Area												
All Cities	2	0	3	0	0	0	2	0	3	10	4	9
Yukon-Koyukuk Census Area												
All Cities	4	2	3	0	0	0	4	2	3	30	31	27

Table 3.3 continued

	Halibut			Sablefish			H & S			All species		
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990
Nome Census Area												
All Cities	1	1	3	0	0	0	1	1	3	223	208	201
North Slope Borough												
All Cities	1	1	2	0	0	0	1	1	2	5	6	8
NW. Arctic Borough												
All Cities	0	0	1	0	0	0	0	0	1	10	10	10
Haines Borough												
All Cities	83	81	75	12	12	11	83	82	77	125	123	122
Juneau Borough												
Auke Bay	27	23	30	7	6	7	27	24	30	45	37	41
Douglas	31	37	31	14	9	10	33	37	31	54	58	49
Juneau	170	170	163	60	56	46	183	181	171	317	313	304
Other	2	3	2	0	0	0	2	3	2	6	6	5
All Cities	230	233	226	81	71	63	245	245	234	422	414	399
Ketchikan Gateway Borough												
Ketchikan	137	129	130	31	36	29	143	139	134	336	327	343
Ward Cove	15	14	14	7	9	6	17	17	17	35	39	29
Other	0	0	0	0	0	0	0	0	0	2	0	0
All Cities	152	143	144	38	45	35	160	156	151	373	366	372
Prince of Wales-Outer Ketchikan Census Area												
Craig	55	61	63	12	14	12	57	61	64	98	109	124
Other	125	127	132	14	13	13	127	131	134	209	202	213
All Cities	180	188	195	26	27	25	184	192	198	307	311	337
Sitka Census Area												
Sitka	0	0	276	0	0	95	0	0	290	0	0	507
All Cities	294	299	276	110	121	95	313	325	290	464	495	507
Skagway-Yakutat-Angoon Census Area												
Hoonah	56	58	57	13	10	12	58	60	59	108	97	98
Pelican	44	42	37	26	21	24	49	44	39	70	63	52
Other	139	150	137	11	9	12	140	150	137	225	224	222
All Cities	239	250	231	50	40	48	247	254	235	403	384	372

ole 3.3 continued

	Halibut			Sablefish			H & S			All species		
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990
Wrangell-Petersburg Census Area												
Petersburg	247	234	238	62	61	52	259	246	248	433	428	420
Port Alexander	26	26	20	14	14	9	30	27	21	49	42	39
Wrangell	119	116	111	5	5	6	119	116	111	202	196	193
Other	60	51	44	1	3	1	60	52	44	75	66	59
All Cities	452	427	413	82	83	68	468	441	424	759	732	711
Aleutians East Borough												
All Cities	95	89	113	16	3	7	103	89	115	222	222	220
Aleutian Islands Census Area												
All Cities	59	65	62	7	3	2	61	67	62	89	86	83
Bethel Census Area												
Toksook Bay	15	13	6	0	0	0	15	13	6	66	67	19
Other	8	8	26	1	1	1	9	8	26	478	565	460
All Cities	23	21	32	1	1	1	24	21	32	544	632	479
Bristol Bay Borough												
Naknek	0	0	7	0	0	0	0	0	7	0	0	68
South Naknek	0	0	3	0	0	0	0	0	3	0	0	17
Other	0	0	2	0	0	0	0	0	2	0	0	15
All Cities	1	1	12	0	0	0	1	1	12	114	90	100
Dillingham Census Area												
Manokotak	0	0	5	0	0	0	0	0	5	0	0	52
Other	0	0	41	0	0	1	0	0	41	0	0	469
All Cities	9	5	46	1	1	1	9	6	46	475	490	521
Wade-Hampton Census Area												
All Cities	3	5	3	0	0	0	3	5	3	145	211	188
Lake & Peninsula Borough												
All Cities	22	10	28	0	1	0	22	11	28	167	144	186
All Alaska Cities												
All Cities	3,406	3,103	3,512	688	570	617	3,567	3,236	3,630	8,350	7,762	8,328

Table 3.3 continued

	Halibut			Sablefish			H & S			All species		
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990
Washington												
Anacortes	22	18	20	2	5	6	22	21	21	91	84	102
Bellingham	25	19	26	10	7	7	26	21	29	193	185	192
Edmonds	8	9	18	4	5	9	9	12	21	75	82	94
Everett	8	12	12	6	5	6	8	12	12	51	46	44
Longview	6	7	7	0	0	1	6	7	7	17	12	21
Marysville	3	5	4	0	0	1	3	5	4	17	23	20
Port Townsend	9	14	15	7	8	7	11	15	16	22	26	28
Seattle	76	72	85	71	64	56	110	105	107	629	646	735
Other	140	145	206	59	60	63	161	162	222	912	864	1,030
All Cities	297	301	393	159	154	156	356	360	439	2,007	1,968	2,266
All Oregon Cities												
All Cities	52	73	101	21	20	24	57	79	110	235	237	337
Unknown												
All Cities	36	15	29	6	6	12	37	17	31	103	141	105

Table 3.4 Percentage of vessel owners with halibut, sablefish, halibut or sablefish, and any landing by residence and year, 1988-90.

	Halibut			Sablefish			Halibut & Sablefish		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Anchorage Borough									
Anchorage	36.1%	30.3%	35.7%	6.8%	4.2%	5.0%	38.8%	31.6%	36.8%
Other	41.7%	40.7%	27.6%	4.2%	3.4%	3.3%	43.1%	40.7%	27.6%
All Cities	36.7%	31.5%	34.1%	6.5%	4.1%	4.7%	39.3%	32.6%	35.1%
Matanuska-Susitna Borough									
All Cities	33.3%	35.3%	43.1%	3.9%	4.2%	6.4%	34.9%	35.3%	43.1%
Kenai Peninsula Borough									
Anchor Point	64.8%	67.5%	69.5%	9.9%	11.3%	14.7%	65.9%	72.5%	71.6%
Clam Gulch	42.9%	54.5%	45.7%	0.0%	0.0%	2.9%	42.9%	54.5%	45.7%
Homer	61.4%	64.4%	59.1%	10.5%	8.9%	11.8%	64.7%	67.5%	61.9%
Nikiski	33.3%	50.0%	46.2%	0.0%	0.0%	7.7%	33.3%	50.0%	46.2%
Seldovia	51.7%	40.0%	46.6%	13.8%	11.1%	15.5%	56.9%	42.2%	51.7%
Seward	52.2%	43.8%	55.8%	26.5%	16.3%	27.9%	58.4%	51.3%	65.4%
Other	51.1%	57.5%	50.0%	4.1%	1.4%	2.0%	52.5%	58.0%	50.4%
All Cities	55.2%	58.9%	54.8%	8.8%	6.4%	9.1%	57.7%	61.3%	57.0%
Kodiak Island Borough									
Kodiak	53.2%	56.7%	57.9%	10.7%	8.8%	8.9%	56.6%	59.6%	60.9%
Ouzinkie	86.7%	75.0%	83.3%	0.0%	0.0%	0.0%	86.7%	75.0%	83.3%
Port Lions	75.9%	54.2%	78.6%	0.0%	0.0%	3.6%	75.9%	54.2%	82.1%
Other	30.9%	51.9%	46.0%	0.0%	3.7%	4.0%	30.9%	51.9%	46.0%
All Cities	53.1%	56.9%	58.6%	9.3%	8.0%	8.1%	56.1%	59.4%	61.4%
Valdez-Cordova Census Area									
Cordova	16.3%	9.5%	24.7%	4.6%	2.7%	6.1%	17.3%	10.4%	26.4%
Other	37.7%	34.4%	44.2%	7.0%	11.5%	9.1%	37.7%	41.0%	45.5%
All Cities	20.9%	13.3%	27.7%	5.1%	4.0%	6.6%	21.7%	15.0%	29.3%
Fairbanks-North Star Borough									
All Cities	42.0%	47.6%	36.8%	2.0%	0.0%	1.8%	42.0%	47.6%	36.8%
SE. Fairbanks Census Area									
All Cities	20.0%	0.0%	33.3%	0.0%	0.0%	0.0%	20.0%	0.0%	33.3%

Table 3.4 continued

	Halibut			Sablefish			Halibut & Sablefish		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Yukon-Koyukuk Census Area									
All Cities	13.3%	6.5%	11.1%	0.0%	0.0%	0.0%	13.3%	6.5%	11.1%
Nome Census Area									
All Cities	0.4%	0.5%	1.5%	0.0%	0.0%	0.0%	0.4%	0.5%	1.5%
North Slope Borough									
All Cities	20.0%	16.7%	25.0%	0.0%	0.0%	0.0%	20.0%	16.7%	25.0%
NW. Arctic Borough									
All Cities	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%
Haines Borough									
All Cities	66.4%	65.9%	61.5%	9.6%	9.8%	9.0%	66.4%	66.7%	63.1%
Juneau Borough									
Auke Bay	60.0%	62.2%	73.2%	15.6%	16.2%	17.1%	60.0%	64.9%	73.2%
Douglas	57.4%	63.8%	63.3%	25.9%	15.5%	20.4%	61.1%	63.8%	63.3%
Juneau	53.6%	54.3%	53.6%	18.9%	17.9%	15.1%	57.7%	57.8%	56.3%
Other	33.3%	50.0%	40.0%	0.0%	0.0%	0.0%	33.3%	50.0%	40.0%
All Cities	54.5%	56.3%	56.6%	19.2%	17.1%	15.8%	58.1%	59.2%	58.6%
Ketchikan Gateway Borough									
Ketchikan	40.8%	39.4%	37.9%	9.2%	11.0%	8.5%	42.6%	42.5%	39.1%
Ward Cove	42.9%	35.9%	48.3%	20.0%	23.1%	20.7%	48.6%	43.6%	58.6%
All Cities	40.8%	39.1%	38.7%	10.2%	12.3%	9.4%	42.9%	42.6%	40.6%
Prince of Wales-Outer Ketchikan Census Area									
Craig	56.1%	56.0%	50.8%	12.2%	12.8%	9.7%	58.2%	56.0%	51.6%
Other	59.8%	62.9%	62.0%	6.7%	6.4%	6.1%	60.8%	64.9%	62.9%
All Cities	58.6%	60.5%	57.9%	8.5%	8.7%	7.4%	59.9%	61.7%	58.8%
Sitka Census Area									
Sitka	0.0%	0.0%	54.4%	0.0%	0.0%	18.7%	0.0%	0.0%	57.2%
All Cities	63.4%	60.4%	54.4%	23.7%	24.4%	18.7%	67.5%	65.7%	57.2%

ole 3.4 continued

	Halibut			Sablefish			Halibut & Sablefish		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Skagway-Yakutat-Angoon Census Area									
Hoonah	51.9%	59.8%	58.2%	12.0%	10.3%	12.2%	53.7%	61.9%	60.2%
Pelican	62.9%	66.7%	71.2%	37.1%	33.3%	46.2%	70.0%	69.8%	75.0%
Other	61.8%	67.0%	61.7%	4.9%	4.0%	5.4%	62.2%	67.0%	61.7%
All Cities	59.3%	65.1%	62.1%	12.4%	10.4%	12.9%	61.3%	66.1%	63.2%
Wrangell-Petersburg Census Area									
Petersburg	57.0%	54.7%	56.7%	14.3%	14.3%	12.4%	59.8%	57.5%	59.0%
Port Alexander	53.1%	61.9%	51.3%	28.6%	33.3%	23.1%	61.2%	64.3%	53.8%
Wrangell	58.9%	59.2%	57.5%	2.5%	2.6%	3.1%	58.9%	59.2%	57.5%
Other	80.0%	77.3%	74.6%	1.3%	4.5%	1.7%	80.0%	78.8%	74.6%
All Cities	59.6%	58.3%	58.1%	10.8%	11.3%	9.6%	61.7%	60.2%	59.6%
Aleutians East Borough									
All Cities	42.8%	40.1%	51.4%	7.2%	1.4%	3.2%	46.4%	40.1%	52.3%
Aleutian Islands Census Area									
All Cities	66.3%	75.6%	74.7%	7.9%	3.5%	2.4%	68.5%	77.9%	74.7%
Bethel Census Area									
Toksook Bay	22.7%	19.4%	31.6%	0.0%	0.0%	0.0%	22.7%	19.4%	31.6%
Other	1.7%	1.4%	5.7%	0.2%	0.2%	0.2%	1.9%	1.4%	5.7%
All Cities	4.2%	3.3%	6.7%	0.2%	0.2%	0.2%	4.4%	3.3%	6.7%
Bristol Bay Borough									
Naknek	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%	0.0%	0.0%	10.3%
South Naknek	0.0%	0.0%	17.6%	0.0%	0.0%	0.0%	0.0%	0.0%	17.6%
Other	0.0%	0.0%	13.3%	0.0%	0.0%	0.0%	0.0%	0.0%	13.3%
All Cities	0.9%	1.1%	12.0%	0.0%	0.0%	0.0%	0.9%	1.1%	12.0%
Dillingham Census Area									
Manokotak	0.0%	0.0%	9.6%	0.0%	0.0%	0.0%	0.0%	0.0%	9.6%
Other	0.0%	0.0%	8.7%	0.0%	0.0%	0.2%	0.0%	0.0%	8.7%
All Cities	1.9%	1.0%	8.8%	0.2%	0.2%	0.2%	1.9%	1.2%	8.8%
Wade-Hampton Census Area									
All Cities	2.1%	2.4%	1.6%	0.0%	0.0%	0.0%	2.1%	2.4%	1.6%

Table 3.4 continued

	Halibut			Sablefish			Halibut & Sablefish		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Lake & Peninsula Borough									
All Cities	13.2%	6.9%	15.1%	0.0%	0.7%	0.0%	13.2%	7.6%	15.1%
All Alaska Cities									
All Cities	40.8%	40.0%	42.2%	8.2%	7.3%	7.4%	42.7%	41.7%	43.6%
Washington									
Anacortes	24.2%	21.4%	19.6%	2.2%	6.0%	5.9%	24.2%	25.0%	20.6%
Bellingham	13.0%	10.3%	13.5%	5.2%	3.8%	3.6%	13.5%	11.4%	15.1%
Edmonds	10.7%	11.0%	19.1%	5.3%	6.1%	9.6%	12.0%	14.6%	22.3%
Everett	15.7%	26.1%	27.3%	11.8%	10.9%	13.6%	15.7%	26.1%	27.3%
Longview	35.3%	58.3%	33.3%	0.0%	0.0%	4.8%	35.3%	58.3%	33.3%
Marysville	17.6%	21.7%	20.0%	0.0%	0.0%	5.0%	17.6%	21.7%	20.0%
Port Townsend	40.9%	53.8%	53.6%	31.8%	30.8%	25.0%	50.0%	57.7%	57.1%
Seattle	12.1%	11.1%	11.6%	11.3%	9.9%	7.6%	17.5%	16.3%	14.6%
Other	15.4%	16.8%	20.0%	6.5%	6.9%	6.1%	17.7%	18.8%	21.6%
All Cities	14.8%	15.3%	17.3%	7.9%	7.8%	6.9%	17.7%	18.3%	19.4%
All Oregon Cities									
All Cities	22.1%	30.8%	30.0%	8.9%	8.4%	7.1%	24.3%	33.3%	32.6%
Unknown									
All Cities	35.0%	10.6%	27.6%	5.8%	4.3%	11.4%	35.9%	12.1%	29.5%

.ble 3.5 Halibut and sablefish exvessel value as a perc age of the exvessel value of all species for all vessel owne. y owner's residence for the period 1988 through 1990.

	Halibut			Sablefish			Halibut & Sablefish		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Anchorage Borough									
Anchorage	3.9%	4.3%	5.7%	2.1%	1.9%	2.3%	6.0%	6.2%	8.0%
Other		6.3%	7.3%	4.2%	0.0%	0.0%	0.3%	6.3%	7.3%
4.5%									
All Cities	4.1%	4.6%	5.6%	2.0%	1.7%	2.1%	6.1%	6.3%	7.7%
Matanuska-Susitna Borough									
All Cities	3.0%	7.4%	6.6%	0.4%	1.1%	0.5%	3.4%	8.5%	7.1%
Kenai Peninsula Borough									
Anchor Point	15.1%	29.7%	24.3%	1.2%	1.7%	1.0%	16.3%	31.4%	25.3%
Clam Gulch	2.2%	2.5%	7.7%	0.0%	0.0%	0.0%	2.2%	2.5%	7.7%
Homer	14.7%	25.9%	17.7%	5.0%	7.2%	6.	1%19.7%	33.1%	23.8%
Nikiski	2.0%	31.8%	24.4%	0.0%	0.0%	0.2%	2.0%	31.8%	24.6%
Seldovia	14.7%	14.5%	16.6%	11.4%	27.7%	8.2%	26.1%	42.2%	24.8%
Seward	4.6%	27.2%	5.4%	3.4%	26.3%	2.1%	8.0%	53.5%	7.5%
Other	5.1%	10.7%	10.8%	1.2%	0.2%	0.2%	6.3%	10.9%	11.0%
All Cities	8.8%	18.9%	12.3%	3.2%	6.1%	3.2%	12.0%	25.0%	15.5%
Kodiak Island Borough									
Kodiak	12.0%	25.9%	12.2%	3.4%	4.2%	1.3%	15.4%	30.1%	13.5%
Ouzinkie	7.1%	87.2%	31.1%	0.0%	0.0%	0.0%	7.1%	87.2%	31.1%
Port Lions	6.8%	23.6%	11.6%	0.0%	0.0%	0.1%	6.8%	23.6%	11.7%
Other	1.8%	8.0%	8.4%	0.0%	0.5%	0.1%	1.8%	8.5%	8.5%
All Cities	11.1%	25.5%	12.2%	3.1%	4.0%	1.2%	14.2%	29.5%	13.4%
Valdez-Cordova Census Area									
Cordova	2.3%	4.1%	5.6%	1.6%	1.6%	1.6%	3.9%	5.7%	7.2%
Other	4.7%	9.1%	6.9%	6.5%	3.7%	0.3%	11.2%	12.8%	7.2%
All Cities	2.5%	4.6%	5.7%	2.1%	1.8%	1.5%	4.6%	6.4%	7.2%
Fairbanks-North Star Borough									
All Cities	2.6%	5.3%	3.1%	0.0%	0.0%	0.0%	2.6%	5.3%	3.1%
SE. Fairbanks Census Area									
All Cities	0.6%	0.0%	1.4%	0.0%	0.0%	0.0%	0.6%	0.0%	1.4%

Table 3.5 continued

	Halibut			Sablefish			Halibut & Sablefish		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Yukon-Koyukuk Census Area									
All Cities	0.4%	1.2%	0.4%	0.0%	0.0%	0.0%	0.4%	1.2%	0.4%
Nome Census Area									
All Cities	0.0%	0.0%	0.9%	0.1%	0.0%	0.0%	0.1%	0.0%	0.9%
North Slope Borough									
All Cities	1.1%	0.3%	2.1%	0.0%	0.0%	0.0%	1.1%	0.3%	2.1%
NW. Arctic Borough									
All Cities	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
Haines Borough									
All Cities	10.0%	11.4%	13.8%	2.5%	3.5%	3.8%	12.5%	14.9%	17.6%
Juneau Borough									
Auke Bay	14.3%	20.0%	20.6%	5.0%	9.2%	5.3%	19.3%	29.2%	25.9%
Douglas	9.7%	22.7%	28.3%	5.8%	15.6%	12.3%	15.5%	38.3%	40.6%
Juneau	10.3%	15.4%	18.1%	12.6%	14.5%	14.1%	22.9%	29.9%	32.2%
Other	1.3%	6.7%	2.4%	0.0%	0.0%	0.0%	1.3%	6.7%	2.4%
All Cities	10.4%	16.7%	19.9%	10.9%	14.2%	13.0%	21.3%	30.9%	32.9%
Ketchikan Gateway Borough									
Ketchikan	6.6%	6.3%	13.6%	7.8%	9.0%	7.5%	14.4%	15.3%	21.1%
Ward Cove	7.9%	9.4%	14.4%	7.5%	6.8%	11.3%	15.4%	16.2%	25.7%
All Cities	6.7%	6.8%	13.7%	7.8%	8.7%	7.9%	14.5%	15.5%	21.6%
Prince of Wales-Outer Ketchikan Census Area									
Craig	12.4%	16.3%	22.0%	4.6%	8.2%	8.3%	17.0%	24.5%	30.3%
Other	12.4%	15.4%	27.6%	3.2%	2.5%	4.5%	15.6%	17.9%	32.1%
All Cities	12.4%	15.7%	25.0%	3.7%	4.8%	6.2%	16.1%	20.5%	31.2%
Sitka Census Area									
All Cities	21.3%	24.6%	28.4%	37.9%	29.0%	23.3%	59.2%	53.6%	51.7%
Skagway-Yakutat-Angoon Census Area									
Hoonah	19.0%	20.3%	27.7%	27.4%	13.5%	10.3%	46.4%	33.8%	38.0%
Pelican	18.7%	26.7%	35.2%	38.4%	35.2%	18.9%	57.1%	61.9%	54.1%
Other	9.2%	13.1%	16.0%	7.0%	8.5%	4.8%	16.2%	21.6%	20.8%
All Cities	13.9%	18.8%	23.5%	19.8%	16.8%	9.5%	33.7%	35.6%	33.0%

able 3.5 continued.

	Halibut			Sablefish			Halibut & Sablefish		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Wrangell-Petersburg Census Area									
Petersburg	10.8%	13.0%	14.6%	16.3%	12.9%	12.4%	27.1%	25.9%	27.0%
Port Alexander	18.9%	26.9%	35.1%	33.0%	41.0%	30.6%	51.9%	67.9%	65.7%
Wrangell	19.6%	16.5%	18.1%	1.9%	2.5%	2.7%	21.5%	19.0%	20.8%
Other	41.5%	26.7%	33.1%	3.8%	6.0%	6.7%	45.3%	32.7%	39.8%
All Cities	13.4%	14.4%	16.3%	15.1%	12.8%	11.9%	28.5%	27.2%	28.2%
Aleutians East Borough									
All Cities	1.2%	2.6%	6.9%	0.7%	0.5%	0.9%	1.9%	3.1%	7.8%
Aleutian Islands Census Area									
All Cities	9.3%	31.0%	16.0%	0.7%	0.1%	0.1%	10.0%	31.1%	16.1%
Bethel Census Area									
Toksook Bay	0.0%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%	1.2%	0.2%
Other	0.0%	2.9%	2.1%	0.0%	0.1%	0.0%	0.0%	3.0%	2.1%
All Cities	1.4%	2.7%	1.8%	0.0%	0.1%	0.0%	1.4%	2.8%	1.8%
Bristol Bay Borough									
Naknek	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
South Naknek	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Other	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
All Cities	0.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.1%
Dillingham Census Area									
Other	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
All Cities	0.1%	1.5%	0.2%	0.0%	0.0%	0.0%	0.1%	1.5%	0.2%
Wade-Hampton Census Area									
All Cities	0.8%	1.0%	0.6%	0.0%	0.0%	0.0%	0.8%	1.0%	0.6%
Lake & Peninsula Borough									
All Cities	2.6%	1.6%	3.1%	0.0%	0.0%	0.0%	2.6%	1.6%	3.1%
All Alaska Cities									
All Cities	7.9%	13.0%	11.5%	5.2%	6.5%	4.3%	13.1%	19.5%	15.8%

Table 3.5 continued.

	Halibut			Sablefish			Halibut & Sablefish		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Washington									
Anacortes	4.7%	10.7%	4.3%	3.2%	8.1%	2.0%	7.9%	18.8%	6.3%
Bellingham	2.2%	2.7%	4.4%	0.9%	0.4%	1.2%	3.1%	3.1%	5.6%
Edmonds	1.8%	4.0%	1.6%	4.8%	7.3%	1.7%	6.6%	11.3%	3.3%
Everett	3.4%	8.8%	7.6%	4.0%	8.4%	5.2%	7.4%	17.2%	12.8%
Longview	2.8%	7.8%	5.1%	0.0%	0.0%	0.1%	2.8%	7.8%	5.2%
Marysville	9.1%	6.3%	9.5%	0.0%	0.0%	0.8%	9.1%	6.3%	10.3%
Port Townsend	13.2%	22.5%	23.9%	23.5%	21.1%	13.1%	36.7%	43.6%	37.0%
Seattle	1.4%	4.6%	0.8%	4.8%	10.4%	1.4%	6.2%	15.0%	2.2%
Other	4.2%	6.5%	6.7%	6.9%	7.0%	5.6%	11.1%	13.5%	12.3%
All Cities	2.4%	5.6%	2.0%	5.1%	8.2%	2.1%	7.5%	13.8%	4.1%
All Oregon Cities									
All Cities	6.9%	15.1%	9.1%	5.5%	7.0%	2.4%	12.4%	22.1%	11.5%
Unknown									
All Cities	14.5%	11.3%	36.8%	0.0%	0.0%	0.0%	14.5%	11.3%	36.8%

Table 3.6 Estimated number of halibut vessel owners (1984-1990) and number of quota share (QS) recipients by year and census area of owner residence.

Number of halibut vessel owners and QS recipients by year and census area of residence.

Census area	YEAR							
	84	85	86	87	88	89	90	QS
Anchorage Borough	312	193	194	221	229	170	210	351
MatSu Borough	27	24	25	31	42	37	43	73
Kenai Peninsula Borough	511	383	502	615	710	599	726	1,041
Kodiak Island Borough	360	297	351	411	388	352	455	586
Valdez-Cordova	80	67	112	147	115	53	147	204
Fairbanks-North Star Bor.	14	9	14	15	19	19	21	36
SE Fairbanks	1	0	0	1	0	0	0	0
Yukon-Koyukuk	4	3	2	2	3	1	3	6
Nome	0	1	1	0	0	0	1	1
North Slope Borough	0	0	1	1	1	0	1	1
NW Arctic Borough	0	0	0	0	0	0	1	1
Haines Borough	40	43	60	71	77	78	73	95
Juneau Borough	202	152	195	183	221	230	219	314
Ketchikan-Gateway Borough	114	104	107	133	145	133	133	191
P.of Wales-Outer Ketchikan	98	80	103	125	154	161	166	235
Sitka Borough	192	199	230	265	289	292	285	404
Skagway-Yakutat-Angoon	232	177	197	204	241	236	225	316
Wrangell-Petersburg	351	323	372	392	445	411	396	572
Aleutians E. Borough	55	58	87	102	94	87	103	135
Aleutians W. Borough	51	36	29	37	45	45	50	72
Bethel	64	55	59	94	20	17	28	49
Bristol Bay Borough	1	0	1	1	1	0	16	16
Dillingham	1	1	1	5	3	4	45	50
Wade Hampton	0	0	0	6	2	2	3	4
Lake & Peninsula Borough	7	8	10	17	20	9	27	33
All Alaska Areas	2,717	2,213	2,653	3,079	3,264	2,936	3,377	4,786

Table 3.7 Percent of halibut vessel owners and QS recipients by year and census area of residence.

Census area	YEAR							
	84	85	86	87	88	89	90	QS
Anchorage	10.1%	7.8%	6.5%	6.3%	6.3%	5.1%	5.4%	6.4%
MatSu Borough	0.9%	1.0%	0.8%	0.9%	1.2%	1.1%	1.1%	1.3%
Kenai Peninsula Borough	16.6%	15.4%	16.7%	17.6%	19.5%	17.9%	18.7%	19.0%
Kodiak Island Borough	11.7%	12.0%	11.7%	11.8%	10.6%	10.5%	11.7%	10.7%
Valdez-Cordova	2.6%	2.7%	3.7%	4.2%	3.2%	1.6%	3.8%	3.7%
Fairbanks-North Star Bor.	0.5%	0.4%	0.5%	0.4%	0.5%	0.6%	0.5%	0.7%
SE Fairbanks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Yukon-Koyukuk	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%
Nome	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
North Slope Borough	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NW Arctic Borough	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haines Borough	1.3%	1.7%	2.0%	2.0%	2.1%	2.3%	1.9%	1.7%
Juneau Borough	6.6%	6.1%	6.5%	5.2%	6.1%	6.9%	5.6%	5.7%
Ketchikan-Gateway Borough	3.7%	4.2%	3.6%	3.8%	4.0%	4.0%	3.4%	3.5%
P.of Wales-Outer Ketchikan	3.2%	3.2%	3.4%	3.6%	4.2%	4.8%	4.3%	4.3%
Sitka Borough	6.2%	8.0%	7.7%	7.6%	7.9%	8.7%	7.3%	7.4%
Skagway-Yakutat-Angoon	7.5%	7.1%	6.6%	5.8%	6.6%	7.1%	5.8%	5.8%
Wrangell-Petersburg	11.4%	13.0%	12.4%	11.2%	12.2%	12.3%	10.2%	10.4%
Aleutians E. Borough	1.8%	2.3%	2.9%	2.9%	2.6%	2.6%	2.7%	2.5%
Aleutians W. Borough	1.7%	1.5%	1.0%	1.1%	1.2%	1.3%	1.3%	1.3%
Bethel	2.1%	2.2%	2.0%	2.7%	0.5%	0.5%	0.7%	0.9%
Bristol Bay Borough	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.3%
Dillingham	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	1.2%	0.9%
Wade Hampton	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.1%
Lake & Peninsula Borough	0.2%	0.3%	0.3%	0.5%	0.5%	0.3%	0.7%	0.6%
All Alaska Areas	88.3%	89.3%	88.4%	88.2%	89.4%	87.7%	87.0%	87.3%

Note: Total percent of owners may be less than 100% due to presence of non-Alaskan owners not shown.

Table 3.8 Estimated catch of Pacific halibut off Alaska, (1984-1990), and amount of IFQs, using 1991 TACs, by year and census area of owner residence (thousands of pounds net weight).

Halibut catch and IFQs by year and census area of residence.

Census area	YEAR							
	84	85	86	87	88	89	90	IFQ
Anchorage	954	1,019	1,113	2,007	1,871	1,019	1,152	1,140
MatSu Borough	111	143	116	150	234	279	290	201
Kenai Peninsula Borough	4,307	5,207	7,769	8,913	11,899	9,441	8,571	8,041
Kodiak Island Borough	7,694	12,139	14,995	13,876	13,744	11,614	8,887	10,675
Valdez-Cordova	403	558	1,636	1,179	1,021	932	1,372	814
Fairbanks-North Star Bor.	14	8	27	24	33	32	32	21
SE Fairbanks	*	0	0	*	0	0	0	0
Yukon-Koyukuk	1	*	*	*	*	*	*	1
Nome	0	*	*	0	0	0	*	*
North Slope Borough	0	0	*	*	*	0	*	*
NW Arctic Borough	0	0	0	0	0	0	*	*
Haines Borough	254	397	456	631	682	434	391	400
Juneau Borough	1,254	1,336	1,822	1,710	1,948	2,275	2,103	1,551
Ketchikan-Gateway Borough	767	975	1,319	1,003	1,113	1,059	1,219	799
P.of Wales-Outer Ketchikan	276	283	602	643	832	920	1,165	583
Sitka Borough	1,582	2,545	3,149	3,426	4,422	3,838	3,811	3,084
Skagway-Yakutat-Angoon	1,071	1,201	1,461	1,527	1,975	1,809	1,666	1,222
Wrangell-Petersburg	3,297	4,602	6,403	5,333	5,569	5,202	5,247	4,325
Aleutians E. Borough	614	854	1,324	1,391	630	648	1,500	1,044
Aleutians W. Borough	480	429	219	543	972	421	310	414
Bethel	49	25	44	74	5	12	22	49
Bristol Bay Borough	*	0	*	*	*	0	6	4
Dillingham	*	*	*	35	*	205	26	16
Wade Hampton	0	0	0	3	*	*	*	2
Lake & Peninsula Borough	52	136	147	215	361	52	307	192
All Alaska Areas	23,183	31,868	42,611	42,699	47,359	40,196	38,083	34,580

*Due to confidentiality restrictions, this information could not be released.

Table 3.9 Percent of halibut catch and IFQs by year and census area of residence.

Census area	YEAR							
	84	85	86	87	88	89	90	IFQ
Anchorage	2.7%	2.3%	1.9%	3.6%	3.1%	1.8%	2.2%	2.4%
MatSu Borough	0.3%	0.3%	0.2%	0.3%	0.4%	0.5%	0.5%	0.4%
Kenai Peninsula Borough	12.3%	11.5%	13.4%	15.8%	19.5%	16.9%	16.2%	16.9%
Kodiak Island Borough	22.0%	26.9%	25.9%	24.7%	22.5%	20.7%	16.8%	22.5%
Valdez-Cordova	1.2%	1.2%	2.8%	2.1%	1.7%	1.7%	2.6%	1.7%
Fairbanks-North Star Bor.	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%
SE Fairbanks	*	0.0%	0.0%	*	0.0%	0.0%	0.0%	0.0%
Yukon-Koyukuk	0.0%	*	*	*	*	*	*	0.0%
Nome	0.0%	*	*	0.0%	0.0%	0.0%	*	*
North Slope Borough	0.0%	0.0%	*	*	*	0.0%	*	*
NW Arctic Borough	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	*	*
Haines Borough	0.7%	0.9%	0.8%	1.1%	1.1%	0.8%	0.7%	0.8%
Juneau Borough	3.6%	3.0%	3.2%	3.0%	3.2%	4.1%	4.0%	3.3%
Ketchikan-Gateway Borough	2.2%	2.2%	2.3%	1.8%	1.8%	1.9%	2.3%	1.7%
P.of Wales-Outer Ketchikan	0.8%	0.6%	1.0%	1.1%	1.4%	1.6%	2.2%	1.2%
Sitka Borough	4.5%	5.6%	5.4%	6.1%	7.2%	6.9%	7.2%	6.5%
Skagway-Yakutat-Angoon	3.1%	2.7%	2.5%	2.7%	3.2%	3.2%	3.1%	2.6%
Wrangell-Petersburg	9.4%	10.2%	11.1%	9.5%	9.1%	9.3%	9.9%	9.1%
Aleutians E. Borough	1.8%	1.9%	2.3%	2.5%	1.0%	1.2%	2.8%	2.2%
Aleutians W. Borough	1.4%	1.0%	0.4%	1.0%	1.6%	0.8%	0.6%	0.9%
Bethel	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%
Bristol Bay Borough	*	0.0%	*	*	*	0.0%	0.0%	0.0%
Dillingham	*	*	*	0.1%	*	0.4%	0.0%	0.0%
Wade Hampton	0.0%	0.0%	0.0%	0.0%	*	*	*	0.0%
Lake & Peninsula Borough	0.1%	0.3%	0.3%	0.4%	0.6%	0.1%	0.6%	0.4%
All Alaska Areas	66.2%	70.5%	73.7%	75.9%	77.6%	71.8%	71.9%	72.8%

Note: Total percent of catch may be less than 100% due to presence of catch to non-Alaskan owners not shown.
*Due to confidentiality restrictions, this information could not be released.

Table 3.10 Number of sablefish vessel owners (1985-1990) and number of quota share (QS) recipients by year and census area of owner residence.

Number of sablefish vessel owners and QS recipients by year and census area of residence.

Census area	YEAR						
	85	86	87	88	89	90	QS
Anchorage	6	10	20	25	9	18	37
MatSu Borough	0	1	2	4	3	4	7
Kenai Peninsula Borough	12	43	85	95	62	102	161
Kodiak Island Borough	37	46	56	57	41	58	90
Valdez-Cordova	6	15	24	16	13	17	26
Nome	0	0	0	1	0	0	1
Haines Borough	0	2	9	11	11	9	19
Juneau Borough	23	41	57	64	64	57	87
Ketchikan-Gateway Borough	5	18	28	29	36	27	44
P.of Wales-Outer Ketchikan	1	6	13	14	22	20	31
Sitka Borough	38	69	85	95	96	89	131
Skagway-Yakutat-Angoon	12	27	40	46	37	39	53
Wrangell-Petersburg	21	42	50	62	70	55	98
Aleutians E. Borough	8	12	18	13	4	6	17
Aleutians W. Borough	2	0	3	7	3	2	8
Bethel	0	0	0	1	1	1	2
Dillingham	0	0	0	1	1	0	1
Lake & Peninsula Borough	0	0	1	0	1	0	1
All Alaska Areas	171	332	491	541	474	504	814

Table 3.11 Percent of sablefish vessel owners and QS recipients by year and census area of residence.

Census area	YEAR						
	85	86	87	88	89	90	QS
Anchorage	2.5%	2.2%	2.9%	3.5%	1.4%	2.6%	3.4%
MatSu Borough	0.0%	0.2%	0.3%	0.6%	0.5%	0.6%	0.6%
Kenai Peninsula Borough	4.9%	9.3%	12.5%	13.5%	9.7%	14.9%	14.7%
Kodiak Island Borough	15.2%	10.0%	8.2%	8.1%	6.4%	8.5%	8.2%
Valdez-Cordova	2.5%	3.3%	3.5%	2.3%	2.0%	2.5%	2.4%
Nome	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Haines Borough	0.0%	0.4%	1.3%	1.6%	1.7%	1.3%	1.7%
Juneau Borough	9.4%	8.9%	8.4%	9.1%	10.0%	8.3%	8.0%
Ketchikan-Gateway Borough	2.0%	3.9%	4.1%	4.1%	5.6%	3.9%	4.0%
P.of Wales-Outer Ketchikan	0.4%	1.3%	1.9%	2.0%	3.4%	2.9%	2.8%
Sitka Borough	15.6%	15.0%	12.5%	13.5%	15.0%	13.0%	12.0%
Skagway-Yakutat-Angoon	4.9%	5.9%	5.9%	6.5%	5.8%	5.7%	4.8%
Wrangell-Petersburg	8.6%	9.1%	7.4%	8.8%	10.9%	8.0%	9.0%
Aleutians E. Borough	3.3%	2.6%	2.7%	1.8%	0.6%	0.9%	1.6%
Aleutians W. Borough	0.8%	0.0%	0.4%	1.0%	0.5%	0.3%	0.7%
Bethel	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%
Dillingham	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.1%
Lake & Peninsula Borough	0.0%	0.0%	0.1%	0.0%	0.2%	0.0%	0.1%
All Alaska Areas	70.1%	72.2%	72.3%	76.6%	73.8%	73.7%	74.4%

Note: Total percent of owners may be less than 100% due to presence of non-Alaskan owners not shown.

Table 3.12 Estimated catch of sablefish, (1985-1990), and amount of IFQs, using 1991 TACs, by year and census area of owner residence (thousands of pounds round weight).

Sablefish catch and IFQs by year and census area of residence.

Census area	YEAR						
	85	86	87	88	89	90	IFQ
Anchorage	64	140	1,801	877	437	817	828
MatSu Borough	0	*	*	25	*	24	18
Kenai Peninsula Borough	1,586	1,731	3,756	4,985	4,705	4,302	3,718
Kodiak Island Borough	3,302	4,320	4,519	4,388	2,994	2,134	3,252
Valdez-Cordova	246	747	987	853	1,019	775	548
Nome	0	0	0	*	0	0	*
Haines Borough	0	*	239	194	172	195	138
Juneau Borough	395	1,131	1,782	1,978	2,597	2,481	1,717
Ketchikan-Gateway Borough	886	1,314	1,639	1,168	1,892	1,432	972
P.of Wales-Outer Ketchikan	*	51	471	238	459	567	330
Sitka Borough	3,218	3,715	5,773	7,945	6,399	6,131	5,922
Skagway-Yakutat-Angoon	866	1,760	2,390	2,776	2,227	1,420	1,611
Wrangell-Petersburg	1,952	4,737	6,240	6,256	6,428	7,121	5,686
Aleutians E. Borough	448	862	887	389	189	407	410
Aleutians W. Borough	*	0	*	89	*	*	40
Bethel	0	0	0	*	*	*	*
Dillingham	0	0	0	*	*	0	*
Lake & Peninsula Borough	0	0	*	0	*	0	*
All Alaska Areas	13,001	20,526	30,993	32,166	29,553	27,809	25,191

*Due to confidentiality restrictions, this information could not be released.

Table 3.13 Percent of sablefish catch and IFQs by year and census area of residence.

Census area	YEAR						
	85	86	87	88	89	90	IFQ
Anchorage	0.2%	0.3%	3.0%	1.4%	0.7%	1.5%	1.6%
MatSu Borough	0.0%	*	*	0.0%	*	0.0%	0.0%
Kenai Peninsula Borough	5.6%	4.1%	6.3%	7.8%	7.8%	7.7%	7.2%
Kodiak Island Borough	11.6%	10.2%	7.6%	6.9%	5.0%	3.8%	6.3%
Valdez-Cordova	0.9%	1.8%	1.7%	1.3%	1.7%	1.4%	1.1%
Nome	0.0%	0.0%	0.0%	*	0.0%	0.0%	*
Haines Borough	0.0%	*	0.4%	0.3%	0.3%	0.3%	0.3%
Juneau Borough	1.4%	2.7%	3.0%	3.1%	4.3%	4.4%	3.3%
Ketchikan-Gateway Borough	3.1%	3.1%	2.7%	1.8%	3.1%	2.5%	1.9%
P.of Wales-Outer Ketchikan	*	0.1%	0.8%	0.4%	0.8%	1.0%	0.6%
Sitka Borough	11.3%	8.7%	9.7%	12.5%	10.6%	10.9%	11.5%
Skagway-Yakutat-Angoon	3.0%	4.1%	4.0%	4.4%	3.7%	2.5%	3.1%
Wrangell-Petersburg	6.9%	11.1%	10.5%	9.8%	10.7%	12.7%	11.1%
Aleutians E. Borough	1.6%	2.0%	1.5%	0.6%	0.3%	0.7%	0.8%
Aleutians W. Borough	*	0.0%	*	0.1%	*	*	0.1%
Bethel	0.0%	0.0%	0.0%	*	*	*	*
Dillingham	0.0%	0.0%	0.0%	*	*	0.0%	*
Lake & Peninsula Borough	0.0%	0.0%	*	0.0%	*	0.0%	*
All Alaska Areas	45.6%	48.3%	51.9%	50.6%	49.1%	49.5%	49.0%

Note: Total percent of catch may be less than 100% due to presence of catch to non-Alaskan owners not shown.
*Due to confidentiality restrictions, this information could not be released.

Table 3.14 Number of halibut and sablefish vessel owners (1985-1990) and number of quota share (QS) recipients by year and census area of owner residence.

Number of halibut and sablefish vessel owners and QS recipients by year and census area of residence.

Census area	YEAR						
	85	86	87	88	89	90	QS
Anchorage	195	194	222	231	170	211	356
MatSu Borough	24	25	31	42	37	43	74
Kenai Peninsula Borough	384	503	620	715	604	728	1,051
Kodiak Island Borough	301	353	414	390	353	456	587
Valdez-Cordova	67	112	147	116	55	149	208
Fairbanks-North Star Bor.	9	14	15	19	19	21	36
SE Fairbanks	0	0	1	0	0	0	0
Yukon-Koyukuk	3	2	2	3	1	3	6
Nome	1	1	0	1	0	1	2
North Slope Borough	0	1	1	1	0	1	1
NW Arctic Borough	0	0	0	0	0	1	1
Haines Borough	43	60	71	77	79	73	95
Juneau Borough	154	195	184	222	232	221	315
Ketchikan-Gateway Borough	104	107	133	148	137	134	194
P.of Wales-Outer Ketchikan	80	103	125	154	161	166	236
Sitka Borough	201	233	268	292	296	286	406
Skagway-Yakutat-Angoon	178	198	205	243	237	225	320
Wrangell-Petersburg	324	373	393	448	415	397	575
Aleutians E. Borough	59	88	102	96	87	103	136
Aleutians W. Borough	37	29	37	45	47	50	72
Bethel	55	59	94	21	17	28	50
Bristol Bay Borough	0	1	1	1	0	16	16
Dillingham	1	1	5	3	4	45	50
Wade Hampton	0	0	6	2	2	3	4
Lake & Peninsula Borough	8	10	18	20	9	27	33
All Alaska Areas	2,507	3,028	3,531	3,704	3,406	3,916	5,579

Table 3.15 Percent of halibut and sablefish vessel owners and QS recipients by year and census area of residence.

Census area	YEAR						
	85	86	87	88	89	90	QS
Anchorage	7.8%	6.4%	6.3%	6.2%	5.0%	5.4%	6.4%
MatSu Borough	1.0%	0.8%	0.9%	1.1%	1.1%	1.1%	1.3%
Kenai Peninsula Borough	15.3%	16.6%	17.6%	19.3%	17.7%	18.6%	18.8%
Kodiak Island Borough	12.0%	11.7%	11.7%	10.5%	10.4%	11.6%	10.5%
Valdez-Cordova	2.7%	3.7%	4.2%	3.1%	1.6%	3.8%	3.7%
Fairbanks-North Star Bor.	0.4%	0.5%	0.4%	0.5%	0.6%	0.5%	0.6%
SE Fairbanks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Yukon-Koyukuk	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%
Nome	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
North Slope Borough	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NW Arctic Borough	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haines Borough	1.7%	2.0%	2.0%	2.1%	2.3%	1.9%	1.7%
Juneau Borough	6.1%	6.4%	5.2%	6.0%	6.8%	5.6%	5.6%
Ketchikan-Gateway Borough	4.1%	3.5%	3.8%	4.0%	4.0%	3.4%	3.5%
P.of Wales-Outer Ketchikan	3.2%	3.4%	3.5%	4.2%	4.7%	4.2%	4.2%
Sitka Borough	8.0%	7.7%	7.6%	7.9%	8.7%	7.3%	7.3%
Skagway-Yakutat-Angoon	7.1%	6.5%	5.8%	6.6%	7.0%	5.7%	5.7%
Wrangell-Petersburg	12.9%	12.3%	11.1%	12.1%	12.2%	10.1%	10.3%
Aleutians E. Borough	2.4%	2.9%	2.9%	2.6%	2.6%	2.6%	2.4%
Aleutians W. Borough	1.5%	1.0%	1.0%	1.2%	1.4%	1.3%	1.3%
Bethel	2.2%	1.9%	2.7%	0.6%	0.5%	0.7%	0.9%
Bristol Bay Borough	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.3%
Dillingham	0.0%	0.0%	0.1%	0.1%	0.1%	1.1%	0.9%
Wade Hampton	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.1%
Lake & Peninsula Borough	0.3%	0.3%	0.5%	0.5%	0.3%	0.7%	0.6%
All Alaska Areas	88.9%	87.9%	87.7%	88.8%	87.0%	86.5%	86.5%

Note: Total percent of owners may be less than 100% due to presence of non-Alaskan owners not shown.

Table 3.16 Estimated value of catch of Pacific halibut and sablefish, in thousands of dollars, (1985-1990), and calculated value of IFQs[1], by year and census area of owner residence.

Halibut and sablefish value and IFQ value by year and census area of residence.

Census area	YEAR						
	85	86	87	88	89	90	IFQ
Anchorage	967	1,733	4,945	3,647	2,180	3,126	3,063
MatSu Borough	128	167	232	326	461	545	410
Kenai Peninsula Borough	6,078	12,820	17,109	22,281	21,184	20,896	19,446
Kodiak Island Borough	13,812	25,684	25,115	23,621	21,837	18,569	24,111
Valdez-Cordova	720	3,067	2,824	2,569	2,930	3,461	2,142
Fairbanks-North Star Bor.	7	39	34	40	48	56	40
SE Fairbanks	0	0	*	0	0	0	0
Yukon-Koyukuk	*	*	*	*	*	*	2
Nome	*	*	0	*	0	*	*
North Slope Borough	0	*	*	*	0	*	*
NW Arctic Borough	0	0	0	0	0	*	*
Haines Borough	354	671	1,181	1,136	906	951	920
Juneau Borough	1,548	3,703	4,499	5,444	7,317	7,024	4,763
Ketchikan-Gateway Borough	1,670	3,157	3,317	3,168	4,438	4,063	2,543
P.of Wales-Outer Ketchikan	257	913	1,463	1,387	2,064	2,816	1,470
Sitka Borough	5,178	8,092	11,532	17,695	15,394	14,907	12,012
Skagway-Yakutat-Angoon	1,854	3,790	4,930	6,710	6,062	4,838	4,015
Wrangell-Petersburg	5,869	13,746	14,808	16,490	17,471	18,765	14,193
Aleutians E. Borough	1,167	2,730	3,014	1,372	1,251	3,197	2,450
Aleutians W. Borough	412	314	1,051	1,328	630	552	849
Bethel	22	63	106	12	24	38	98
Bristol Bay Borough	0	*	*	*	0	11	7
Dillingham	*	*	51	*	306	47	31
Wade Hampton	0	0	4	*	*	*	4
Lake & Peninsula Borough	122	211	607	442	80	544	374
All Alaska Areas	66,046	123,853	149,210	173,052	174,555	168,457	144,660

[1]Price/pound figures came from the Commercial Fisheries Entry Commissions' Condensed Gross Earnings data for halibut and sablefish for 1984 through 1990, from Pacfin data for 1991 sablefish, and from a conversation with the IPHC for halibut 1991.
*Due to confidentiality restrictions, this information could not be released.

Table 3.17 Percent of halibut and sablefish catch value and IFQ value by year and census area of residence.

Census area	YEAR						
	85	86	87	88	89	90	IFQ
Anchorage	1.5%	1.4%	3.3%	2.1%	1.2%	1.9%	2.1%
MatSu Borough	0.2%	0.1%	0.2%	0.2%	0.3%	0.3%	0.3%
Kenai Peninsula Borough	9.2%	10.4%	11.5%	12.9%	12.1%	12.4%	13.4%
Kodiak Island Borough	20.9%	20.7%	16.8%	13.6%	12.5%	11.0%	16.7%
Valdez-Cordova	1.1%	2.5%	1.9%	1.5%	1.7%	2.1%	1.5%
Fairbanks-North Star Bor.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SE Fairbanks	0.0%	0.0%	*	0.0%	0.0%	0.0%	0.0%
Yukon-Koyukuk	*	*	*	*	*	*	0.0%
Nome	*	*	0.0%	*	0.0%	*	*
North Slope Borough	0.0%	*	*	*	0.0%	*	*
NW Arctic Borough	0.0%	0.0%	0.0%	0.0%	0.0%	*	*
Haines Borough	0.5%	0.5%	0.8%	0.7%	0.5%	0.6%	0.6%
Juneau Borough	2.3%	3.0%	3.0%	3.1%	4.2%	4.2%	3.3%
Ketchikan-Gateway Borough	2.5%	2.5%	2.2%	1.8%	2.5%	2.4%	1.8%
P.of Wales-Outer Ketchikan	0.4%	0.7%	1.0%	0.8%	1.2%	1.7%	1.0%
Sitka Borough	7.8%	6.5%	7.7%	10.2%	8.8%	8.8%	8.3%
Skagway-Yakutat-Angoon	2.8%	3.1%	3.3%	3.9%	3.5%	2.9%	2.8%
Wrangell-Petersburg	8.9%	11.1%	9.9%	9.5%	10.0%	11.1%	9.8%
Aleutians E. Borough	1.8%	2.2%	2.0%	0.8%	0.7%	1.9%	1.7%
Aleutians W. Borough	0.6%	0.3%	0.7%	0.8%	0.4%	0.3%	0.6%
Bethel	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%
Bristol Bay Borough	0.0%	*	*	*	0.0%	0.0%	0.0%
Dillingham	*	*	0.0%	*	0.2%	0.0%	0.0%
Wade Hampton	0.0%	0.0%	0.0%	*	*	*	0.0%
Lake & Peninsula Borough	0.2%	0.2%	0.4%	0.3%	0.0%	0.3%	0.3%
All Alaska Areas	60.8%	65.3%	64.9%	62.3%	59.9%	62.0%	64.3%

Note: Total percent of value may be less than 100% due to presence of catch to non-Alaskan owners not shown.
*Due to confidentiality restrictions, this information could not be released.

Table 3.18 Cumulative numbers of halibut vessel owners with each level of either landings by year or IFQ (based on 1991 TACs) by Borough or Census Area.

Halibut - States other than Alaska

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	88	55	24	30	40	46	57	192
1-5	170	99	86	106	111	126	145	385
5-10	208	136	141	180	180	196	227	494
10-20	253	164	200	272	253	275	323	566
≥20	360	266	348	410	385	410	506	698

Halibut - Anchorage Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	200	91	85	83	69	69	75	199
1-5	279	147	145	145	155	124	149	293
5-10	294	169	170	168	186	146	182	325
10-20	305	182	186	196	207	158	197	339
≥20	312	193	194	221	229	170	210	351

Halibut - Matanuska-Susitna Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	13	14	12	13	19	12	16	43
≥1	27	24	25	31	42	37	43	73

Rows in this table were deleted because of confidentiality restrictions.

Halibut - Kenia Peninsula Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	205	118	133	166	154	144	187	446
1-5	318	211	252	295	321	299	369	710
5-10	387	258	322	380	430	380	483	837
10-20	457	311	398	476	534	454	627	941
≥20	511	383	502	615	710	599	726	1,041

Table 3.18 continued

Halibut - Kodiak Island Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	131	79	55	73	61	64	91	180
1-5	218	143	125	148	143	120	174	322
5-10	258	169	172	195	191	166	244	386
10-20	280	187	222	252	250	214	323	462
≥20	360	297	351	411	388	352	455	586

Halibut - Valdez-Cordova Census Area

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	36	29	26	47	32	21	55	110
1-5	67	48	57	104	79	34	102	172
5-10	72	58	80	119	91	40	121	182
10-20	76	60	93	129	104	44	129	195
≥20	80	67	112	147	115	53	147	204

Halibut - Fairbanks-North Star Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	10	6	5	9	12	13	15	29
≥1	14	9	14	15	19	19	21	36

Rows in this table were deleted because of confidentiality restrictions.

Halibut - Southeast Fairbanks Census Area

There are no qualifying QS recipients in the Southeast Fairbanks census area.

Halibut - Yukon-Koyukuk Census Area

There are a total of 6 qualifying QS recipients in the Yukon-Koyukuk Census Area. They are not broken down by landings category due to confidentiality restrictions.

Table 3.18 continued

Halibut - Nome Census Area

There is 1 qualifying QS recipient in the Nome Census Area. It is not broken down by landings category due to confidentiality restrictions.

Halibut - North Slope Borough

There is 1 qualifying QS recipient in the North Slope Borough. It is not broken down by landings category due to confidentiality restrictions.

Halibut - Northwest Arctic Borough

There is 1 qualifying QS recipient in the Northwest Arctic Borough. It is not broken down by landings category due to confidentiality restrictions.

Halibut - Haines Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	3	3	4	4	3	13	6	19
1-5	19	16	22	23	35	48	44	63
5-10	32	27	43	48	55	64	62	87
≥10	40	43	60	71	77	78	73	95

Rows in this table were deleted because of confidentiality restrictions.

Halibut - Juneau Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	64	25	40	41	52	51	49	141
1-5	136	81	96	88	119	125	113	225
5-10	168	108	133	120	160	163	162	265
10-20	186	134	168	164	195	196	183	297
≥20	202	152	195	183	221	230	219	314

Table 3.18 continued

Halibut - Ketchikan-Gateway Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	59	31	25	33	45	31	35	92
1-5	87	65	54	88	95	82	83	15
5-10	94	80	67	104	116	99	96	169
10-20	105	90	92	124	132	118	113	185
≥20	114	104	107	133	145	133	133	191

Halibut - Prince of Wales-Outer Ketchikan Census Area

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	42	27	26	28	38	43	42	128
1-5	79	63	67	78	94	103	102	194
5-10	93	73	87	109	128	132	127	223
≥10	98	80	103	125	154	161	166	235

Rows in this table were deleted because of confidentiality restrictions.

Halibut - Sitka Census Area

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	72	45	56	64	56	75	53	168
1-5	124	98	121	139	143	160	133	275
5-10	147	128	142	170	185	196	171	322
10-20	167	153	182	220	218	238	224	362
≥20	192	199	230	265	289	292	285	404

Halibut - Skagway-Yakutat-Angoon Census Area

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	96	51	61	38	58	70	66	158
1-5	191	124	136	133	148	160	156	257
5-10	212	149	163	158	189	189	182	283
10-20	217	161	178	188	210	212	201	301
≥20	232	177	197	204	241	236	225	316

Table 3.18 continued

Halibut - Wrangell-Petersburg Census Area

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	106	77	54	59	87	76	70	206
1-5	215	163	162	180	219	205	179	386
5-10	265	208	232	251	299	281	252	470
10-20	306	252	287	321	367	346	328	518
≥20	351	323	372	392	445	411	396	572

Halibut - Aleutians East Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	10	13	14	9	15	18	8	36
1-5	25	25	33	42	55	49	42	81
5-10	37	32	52	56	74	64	60	10
10-20	50	50	64	77	85	75	82	120
≥20	55	58	87	102	94	87	103	135

Halibut - Aleutian Islands Census - Balance

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	13	10	7	11	9	12	10	33
1-5	31	18	20	25	20	28	33	53
5-10	39	23	22	29	28	34	41	62
10-20	45	30	29	32	33	39	46	67
≥20	51	36	C	37	45	45	50	72

C - this is excluded due to confidentiality restrictions.

Halibut - Bethel Census Area

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	56	50	46	66	20	17	23	31
≥1	64	55	59	94	20	C	28	49

C - this is excluded due to confidentiality restrictions. Rows in this table were deleted because of confidentiality restrictions.

Table 3.18 continued

Halibut - Bristol Bay Borough

There are 16 qualifying recipients in the Bristol Bay Borough. All would receive less than 1,000 pounds QS.

Halibut - Dillingham Census Area

There are 50 qualifying QS recipients in the Dillingham Census Area. They are not broken down by landing categories due to confidentiality restrictions. More than 45 of them would receive less that 1,000 pounds QS.

Halibut - Wade Hampton Census Area

There are a total of 4 qualifying QS recipients in the Wade Hampton Census Area. They are not broken down by landings category due to confidentiality restrictions.

Halibut - Lake and Peninsula Borough

Landings (1000 lbs)	1984	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	0	2	0	0	1	1	5	10
≥1	7	8	10	17	20	9	27	33

Rows in this table were deleted because of confidentiality restrictions.

Table 3.19 Cumulative numbers of sablefish vessel owners with each level of either landings by year or IFQ (based on 1991 TACs) by Borough or Census Area.

Sablefish - States other than Alaska

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	2	3	6	6	16	25	55
1-5	10	7	23	20	28	42	98
5-10	14	14	41	28	36	44	113
10-20	20	28	65	40	55	53	140
≥20	73	128	188	165	168	180	280

Sablefish - Anchorage Borough

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	1	4	3	9	2	5	17
≥1	6	10	20	25	9	18	37

Rows in this table were deleted because of confidentiality restrictions.

Sablefish - Matanuska-Susitna Borough

There are a total of 7 qualifying QS recipients in the Matnuska-Susitna Borough Census Area. They are not broken down by landings category due to confidentiality restrictions.

Sablefish - Kenia Peninsula Borough

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	2	5	20	19	7	29	68
1-5	3	14	35	46	19	61	113
5-10	4	21	47	54	31	75	127
10-20	4	29	57	67	39	83	139
≥20	12	43	85	95	62	102	161

Table 3.19 continued

Sablefish - Kodiak Island Borough

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	1	2	7	20	2	16	34
1-5	5	3	13	27	7	33	46
5-10	10	3	18	27	13	40	48
10-20	14	11	22	29	16	41	56
≥20	37	46	56	57	41	58	90

Sablefish - Valdez-Cordova Census Area

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	0	1	5	3	2	2	6
1-5	6	4	8	4	3	6	12
5-10	C	5	11	5	3	8	14
10-20	C	7	14	6	3	10	18
≥20	C	15	24	16	13	17	26

C - confidential data; some of the 6 listed in the 1-5 category may be in the upper categories.

Sablefish - Nome Census Area

There is 1 qualifying QS recipient in the Nome Census Area. It is not broken down by landings category due to confidentiality restrictions.

Sablefish - Haines Borough

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	0	0	0	3	2	1	7
1-5	0	0	1	5	4	3	9
5-10	0	C	1	6	5	3	14
10-20	0	C	5	7	6	5	16
≥20	0	C	9	11	11	9	19

C - this is excluded due to confidentiality restrictions.

Table 3.19 continued

Sablefish - Juneau Borough

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	4	4	3	5	6	5	13
1-5	12	8	9	15	11	9	32
5-10	16	16	20	28	22	19	49
10-20	18	23	35	40	32	27	67
≥20	23	41	57	64	64	57	87

Sablefish - Ketchikan Gateway Borough

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	0	1	3	0	3	5	10
1-5	1	3	11	3	8	9	20
5-10	1	6	16	9	10	10	26
10-20	1	10	23	16	15	10	34
≥20	5	18	28	29	36	27	44

Sablefish - Prince of Wales-Outer Ketchikan Census Area

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	0	2	0	3	3	0	8
1-5	0	6	0	7	4	3	15
5-10	C	C	3	8	6	6	20
10-20	C	C	7	10	13	12	27
≥20	C	C	13	14	22	20	31

C - this is excluded due to confidentiality restrictions.

Sablefish - Sitka Census Area

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	4	3	0	14	11	7	22
1-5	9	10	4	17	19	12	43
5-10	13	17	10	27	23	18	57
10-20	21	32	29	34	31	26	72
≥20	38	69	85	95	96	89	131

Table 3.19 continued

Sablefish - Skagwayu-Yakutat-Angoon Census Area

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	0	1	1	6	5	9	10
1-5	5	4	5	11	8	9	22
5-10	5	6	10	14	11	14	26
10-20	8	9	14	20	16	19	31
≥20	12	27	40	46	37	39	53

Sablefish - Wrangell-Petersburg Census Area

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	0	5	1	8	13	6	18
1-5	2	6	3	14	18	11	31
5-10	4	8	5	16	20	12	42
10-20	5	12	11	18	27	13	51
≥20	21	42	50	62	70	55	98

Sablefish - Aleutians East Borough

Landings (1000 lbs)	1985	1986	1987	1988	1989	1990	QS Recip.
≤1	1	0	1	1	0	1	1
1-5	1	1	2	1	0	1	2
5-10	1	2	3	2	1	1	8
10-20	3	4	5	5	4	2	11
≥20	8	12	18	13	C	6	17

C - this is excluded due to confidentiality restrictions.

Sablefish - Aleutian Islands Census Area - Balance

There are a total of 8 qualifying QS recipients in the Aleutian Islands Census Area. They are not broken down by landings category due to confidentiality restrictions.

Sablefish - Bethel Census Area

There are a total of 2 qualifying QS recipients in the Bethel Census Area. They are not broken down by landings category due to confidentiality restrictions.

Table 3.19 continued

Sablefish - Dilingham Census Area

There is 1 qualifying QS recipient in the Dillingham Census Area. It is not broken down by landings category due to confidentiality restrictions.

Sablefish - Lake and Peninsula Borough

There is 1 qualifying QS recipient in the Lake and Peninsula Borough. It is not broken down by landings category due to confidentiality restrictions.

Note: For Boroughs or Census Areas not shown, there are no qualifying recipients of sablefish QS.

4.0 EFFECTS ON OTHER FISHERIES

The potential effects on other fisheries of the proposed IFQ program are discussed in this chapter. The fisheries considered are other commercial fisheries off Alaska, commercial fisheries in adjacent waters managed by other Regional Fishery Management Councils, recreational fisheries off Alaska, and subsistence fisheries off Alaska.

4.1 Non-IFQ fisheries

By relieving pressure on the halibut and sablefish fisheries, an IFQ program would tend to increase participation in other fisheries for two reasons. First, participation in the other fisheries would probably increase as fishermen attempt to create a record of participation in the expectation that IFQs would be used in those fisheries eventually. The increased participation in the other fisheries would impose costs on fishermen who are already participating in those fisheries and, perhaps, on these fisheries as a whole. Second, those who chose not to participate in the halibut and sablefish fisheries might be more likely to participate in the other fisheries. However, there are also some individuals whose participation in other fisheries would not be possible without participating in the halibut or sablefish fishery. To the extent such fishermen leave the halibut and sablefish fisheries as a result of the IFQ program, their participation in other fisheries would also decrease.

The effect on other fisheries of the IFQ program for halibut is clearly limited by the fact that in the major halibut areas, the fishing year consists of only one or two days of fishing. This means that most of those involved in the halibut fishery are also actively involved in other fisheries and that relatively little additional time will be available per vessel for additional participation in other fisheries.

The data presented in Tables 4.1 - 4.6, Tables 4.7 - 4.12, and Tables 4.13 - 4.18, respectively, provide information concerning annual cross participation for vessel owners in the halibut fishery, the sablefish fishery, and these two fisheries combined. Six measures of cross participation and dependence are presented for each of the two fisheries and for the combined fisheries. For the halibut fishery, the six measures are: (1) the number of halibut vessel owners that participated in other fisheries by fishery; (2) the corresponding percentage of halibut vessel owners; (3) the weighted average of the exvessel value of each fishery as a percentage of the total exvessel value of landings for all halibut vessel owners; (4) the weighted average of the exvessel value of halibut as a percentage of the total exvessel value of landings for all halibut vessel owners who also had landings in the specified fishery; (5) the unweighted average of the exvessel value of each fishery as a percentage of the total exvessel value of landings for all halibut vessel owners; and (6) the unweighted average of the exvessel value of halibut as a percentage of the total exvessel value of landings for all halibut vessel owners who also had landings in the specified fishery. The uses and meaning of each measure are discussed below. There are small differences between the estimates of the total numbers of vessel owners presented below and those in Chapters 2 and 3 because the exvessel value information used for the Chapter 4 tables was not available in the data files used to generate the tables in Chapters 2 and 3.

Although similar data are provided separately for the owners of halibut and sablefish vessels, respectively, in Tables 4.1 -4.6 and 4.7 - 4.12, this summary is for the two fisheries combined. In 1990, for example, 4,292 vessel owners had fixed gear halibut or sablefish landings and 3,211 or 74.8% of these also had other landings in Alaska fisheries (Tables 4.13 and 4.14). More specifically, 767 or 17.9% had longline Pacific cod landing, 1,134 or 26.4% had other longline landings, 744 or 17.3% had troll salmon landings, 1,509 or 35.2% had net salmon landings, and smaller numbers of owners had landings in various other fisheries. Because the other longline landings, excluding Pacific cod, accounted for only 0.5% of the total exvessel value of the total landings of halibut and sablefish vessel

owners (Table 4.15), most of these landings probably were as bycatch in the halibut and sablefish fisheries.

In 1990, 65% of the total exvessel value associated with these vessel owners was from other fisheries (Table 4.15) which means that fixed gear halibut and sablefish landings accounted for only 35% of the total. The exvessel value of their troll and net salmon landings were greater, combined they accounted for 38.3% of the total. For those owners who also had net salmon landings, fixed gear halibut and sablefish landings accounted for only 20.9% of the total exvessel value of their landings; however, for those owners who also had troll salmon landings, fixed gear halibut and sablefish landings accounted for 43.8% of their total (Table 4.16). For those owners who also had longline Pacific cod landings, fixed gear halibut and sablefish landings accounted for 44.4% of the their total.

Tables 4.17 and 4.18 present unweighted averages as opposed to the weighted averages in Tables 4.15 and 4.16. The weighted averages are calculated by taking the total exvessel value of a fishery or group of fisheries for a specific group of vessel owners and dividing that total by another total. For Table 4.15, the total exvessel value of landings in each fishery for all halibut and sablefish vessel owners combined is divided by the total exvessel value of all fisheries for halibut and sablefish vessel owners. Therefore, a larger percentage indicates higher relative dependence on a specific fishery and conversely a lower dependence on other fisheries including halibut and sablefish. The difference for Table 4.16 is that each percentage is calculated by dividing the total exvessel value of fixed gear halibut and sablefish landings by the total exvessel value for all fisheries, where both values are for all the vessel owners with halibut or fixed gear sablefish landings and landings in the specific fishery. Therefore, each entry in Table 4.16 is for a separate subset of halibut and sablefish vessel owners and a higher percentage indicates a higher dependence on these two fisheries.

The unweighted percentages in Tables 4.17 and 4.18 are generated by first calculating the appropriate percentage for each vessel owner and then calculating the average percentage across all owners for a particular group of owners. The data in Table 4.17 indicate that, in 1990, the average percentage of exvessel value of fixed gear halibut and sablefish vessel owners accounted for by other landings was 63.2% compared to the weighted average of 65%.

Although the weighted and unweighted averages are approximately the same for the percentage of exvessel value accounted for by other landings, the same is not true for the percentage of exvessel value accounted for jointly by halibut and sablefish. The weighted average is 35% compared to 52.7% for the unweighted average. This difference is explained by the following: (1) a substantial number of vessel owners who catch only small amounts of halibut and sablefish catch proportionately less of other species and (2) some of those who catch a lot of halibut and sablefish catch proportionately more of other species. These results demonstrate two things. First, the unweighted averages tend to give better measures of the typical relative dependence on a fishery. Second, the data presented in these table are only measures of the relative dependence on the various types of landings because many vessel owners have other sources of income including non-Alaska fisheries and non-fisheries income.

The percentage of halibut vessel owners with each of five different levels of dependence on the halibut fishery, measured in terms of the percentage of total exvessel value accounted for by the halibut, is depicted in Figure 4.1 - 4.3. The first figure presents the data for all halibut vessel owners. The second and third figures present the data for the bottom and top 20% of the halibut vessel owners in terms of halibut catch. Similar data for the sablefish fishery and for the two fisheries combined are presented in Figures 4.4 - 4.6 and 4.7 - 4.9. The following comments are for the combined fishery.

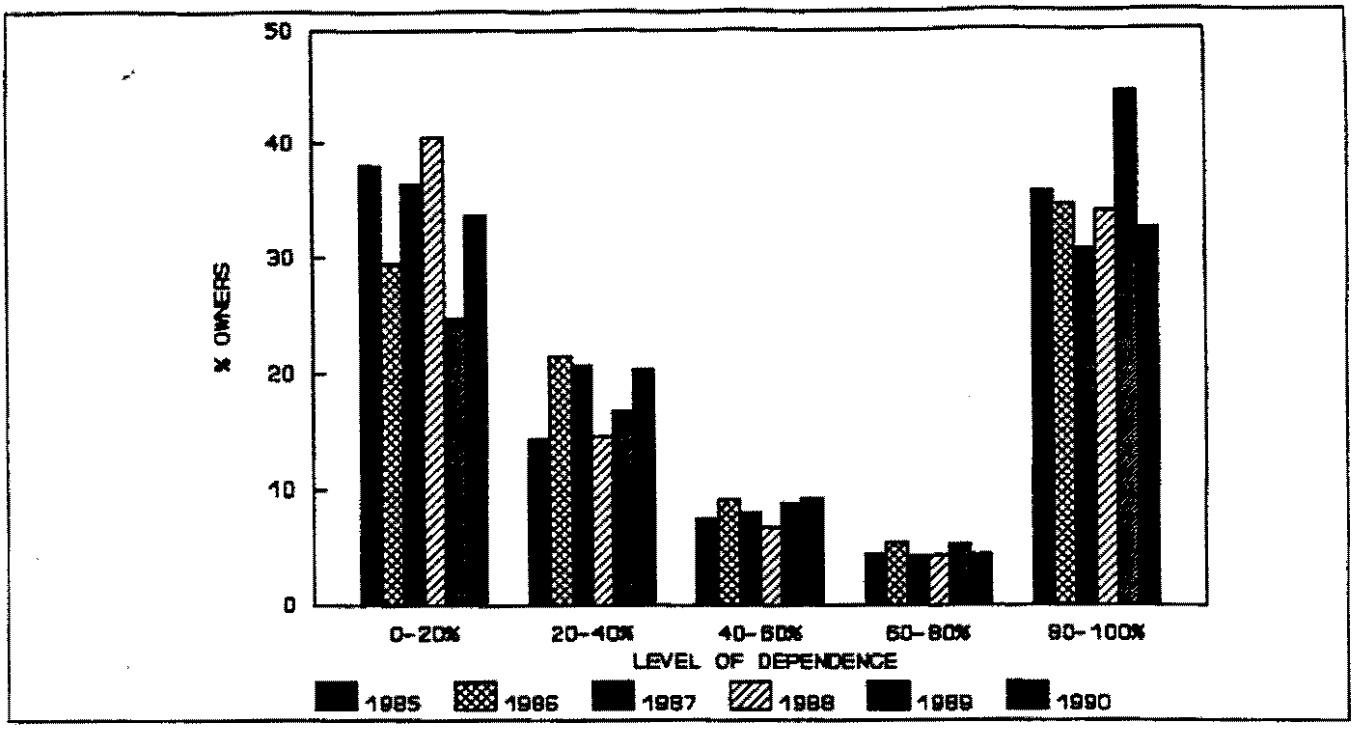


Figure 4.1 Dependence of halibut fishing vessel owners on the halibut fishery measured in terms of the percentage of total exvessel value accounted for by halibut. (all halibut vessel owners)

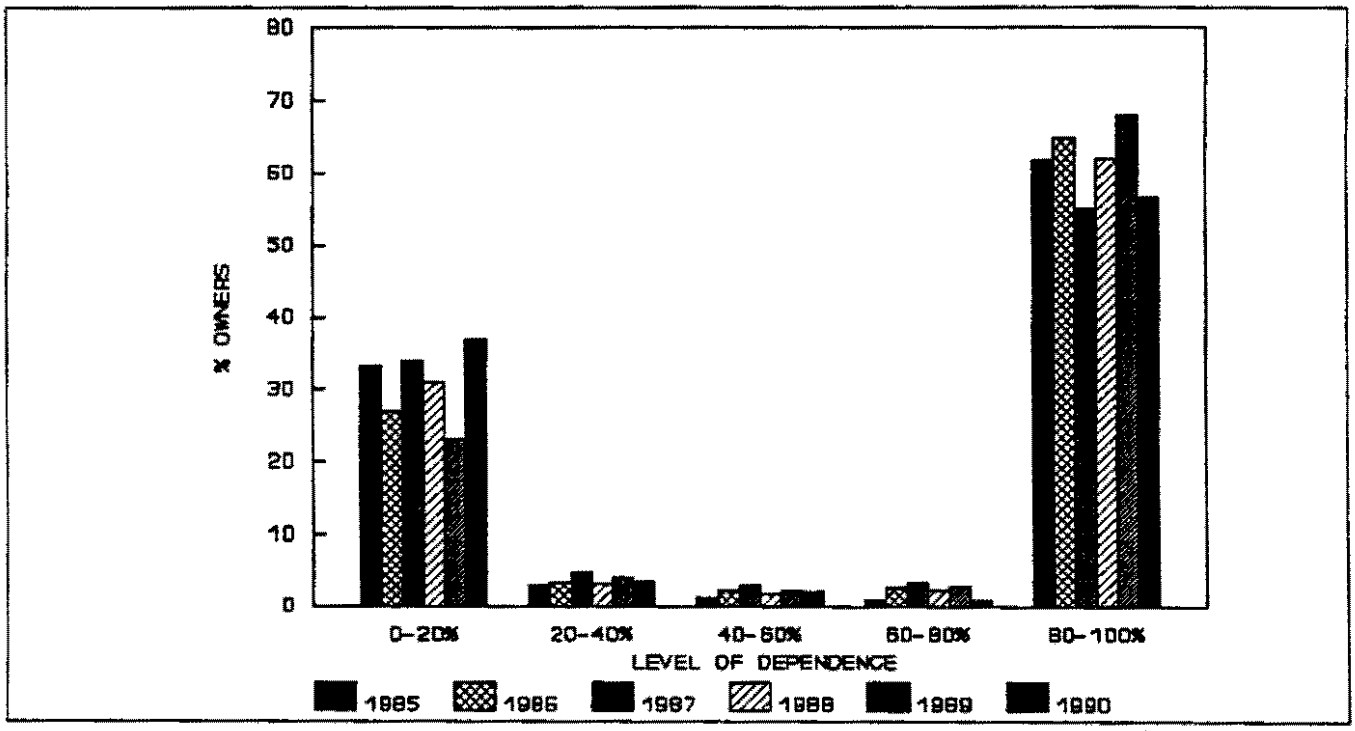


Figure 4.2 Dependence of halibut fishing vessel owners on the halibut fishery measured in terms of the percentage of total exvessel value accounted for by halibut. (bottom 20% of all halibut vessel owners)

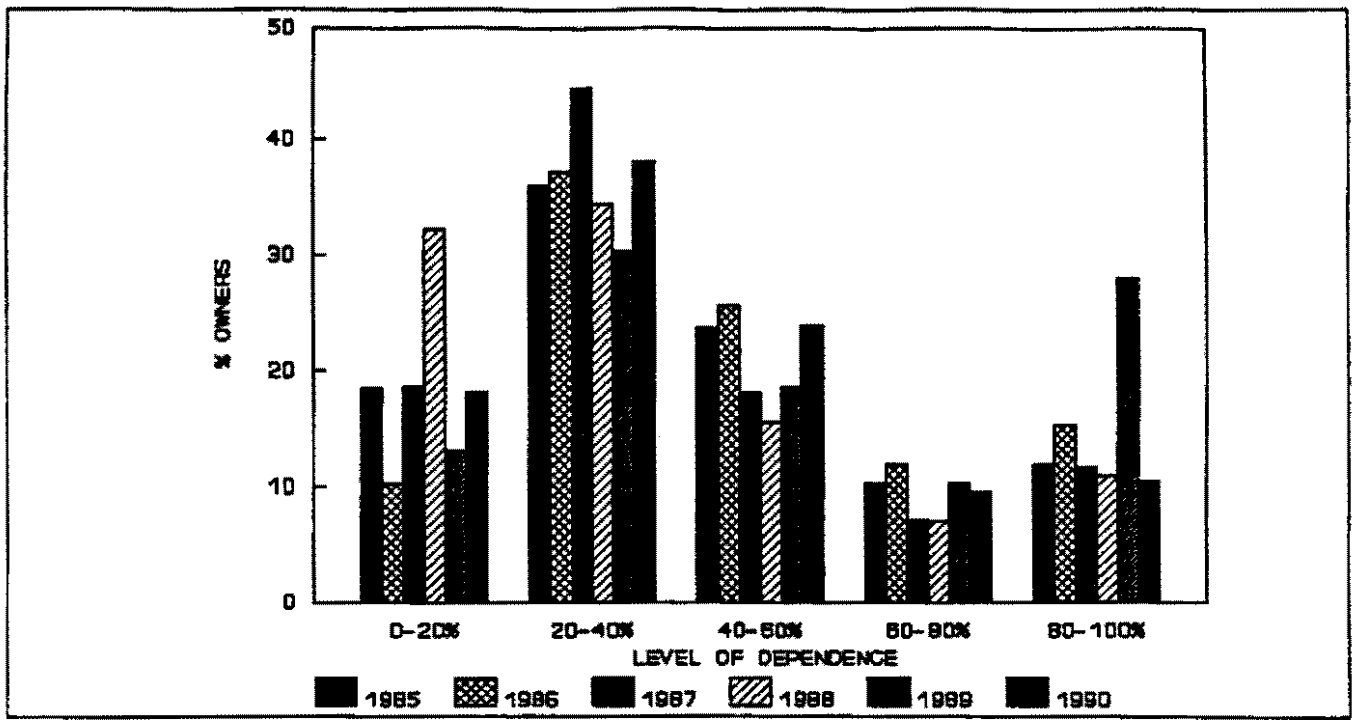


Figure 4.3 Dependence of halibut fishing vessel owners on the halibut fishery measured in terms of the percentage of total exvessel value accounted for by halibut. (top 20% of all halibut vessel owners)

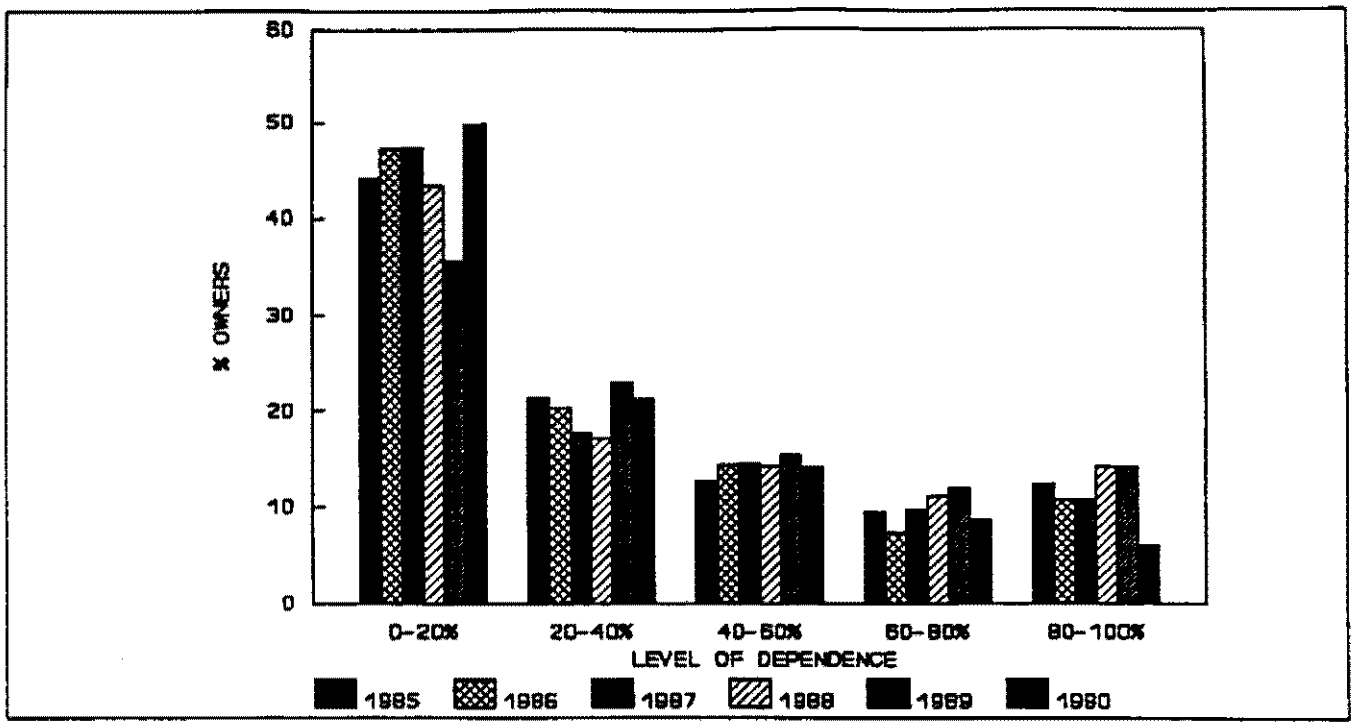


Figure 4.4 Dependence of sablefish fishing vessel owners on the sablefish fishery measured in terms of the percentage of total exvessel value accounted for by sablefish. (all sablefish vessel owners)

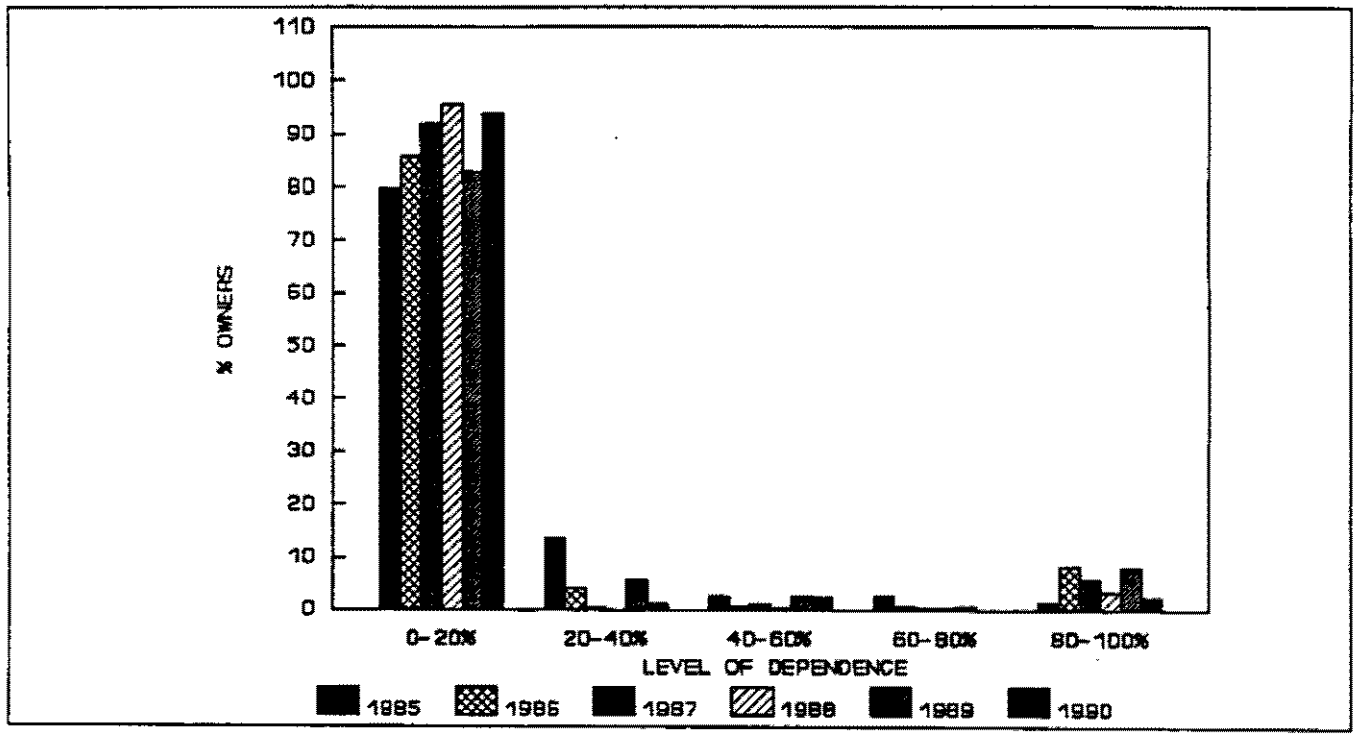


Figure 4.5 Dependence of sablefish fishing vessel owners on the sablefish fishery measured in terms of the percentage of total exvessel value accounted for by sablefish. (bottom 20% of all sablefish vessel owners)

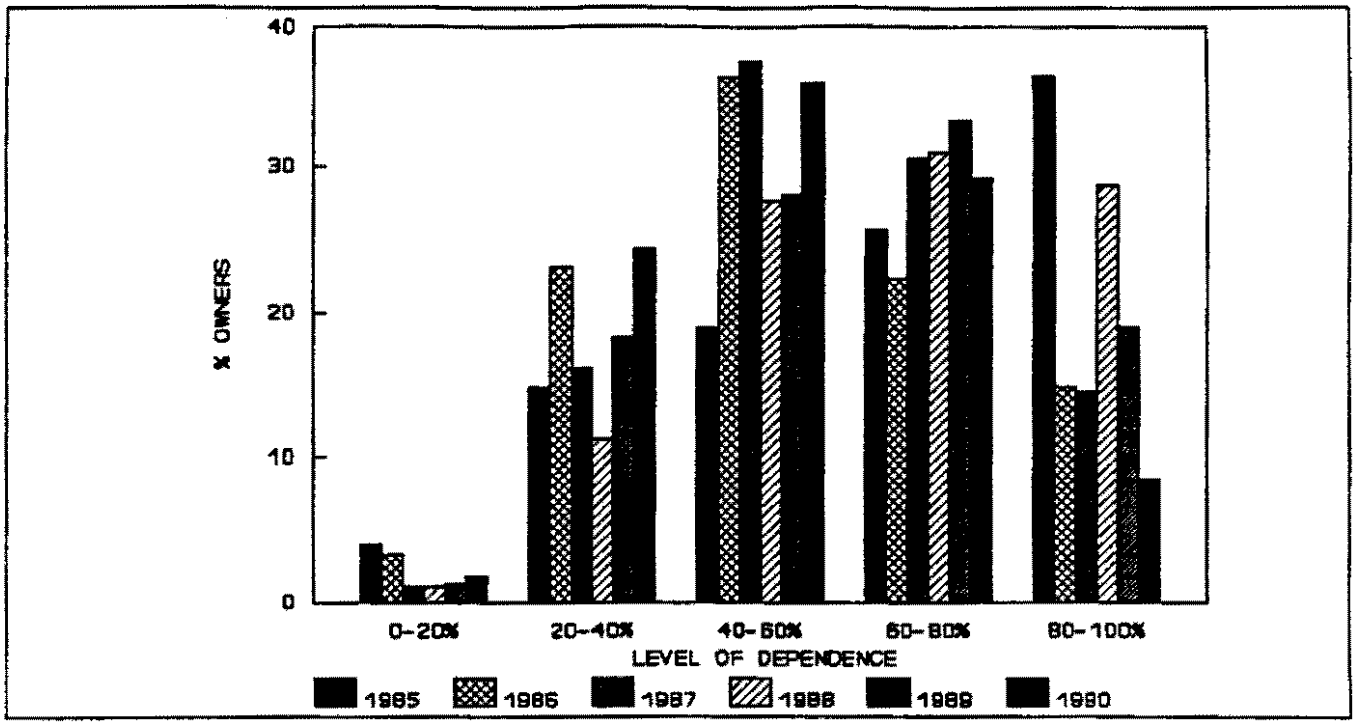


Figure 4.6 Dependence of sablefish fishing vessel owners on the sablefish fishery measured in terms of the percentage of total exvessel value accounted for by sablefish. (top 20% of all sablefish vessel owners)

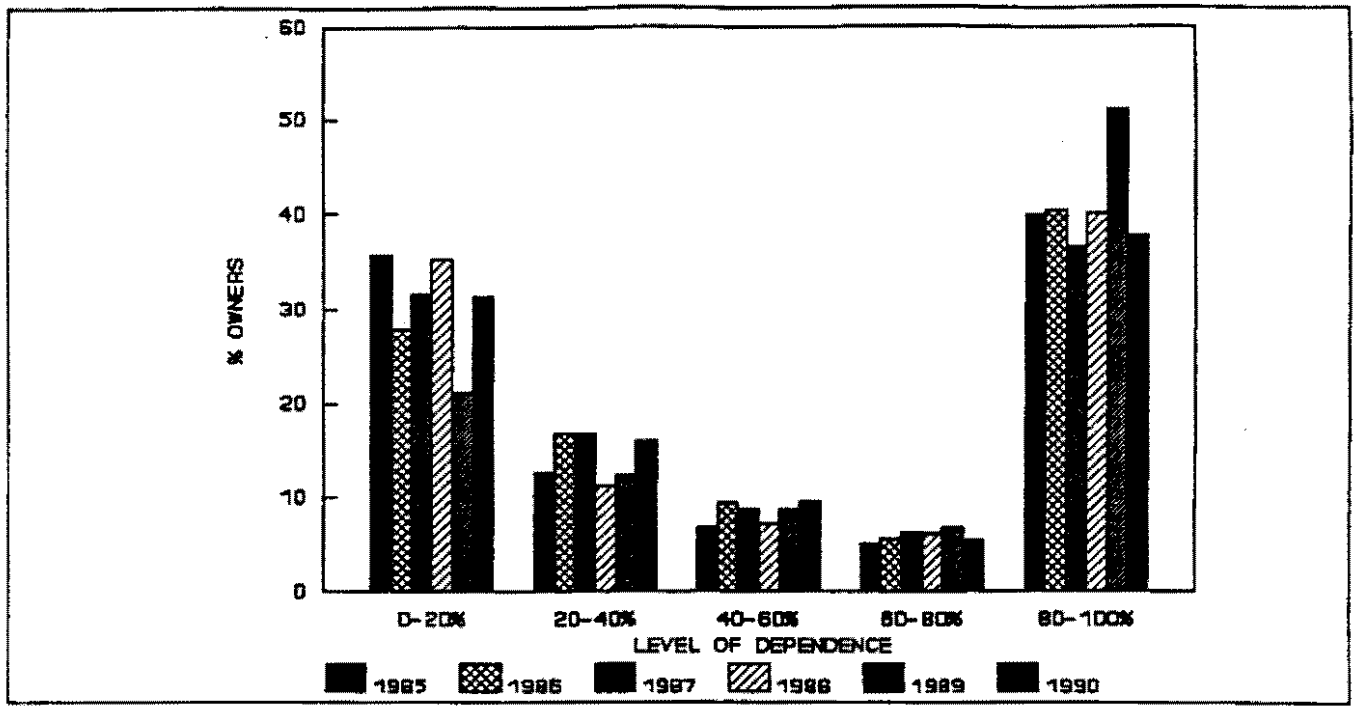


Figure 4.7 Dependence of halibut and sablefish fishing vessel owners on the halibut and sablefish fisheries measured in terms of the percentage of total exvessel value accounted for by halibut and sablefish. (all halibut and sablefish vessel owners)

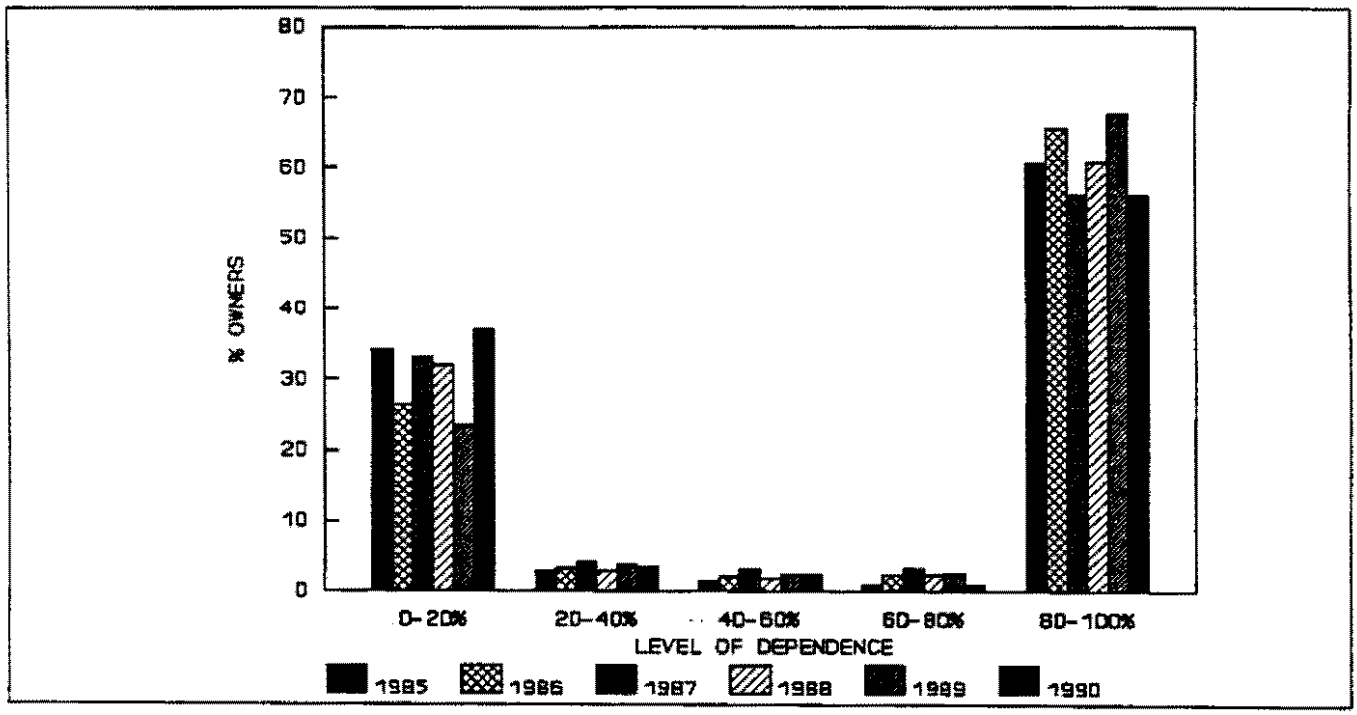


Figure 4.8 Dependence of halibut and sablefish fishing vessel owners on the halibut and sablefish fisheries measured in terms of the percentage of total exvessel value accounted for by halibut and sablefish. (bottom 20% of all halibut and sablefish vessel owners)

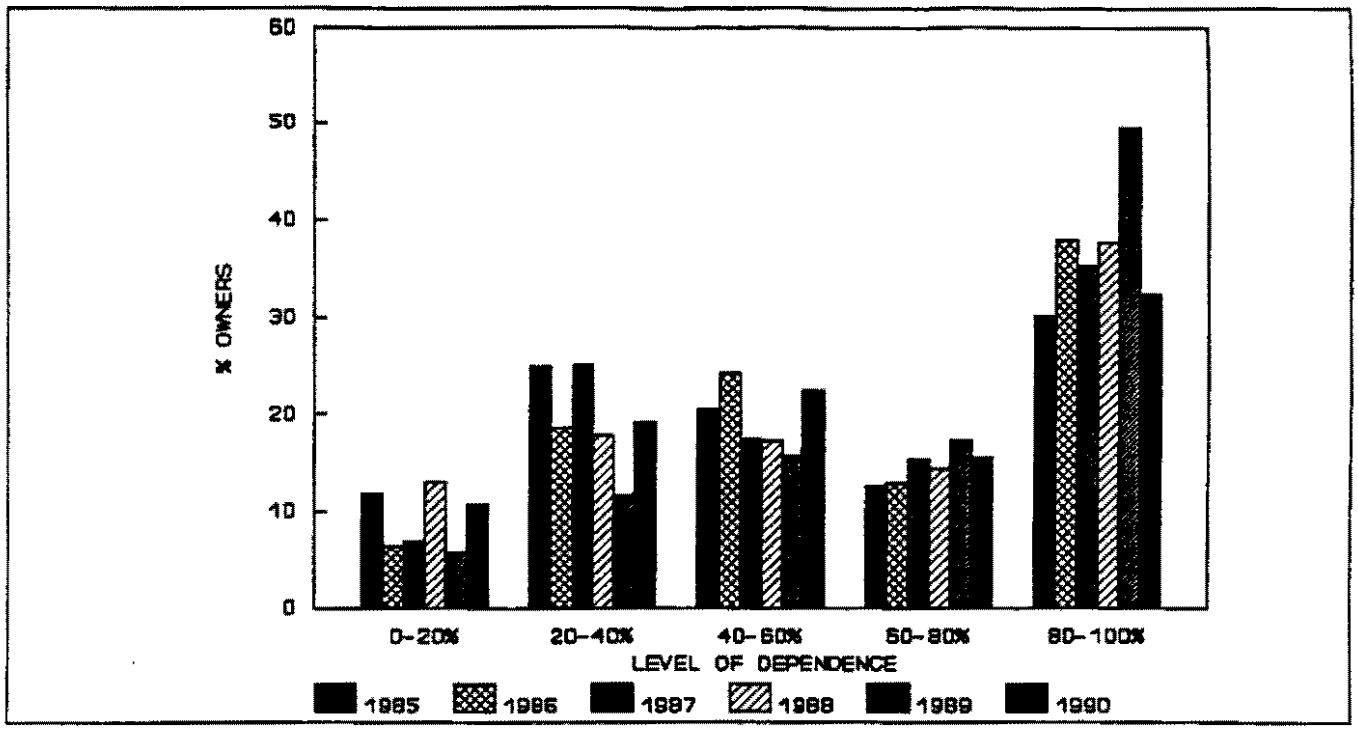


Figure 4.9 Dependence of halibut and sablefish fishing vessel owners on the halibut and sablefish fisheries measured in terms of the percentage of total exvessel value accounted for by halibut and sablefish. (top 20% of all halibut and sablefish vessel owners)

The level of dependence of halibut and sablefish vessel owners on the these two fisheries is bi-modal, that is, the larger percentages of vessel owners who receive from 0% to 20% or from 80% to 100% of their total Alaska exvessel value from these two fisheries is substantially greater than the percentage of owners who receive 20% to 40%, 40% to 60%, or 60% to 80% of that value from these two fisheries (Figure 4.7). The bi-modality is substantially greater for the bottom 20% of the vessel owners (Figure 4.9). A very small percentage of these vessel owners receives from 20% to 80% of their total exvessel value from the halibut and sablefish fisheries. The level of dependence is not bi-modal for the top 20% of halibut and sablefish vessel owners. For these vessel owners, those in the 0% to 20% range account for the smallest percentage of owners and those in the 80% to 100% range account for the largest percentage of owners.

These measures provide some insights concerning the extent that the IFQ programs may redirect fishermen to other fisheries. In 1990, almost 18% of the fixed gear halibut and sablefish vessel owners had Pacific cod landings and those landings accounted for 5.8% of the value of their total landings. Because relatively few smaller boats participate in the cod fishery, these two measures of cross participation in the cod fishery greatly understate the importance of this fishery for the owners of larger halibut and sablefish vessels. The IFQ program is expected to increase the participation of these vessels in the cod fishery because by allowing the retention of halibut in the cod fishery it will increase the profitability of the cod fishery and because some of the larger vessels and vessels that are not owner-operated will not be able to participate as actively in the halibut and sablefish fisheries. The resulting reallocation of effort to the Pacific cod fishery is expected to be beneficial.

The IFQ program is also expected to result in increased effort in the longline rockfish fishery. The ability of longline rockfish fishermen to retain their halibut bycatch with IFQs as opposed to being shutdown when the fixed gear halibut PSC limit is taken will make the rockfish fishery more economically viable and will allow increased catches by this gear group, potentially at the expense of trawlers. As with the other fisheries in which halibut is taken as bycatch, longline rockfish fishermen have a very low harvesting cost for halibut and should be very competitive in bidding for QSs and IFQs. In fact some of the halibut fishermen who receive halibut QSs are expected to use them to cover their halibut bycatch and target on rockfish rather than on halibut. The attractiveness of this situation may induce additional participation in these fisheries. In the recently instituted Canadian Individual Vessel Quota (IVQ) program this situation apparently has occurred with respect to rockfish. Additional effort has been exerted in the directed longline fishery for rockfish, resulting in the total allowable catch of this species being taken in a much shorter period of time than has previously been experienced (Zyblut, personal communication). An additional reason why the TAC was taken quicker this year than usual is that fishermen in the IVQ halibut fishery are now retaining the incidentally caught rockfish that were previously discarded in the fast-paced, license limitation fishery for halibut and these retained rockfish are now being reported and counted against the TAC. A similar situation could likely occur in the Southeast Area off Alaska under a halibut IFQ system. Additional effort could be exerted against rockfish stocks, assuming an ability to retain incidentally caught halibut. Without the derby style "race for fish", unreported (and discarded) bycatch of rockfish in the directed halibut fishery would likely be reduced and these species would now be landed and the landings counted against the TAC. These combined factors would likely increase the possibility that the TAC for these rockfish species would be reached earlier. On the positive side, the IFQ program would result in much better accounting of the actual mortality of these species. The demersal shelf rockfish complex has a low TAC of 550 mt (1992) and mortality of this species in the directed halibut fishery is currently unknown. The IFQ system would likely result in fisheries managers having a more accurate understanding of demersal shelf rockfish stocks.

Because, there are limited entry programs for the salmon and herring fisheries, the proposed IFQ program will not result in an influx of additional vessels into those fisheries. By allowing salmon trollers to use IFQs to retain halibut, the IFQ program should increase the profitability of the troll fishery. As with the other fisheries in which halibut is taken as bycatch, salmon troll fishermen have a very low harvesting cost for halibut and should be very competitive in bidding for QSs and IFQs. This benefit will not be available to the net salmon fisheries. The net salmon fishermen who will receive larger QSs will have an advantage over those who receive smaller or no QSs in that they will have an additional source of income with which to finance their participation in the salmon fisheries. This income can come from selling QSs or by using them profitably. This could increase the stability of the former group and decrease that of the latter. The comments concerning the effects on the net salmon fisheries also apply to the herring fisheries.

The proposed IFQ program would also tend to result in more vessels entering the crab fisheries. However, these fisheries offer a limited opportunity for most halibut and sablefish vessels due both to the physical characteristics of these vessels and limited expected economic rewards from entering these fisheries.

The moratorium that is currently under consideration by the Council for the groundfish, halibut, and crab fisheries off Alaska and the further rationalization that will be considered for these fisheries, will tend to reduce the adverse effects that the IFQ program might otherwise have on these fisheries. As noted in Chapter 2, although these potentially adverse effects could be eliminated by imposing simultaneously an IFQ program for all fisheries, this would be difficult to do and it would postpone substantially the implementation of IFQs for halibut and sablefish. In weighing these tradeoffs, the Council has determined that the benefits of a more rapid implementation of the halibut and sablefish IFQ program more than offset the costs of not implementing a more comprehensive IFQ program.

4.2 Fisheries in adjacently managed waters

Recent amendments to the Magnuson Act require that all amendments submitted to the Secretary after October 1, 1990 include a fishery impact statement which shall assess, specify, and describe the likely effects, if any, of the conservation and management measures on:

1. participants in the fisheries affected by the amendment; and,

2. participants in the fisheries conducted in adjacent areas under authority of another Council, after consultation with such Council and representatives of those participants.

Although there are no fisheries managed by other Councils that are in adjacent areas, the potential effects on fisheries beyond the Council's jurisdiction are considered in this section.

The imposition of an IFQ program for the fixed gear sablefish and halibut fisheries off Alaska is not anticipated to have any direct effect on fisheries managed by other Councils. However, it will have direct effects on some of the participants in the fisheries managed by the other Councils, particularly the Pacific Fishery Management Council (PFMC) because some of these participants also participate in the Alaska halibut and sablefish fisheries. Past and potential participants in both sets of fisheries will be affected directly by the amount of QSs they receive and their decisions to buy or sell QSs. Some will receive enough QSs or will be able to acquire enough that they will decrease their participation in the PFMC fisheries; the opposite will be true for some; and for others who were dependent on the Alaska fisheries to support their participation in the PFMC fisheries, leaving fisheries in both areas may be the result.

Relative to the areas off Alaska, the sablefish and halibut fisheries under the jurisdiction of the Pacific Fishery Management Council are very small and are currently characterized by very small quotas and, in the case of halibut, allocated very distinctly to a variety of user groups including commercial, subsistence (Indian), and recreational fishermen. As with fisheries within the EEZ off Alaska, the most likely form of impact would come in the context of new entrants into the fisheries who do not receive initial allocations of quota share. Potential entrants from outside of Alaska would be faced with the same prospect of an additional capital input into the costs of their fishing operations; therefore, they may decide to expand into fisheries within the jurisdiction of their own EEZ waters, thereby increasing effort into other fisheries not covered by some type of limited entry program.

Since portions of this IFQ program will be submitted under authority of the Halibut Act, it may be appropriate to also consider fisheries in the adjacent waters of Canada. Both the sablefish and halibut fisheries off Canada are currently managed under a form of limited entry or IFQs. Canada manages its sablefish and halibut fisheries with an IVQ, or individual vessel quota, program. A potential effect of an IFQ program for the fisheries off Alaska relates to the marketing of halibut. Under Canada's IVQ program, for example, 90% of halibut landed in 1991 were delivered to the fresh fish market with a substantial increase in prices received by fishermen. If the U.S. implements an IFQ program, this could result in competition in national and international markets with Canadian product. In terms of overall management of the halibut resource, the International Pacific Halibut Commission will continue in its role as the primary steward of the resource by taking the lead in stock assessment and setting of overall fishery quotas.

4.3 Recreational Fisheries

Recreational fisheries for sablefish are virtually non-existent, but are very important in the context of the halibut resource, coastal communities, and the overall management of halibut fisheries. Although recreational halibut fisheries would not be directly affected by any of the provisions of the IFQ program, there are certainly implications to the recreational fisheries. For example, with a substantially increased season length for commercial fisheries, there could be an increased potential for user conflicts between these two groups. To the extent that many commercial fishermen would be on halibut grounds throughout the year, recreational fishing vessels may find it more difficult to find access to traditional, favorite fishing areas. Direct gear conflicts are also a potential result. However, to the extent that most commercial fishing grounds do not overlap traditional recreational fishing areas, this potential conflict would be mitigated.

Perhaps a more alarming prospect, from the view of the recreational halibut fishing interests, is the potential for localized depletions of near-shore halibut stocks in areas adjacent to coastal communities. Under an IFQ program, fishermen would be able to harvest their halibut quota more or less at their leisure throughout the fishing season, which will probably be eight or nine months long. With this type of flexibility, it is possible that many fishermen will find it advantageous to make short trips, near their ports of origin, rather than the traditional trip to more productive grounds which is fostered under the current derby system. The result could be localized depletions of halibut stocks in these port areas which have traditionally been relied upon by the charter boat and other recreational boat fleets.

Notwithstanding these concerns, an IFQ program which reduces gear loss and ghost fishing through that gear loss, as well as reduced halibut mortality through bycatch discarding in other fisheries, may result in halibut savings to the benefit of all user groups.

4.4 Subsistence Fisheries

Alaska has the largest group of subsistence fishermen and regulates the subsistence catch of certain species, but not halibut. IPHC regulations do not recognize a subsistence fishery for halibut. Removals of this type are viewed as part of the recreational catch and are subject to the recreational fishery regulations.

Little is known of specific tribal fisheries in Alaska, with the exception of the fishery by Metlakatla Indian Community of Annette Island in Area 2C. In 1891, the U.S. Congress created the Annette Islands Reserve (AIR), which was expanded by presidential proclamation in 1915, and includes the waters within a 3,000-foot boundary surrounding Annette Island and several small neighboring islands.

The Metlakatla Indian Community began a separate fishery in the AIR in 1990, authorized by the U.S. Secretary of the Interior. Prior to 1990, catches by the Community within the AIR waters occurred only during the scheduled IPHC Area 2C seasons and ranged from 7,000 pounds in 1986 to 15,000 pounds in 1989. The 1990 fishery in the AIR conducted outside of the IPHC seasons took 33,104 pounds. These catches are considered as part of the overall catch from Area 2C and not as catches taken outside of the Area 2C catch limit. Thus, the total catch is maintained within the catch limits established by IPHC.

Table 4.1 Number of vessel owners with halibut landings who also had landings in various Alaska fisheries, 1984-90.

	1984	1985	1986	1987	1988	1989	1990
Sablefish Fixed Gear	203	304	512	735	732	629	736
Pacific Cod Longline	100	107	259	928	629	502	734
Other Longline	303	404	554	979	1036	1006	1080
Any Longline, excluding Halibut	423	541	833	1522	1378	1236	1500
Other Groundfish	277	204	286	390	429	107	528
Salmon Troll	673	586	613	653	726	732	738
Any Hook & Line, excluding Halibut	990	979	1225	1882	1761	1560	1812
Salmon, excluding Troll	823	752	1034	1279	1237	718	1498
Herring	196	255	282	385	301	237	359
Crab	455	432	483	573	587	480	538
All Other	308	281	366	385	394	297	382
All Fisheries, excluding Halibut	2036	1885	2338	2912	2893	2346	3178
Halibut	3472	2744	3247	3777	3925	3642	4206

Table 4.2 Percentage of vessel owners with halibut landings who also had landings in various Alaska fisheries, 1984-90.

	1984	1985	1986	1987	1988	1989	1990
Sablefish Fixed Gear	5.8	11.1	15.8	19.5	18.6	17.3	17.5
Pacific Cod Longline	2.9	3.9	8.0	24.6	16.0	13.8	17.5
Other Longline	8.7	14.7	17.1	25.9	26.4	27.6	25.7
Any Longline, excluding Halibut	12.2	19.7	25.7	40.3	35.1	33.9	35.7
Other Groundfish	8.0	7.4	8.8	10.3	10.9	2.9	12.6
Salmon Troll	19.4	21.4	18.9	17.3	18.5	20.1	17.5
Any Hook & Line, excluding Halibut	28.5	35.7	37.7	49.8	44.9	42.8	43.1
Salmon, excluding Troll	23.7	27.4	31.8	33.9	31.5	19.7	35.6
Herring	5.6	9.3	8.7	10.2	7.7	6.5	8.5
Crab	13.1	15.7	14.9	15.2	15.0	13.2	12.8
All Other	8.9	10.2	11.3	10.2	10.0	8.2	9.1
All Fisheries, excluding Halibut	58.6	68.7	72.0	77.1	73.7	64.4	75.6
Halibut	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.3 Weighted average of the exvessel value of each fishery as a percentage of he total exvessel value for all vessel owners with halibut landings, 1984-90.

	1984	1985	1986	1987	1988	1989	1990
Sablefish Fixed Gear	5.9	9.5	10.5	12.8	14.4	18.4	11.5
Pacific Cod Longline	.1	.1	.3	1.2	.6	.4	1.7
Other Longline	.6	.5	.5	1.2	.6	.6	.4
Any Longline, excluding Halibut	6.6	10.1	11.2	15.3	15.6	19.4	13.6
Other Groundfish	.4	.5	.4	1.6	2.0	2.1	5.0
Salmon Troll	12.3	8.1	6.2	4.5	4.5	5.3	5.2
Any Hook & Line, excluding Halibut	18.9	18.2	17.4	19.8	20.1	24.7	18.9
Salmon, excluding Troll	35.2	33.0	31.6	37.8	47.6	29.2	35.6
Herring	3.1	5.2	3.9	3.6	2.8	1.4	1.9
Crab	22.2	17.1	13.8	13.3	9.5	13.7	14.4
All Other	1.4	.7	.7	.5	.4	.4	.5
All Fisheries, excluding Halibut	81.2	74.7	67.9	76.6	82.3	71.4	76.2
Halibut	18.8	25.3	32.1	23.4	17.7	28.6	23.8

Table 4.4 Weighted average of the exvessel value of halibut as a percentage of the total exvessel value of all Alaska fisheries for all vessel owners with halibut landings and landings in the specified fishery, 1984-90.

	1984	1985	1986	1987	1988	1989	1990
Sablefish Fixed Gear	25.9	34.1	41.1	29.2	23.7	30.4	32.0
Pacific Cod Longline	19.5	26.0	38.8	26.6	17.7	24.2	29.3
Other Longline	20.9	28.7	37.0	28.8	22.2	28.4	31.6
Any Longline, excluding Halibut	23.1	30.7	39.7	27.1	21.3	28.6	30.5
Other Groundfish	18.3	25.7	29.6	25.8	21.4	27.5	22.3
Salmon Troll	11.4	18.9	26.9	24.3	22.6	29.5	30.1
Any Hook & Line, excluding Halibut	18.1	27.9	38.1	27.0	21.2	28.5	30.2
Salmon, excluding Troll	9.9	12.9	18.1	14.2	9.2	12.1	16.1
Herring	10.8	10.7	17.1	10.1	7.7	18.0	13.0
Crab	16.8	27.2	32.4	24.0	18.1	23.0	20.0
All Other	14.0	19.8	22.1	22.2	13.1	15.9	23.5
All Fisheries, excluding Halibut	15.6	23.5	30.1	22.3	16.4	25.1	22.5
Halibut	18.8	25.3	32.1	23.4	17.7	28.6	23.8

Table 4.5 Unweighted average of the exvessel value of each fishery as a percentage of the total exvessel value for all vessel owners with halibut landings, 1984-90.

	1984	1985	1986	1987	1988	1989	1990
Sablefish Fixed Gear	32.4	28.9	25.2	26.0	30.0	31.8	24.5
Pacific Cod Longline	3.9	1.7	4.3	7.0	5.6	2.8	4.0
Other Longline	9.3	6.0	5.3	4.6	3.4	2.7	2.4
Any Longline, excluding Halibut	23.1	21.0	20.2	19.7	21.0	19.6	15.7
Other Groundfish	4.1	4.0	2.9	5.0	6.6	22.8	10.7
Salmon Troll	73.1	64.4	58.6	57.0	58.9	53.6	57.8
Any Hook & Line, excluding Halibut	60.1	50.4	43.3	36.0	41.0	40.8	36.9
Salmon, excluding Troll	77.8	74.9	71.7	73.5	81.5	76.6	75.2
Herring	28.1	39.1	32.2	35.5	24.0	24.7	20.4
Crab	50.2	43.6	35.3	36.6	35.7	40.4	38.6
All Other	20.9	15.8	11.4	13.4	12.0	11.9	12.1
All Fisheries, excluding Halibut	78.1	74.0	67.7	69.7	72.0	63.8	68.4
Halibut	54.2	49.1	51.3	46.2	46.9	58.9	48.3

Table 4.6 Unweighted average of the exvessel value of halibut as a percentage of the total exvessel value of all Alaska fisheries for all vessel owners with halibut landings and landings in the specified fishery, 1984-90.

	1984	1985	1986	1987	1988	1989	1990
Sablefish Fixed Gear	29.0	36.7	42.0	32.0	31.0	36.6	39.5
Pacific Cod Longline	41.6	35.2	44.1	37.9	35.9	41.7	43.1
Other Longline	33.7	38.2	42.0	37.6	36.4	41.3	43.3
Any Longline, excluding Halibut	36.5	38.1	44.0	37.8	37.1	41.9	42.9
Other Groundfish	19.9	22.0	26.0	27.2	25.1	35.9	28.7
Salmon Troll	17.1	23.6	30.0	28.1	27.0	32.6	29.8
Any Hook & Line, excluding Halibut	26.2	31.6	39.8	36.7	35.2	40.2	40.5
Salmon, excluding Troll	12.0	13.6	18.6	15.0	9.3	14.0	16.7
Herring	15.0	15.3	21.2	16.0	16.6	32.5	19.1
Crab	20.0	28.2	37.0	28.3	27.5	33.7	30.5
All Other	19.5	22.9	27.6	26.0	21.2	24.6	29.3
All Fisheries, excluding Halibut	21.9	26.0	32.3	30.3	28.0	36.2	31.6
Halibut	54.2	49.1	51.3	46.2	46.9	58.9	48.3

Table 4.7 Number of vessel owners with sablefish landings that also had landings in various Alaska fisheries, 1985-90.

	1985	1986	1987	1988	1989	1990
Halibut Longline	304	512	735	732	629	736
Pacific Cod Longline	52	102	388	304	216	313
Other Longline	216	336	604	683	627	601
Any Longline, excluding Sablefish	332	542	808	839	728	794
Other Groundfish	50	76	140	139	26	168
Salmon Troll	83	137	178	192	209	186
Any Hook & Line, excluding Sablefish	338	548	816	846	737	800
Salmon, excluding Troll	66	134	242	216	148	214
Herring	28	31	37	53	32	34
Crab	76	124	205	182	113	134
All Other	63	84	98	134	101	105
All Fisheries, excluding Sablefish	355	576	839	863	746	811
Sablefish	371	606	868	888	768	822

Table 4.8 Percentage of vessel owners with sablefish landings that also had landings in various Alaska fisheries, 1985-90.

	1985	1986	1987	1988	1989	1990
Halibut Longline	81.9	84.5	84.7	82.4	81.9	89.5
Pacific Cod Longline	14.0	16.8	44.7	34.2	28.1	38.1
Other Longline	58.2	55.4	69.6	76.9	81.6	73.1
Any Longline, excluding Sablefish	89.5	89.4	93.1	94.5	94.8	96.6
Other Groundfish	13.5	12.5	16.1	15.7	3.4	20.4
Salmon Troll	22.4	22.6	20.5	21.6	27.2	22.6
Any Hook & Line, excluding Sablefish	91.1	90.4	94.0	95.3	96.0	97.3
Salmon, excluding Troll	17.8	22.1	27.9	24.3	19.3	26.0
Herring	7.5	5.1	4.3	6.0	4.2	4.1
Crab	20.5	20.5	23.6	20.5	14.7	16.3
All Other	17.0	13.9	11.3	15.1	13.2	12.8
All Fisheries, excluding Sablefish	95.7	95.0	96.7	97.2	97.1	98.7
Sablefish	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.9 Weighted average of the exvessel value of each fishery as a percentage of he total exvessel value for all vessel owners with sablefish landings, 1985-90.

	1985	1986	1987	1988	1989	1990
Halibut Longline	28.3	36.2	25.8	20.4	24.6	26.7
Pacific Cod Longline	.1	.3	1.7	2.4	7.8	13.3
Other Longline	1.1	1.0	2.7	1.5	1.5	1.0
Any Longline, excluding Sablefish	29.5	37.6	30.2	24.3	33.9	41.0
Other Groundfish	.6	.3	.7	.7	.7	2.6
Salmon Troll	4.3	4.6	3.8	4.2	3.7	4.0
Any Hook & Line, excluding Sablefish	33.8	42.2	34.1	28.5	37.6	45.0
Salmon, excluding Troll	13.0	12.1	16.0	18.6	15.7	13.1
Herring	4.3	1.7	1.4	1.2	.5	.6
Crab	10.2	13.2	15.7	9.5	6.3	8.6
All Other	.7	.5	.2	.5	.2	.4
All Fisheries, excluding Sablefish	62.6	70.0	68.1	59.0	61.0	70.2
Sablefish	37.4	30.0	31.9	41.0	39.0	29.8

Table 4.10 Weighted average of the exvessel value of sablefish as a percentage of the total exvessel value of all Alaska fisheries for all vessel owners with sablefish landings and landings in the specified fishery, 1985-90.

	1985	1986	1987	1988	1989	1990
Halibut Longline	31.5	26.5	30.9	38.6	38.1	29.6
Pacific Cod Longline	30.1	20.3	24.3	34.0	33.0	29.7
Other Longline	40.7	33.4	35.2	44.4	40.5	34.8
Any Longline, excluding Sablefish	33.3	27.8	32.2	40.9	38.9	29.9
Other Groundfish	23.6	31.6	36.3	27.8	18.2	14.8
Salmon Troll	18.7	24.8	32.1	34.5	33.6	27.4
Any Hook & Line, excluding Sablefish	33.2	27.9	32.2	40.9	38.9	29.9
Salmon, excluding Troll	15.4	16.0	15.3	19.2	23.0	20.4
Herring	9.1	12.4	14.1	13.7	11.3	12.3
Crab	16.0	14.7	17.8	19.9	23.1	15.9
All Other	19.4	19.5	27.6	30.9	25.9	25.5
All Fisheries, excluding Sablefish	33.9	28.7	31.6	40.8	38.7	29.7
Sablefish	37.4	30.0	31.9	41.0	39.0	29.8

Table 4.11 Unweighted average of the exvessel value of each fishery as a percentage of the total exvessel value for all vessel owners with sablefish landings, 1985-90.

	1985	1986	1987	1988	1989	1990
Halibut Longline	36.7	42.0	32.0	31.0	36.6	39.5
Pacific Cod Longline	2.2	3.6	5.9	10.3	7.6	9.1
Other Longline	6.2	4.2	4.8	3.7	2.7	2.9
Any Longline, excluding Sablefish	38.0	42.9	35.6	33.7	36.2	42.3
Other Groundfish	7.6	2.1	2.6	2.8	17.4	8.0
Salmon Troll	42.5	41.5	41.3	40.9	36.4	38.7
Any Hook & Line, excluding Sablefish	48.0	52.9	44.3	42.8	46.2	51.1
Salmon, excluding Troll	50.9	48.3	56.8	59.0	58.4	53.3
Herring	34.7	22.1	26.3	19.5	13.0	15.7
Crab	33.2	33.9	32.1	30.5	26.7	31.8
All Other	15.1	6.9	7.7	7.0	6.0	7.8
All Fisheries, excluding Sablefish	68.6	71.3	69.8	65.8	63.2	73.0
Sablefish	34.4	32.3	32.6	36.0	38.7	28.0

Table 4.12 Unweighted average of the exvessel value of sablefish as a percentage of the total exvessel value of all Alaska fisheries for all vessel owners with sablefish landings and landings in the specified fishery, 1985-90.

	1985	1986	1987	1988	1989	1990
Halibut Longline	28.9	25.2	26.0	30.0	31.8	24.5
Pacific Cod Longline	29.6	23.3	23.3	26.0	31.2	24.4
Other Longline	36.3	31.7	32.4	38.2	39.0	31.1
Any Longline, excluding Sablefish	31.3	27.4	29.8	34.1	36.9	27.1
Other Groundfish	20.4	26.4	27.8	22.5	20.4	16.7
Salmon Troll	19.2	21.4	27.2	29.0	27.9	23.8
Any Hook & Line, excluding Sablefish	31.3	27.8	30.0	34.1	37.0	27.3
Salmon, excluding Troll	11.7	14.8	12.8	15.4	18.7	14.6
Herring	11.9	12.8	17.4	14.5	14.0	17.9
Crab	19.2	15.8	18.6	18.3	25.1	16.9
All Other	19.3	19.9	22.2	26.7	24.2	25.1
All Fisheries, excluding Sablefish	31.4	28.7	30.2	34.2	36.8	27.0
Sablefish	34.4	32.3	32.6	36.0	38.7	28.0

Table 4.13 Number of vessel owners with halibut or sablefish landings who also had landings in various Alaska fisheries, 1985-90.

	1985	1986	1987	1988	1989	1990
Pacific Cod Longline	114	264	965	677	539	767
Other Longline	431	584	1051	1139	1102	1134
Any Longline, excluding Hal/Sab	463	681	1441	1364	1244	1394
Other Groundfish	215	298	403	441	113	535
Salmon Troll	595	621	664	744	747	744
Any Hook & Line, excluding Hal/Sab	932	1122	1858	1786	1603	1737
Salmon, excluding Troll	759	1055	1291	1256	735	1509
Herring	261	287	390	307	243	363
Crab	441	495	593	606	490	541
All Other	290	376	393	408	308	389
All Fisheries, excluding Hal/Sab	1904	2338	2983	2994	2432	3211
Halibut/Sablefish	2811	3341	3910	4081	3781	4292

Table 4.14 Percentage of vessel owners with halibut or sablefish landings who also had landings in various Alaska fisheries, 1985-90.

	1985	1986	1987	1988	1989	1990
Pacific Cod Longline	4.1	7.9	24.7	16.6	14.3	17.9
Other Longline	15.3	17.5	26.9	27.9	29.1	26.4
Any Longline, excluding Hal/Sab	16.5	20.4	36.9	33.4	32.9	32.5
Other Groundfish	7.6	8.9	10.3	10.8	3.0	12.5
Salmon Troll	21.2	18.6	17.0	18.2	19.8	17.3
Any Hook & Line, excluding Hal/Sab	33.2	33.6	47.5	43.8	42.4	40.5
Salmon, excluding Troll	27.0	31.6	33.0	30.8	19.4	35.2
Herring	9.3	8.6	10.0	7.5	6.4	8.5
Crab	15.7	14.8	15.2	14.8	13.0	12.6
All Other	10.3	11.3	10.1	10.0	8.1	9.1
All Fisheries, excluding Hal/Sab	67.7	70.0	76.3	73.4	64.3	74.8
Halibut/Sablefish	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.15 Weighted average of the exvessel value of each fishery as a percentage of the total exvessel value for all vessels with halibut or sablefish landings, 1985-90.

	1985	1986	1987	1988	1989	1990
Pacific Cod Longline	.1	.3	1.3	1.1	4.3	5.8
Other Longline	.5	.6	1.3	.7	.9	.5
Any Longline, excluding Hal/Sab	.6	.8	2.6	1.8	5.1	6.4
Other Groundfish	.5	.4	1.6	1.9	2.1	4.7
Salmon Troll	7.7	5.9	4.3	4.3	4.9	4.9
Any Hook & Line, excluding Hal/Sab	8.3	6.8	7.0	6.2	10.0	11.3
Salmon, excluding Troll	31.8	31.0	36.2	45.7	27.1	33.4
Herring	5.5	3.9	3.4	2.7	1.3	1.8
Crab	16.5	14.0	14.9	9.7	12.6	13.5
All Other	.8	.7	.5	.4	.4	.4
All Fisheries, excluding Hal/Sab	63.3	56.7	63.6	66.5	53.5	65.0
Halibut/Sablefish	36.7	43.3	36.4	33.5	46.5	35.0

Table 4.16 Weighted average of the exvessel value of halibut and sablefish as a percentage of the total exvessel value of all Alaska fisheries for all vessels with halibut or sablefish landings and landings in the specified fishery, 1985-90.

	1985	1986	1987	1988	1989	1990
Pacific Cod Longline	42.7	50.2	39.9	37.3	40.0	44.4
Other Longline	56.9	63.3	56.2	58.1	59.0	55.9
Any Longline, excluding Hal/Sab	54.3	61.1	48.5	52.5	56.9	52.2
Other Groundfish	32.6	40.7	43.9	31.4	30.3	27.5
Salmon Troll	23.9	37.8	41.1	40.1	48.1	43.8
Any Hook & Line, excluding Hal/Sab	44.6	56.1	47.4	50.5	55.7	50.6
Salmon, excluding Troll	15.4	21.2	18.0	13.6	20.6	20.9
Herring	12.1	18.9	12.2	10.4	20.9	14.9
Crab	30.7	37.5	31.0	25.6	31.7	25.7
All Other	24.8	28.9	33.8	28.1	30.4	34.7
All Fisheries, excluding Hal/Sab	31.1	38.8	34.7	31.9	43.4	33.3
Halibut/Sablefish	36.7	43.3	36.4	33.5	46.5	35.0

Table 4.17 Unweighted average of the exvessel value of each fishery as a percentage of he total exvessel value for all vessels with halibut or sablefish landings, 1985-90.

	1985	1986	1987	1988	1989	1990
Pacific Cod Longline	2.2	4.6	7.4	7.5	4.7	5.6
Other Longline	6.9	5.4	4.9	3.8	2.9	2.7
Any Longline, excluding Hal/Sab	6.9	6.4	8.6	6.9	4.7	5.3
Other Groundfish	4.8	2.8	5.1	6.5	24.3	10.7
Salmon Troll	64.3	58.5	57.0	58.4	53.2	57.7
Any Hook & Line, excluding Hal/Sab	44.8	36.5	27.3	29.8	28.6	29.4
Salmon, excluding Troll	74.7	71.3	73.5	81.2	76.4	75.3
Herring	39.4	32.4	35.4	24.3	24.6	20.3
Crab	43.6	35.8	37.0	36.1	40.4	38.9
All Other	16.5	11.3	13.3	11.9	11.7	12.3
All Fisheries, excluding Hal/Sab	70.1	63.3	63.0	64.1	55.0	63.2
Halibut/Sablefish	52.5	55.7	51.9	53.0	64.6	52.7

Table 4.18 Unweighted average of the exvessel value of halibut and sablefish as a percentage of the total exvessel value of all Alaska fisheries for all vessels with halibut or sablefish landings and landings in the specified fishery, 1985-90.

	1985	1986	1987	1988	1989	1990
Pacific Cod Longline	46.6	52.2	45.8	45.1	51.4	51.2
Other Longline	54.0	58.1	53.6	56.0	59.9	57.7
Any Longline, excluding Hal/Sab	52.8	57.4	50.6	53.4	58.3	54.9
Other Groundfish	25.6	31.7	36.0	31.6	38.7	33.6
Salmon Troll	25.9	34.4	34.9	33.9	39.7	35.5
Any Hook & Line, excluding Hal/Sab	38.8	47.9	47.0	48.0	53.3	50.2
Salmon, excluding Troll	14.5	20.1	17.2	11.8	17.4	18.7
Herring	16.2	22.2	17.4	18.8	33.5	20.6
Crab	30.9	40.1	33.8	32.1	38.8	34.5
All Other	26.4	31.3	31.0	29.3	31.6	35.6
All Fisheries, excluding Hal/Sab	29.9	36.7	37.0	35.9	45.0	36.8
Halibut/Sablefish	52.5	55.7	51.9	53.0	64.6	52.7

5.0 IMPLEMENTATION PLAN

5.1 Introduction

5.1.1 Purpose and Structure of the Implementation Plan

The purpose of this plan is to specify the administrative, data reporting and computing, and enforcement systems which will be required to implement the Council's proposed individual fishing quota system for the fixed-gear sablefish and halibut fisheries. The plan was developed jointly by government and industry representatives and clearly describes how the IFQ system will work as a management tool. Individuals that helped develop the plan are listed in Appendix A of this Chapter.

The plan was approved by the Council on December 3-9, 1991 and has four parts:

(a) initial allocation;

(b) annual management processes;

(c) enforcement and monitoring; and

(d) personnel and budget requirements.

The initial allocation portion addresses basic eligibility, compilation of the historical catch and vessel ownership database, the application process, appeals and an estimated time schedule to accomplish the initial allocation. The annual management portion discusses factors relevant to continuing the program after the initial allocation, such as the annual determination of individual fishing quotas, accounting of bycatch, control of and accounting of overages, quota share and individual fishing quota transfer procedures, ownership limitations and the western Alaska community development quota program. The monitoring and enforcement portion discusses procedures and requirements necessary to ensure the integrity of the program and prevent overfishing of the resource. Projected personnel and budgetary requirements are discussed in the final portion.

5.1.2 Continuing Industry Consultation

The ad hoc implementation work group recommended continuing a combined agency/industry committee to oversee the individual fishing quota implementation program, if approved by the Secretary of Commerce. The Council adopted this recommendation with the intent that the workgroup will help to communicate implementation details to fishermen and processors, and to provide a forum for the fishing industry to communicate its suggestions for improving compliance with, and implementation of, the proposed program. While the combined industry/agency committee is not charged with developing policy, it may suggest policy initiatives which may promote successful implementation of the program.

The Council also will hold public meetings in major fishing ports in Alaska, Washington, and Oregon to inform the industry about the proposed IFQ program. In addition, a toll-free telephone number will be established to answer questions regarding the initial allocation process or other aspects of the individual transferable quota program. Full use will be made of newspaper, radio and television to communicate details of the proposed scheme.

The following locations have been suggested for public meetings, because of their wide geographic distribution and their association with sablefish/halibut fishermen:

DutchHarbor/	Cordova	Petersburg	Sand Point
Unalaska	Bellingham	Ketchikan	St. Paul Harbor
Kodiak	Seattle	King Cove	Craig
Homer	Newport	Akutan	Astoria
Seward	Yakutat	Juneau	
Dillingham	Sitka	Pelican	

5.1.3 Interaction of the Preferred Alternative with a Potential Moratorium

In December 1991, the Council adopted a work plan to implement a moratorium by 1993 on the entry of new vessels into the groundfish, crab and halibut fisheries. Because the individual fishing quota program will be implemented at the earliest in 1994, the fixed gear fisheries for sablefish and halibut could potentially operate under a moratorium for at least 1993 before coming under the proposed quota program. Though a person may be qualified to use IFQs, there remains a question as to which vessels can be used in the fishery. One option in the moratorium is to exempt the sablefish and halibut fisheries from the moratorium once IFQs are in place. A second option is to provide no such exemption. In the second case, only moratorium qualified vessels would be eligible and there could be restrictions on replacement and reconstruction. The Council will make a final decision on the moratorium in June 1992.

5.2 Initial Allocation

Initial allocation has two steps: (1) determination of eligibility and (2) calculation of initial individual quotas. Eligibility is discussed in great detail in Section 5.2.2. Having established eligibility, an individual's quota will be based on catch history. For halibut the relevant period is the best five years of 1984 through 1990. For sablefish, it is the best five years of 1985 through 1990.

5.2.1 Preparation of a Unified Database

While involving only two species, the proposed management regime will involve more participants than any other similar program developed or implemented anywhere. There may be as many as 12,000 potential applicants. A great deal of reliance will be placed on electronic data records which reside in a number of disparate databases, none of which is coordinated with any other, and none of which has been collected for compiling catch histories for allocation purposes. Detailed planning will be required to assemble these records so that the requisite catch histories can be generated.

The following datasets will be necessary to construct the catch histories:

Groundfish fish tickets	US Coast Guard undocumented file (Alaska vessel file)
Federal weekly processor reports	Alaska vessel license file
Halibut fish tickets	Oregon and Washington state vessel registration files
Alaska limited entry permit file	Halibut license file
Federal groundfish permit file	
US Coast Guard documentation file	

These datasets have not been constructed or designed for this type of exercise and errors or discrepancies could become highly significant in the construction of catch histories. Particular areas of concern involve data entry or key punching errors in which statistical area numbers may have been transposed, where inappropriate numbers have been entered into fields, such as statistical area numbers entered into Alaska Department of Fish and Game fields, or where a particular landing has been ascribed to a vessel other than the one upon which it was caught.

Fish tickets are the central element in the initial allocation process. The poundage recorded on a person's fish tickets from a particular area will determine how much quota share they will receive. Each fish ticket contains an Alaska Department of Fish and Game number identifying the vessel used to harvest the fish, and a permit number identifying the permit holder who made the landing.

The Alaska vessel license file also will be important. The data in this file, however, contain difficulties for catch history purposes as well. The preferred alternative envisages quota allocations being made to vessel owners. While the required form contains a place for details of vessel owners, the information is not verified. It may be that vessel owners as identified in this file are not the legal owners who will be entitled to a quota allocation. Because of the potential scope of this exercise, there is no choice but to use existing data sets despite their quality.

The first step is to consolidate the two separate datasets. This will require both coordination and cooperation between agencies with relevant data. The National Marine Fisheries Service (NMFS) is the agency responsible for the management and enforcement of any IFQ system and is the appropriate agency for integration and storage of data. After various data sets are combined, they need to be edited to provide reliable catch histories. All editing should be undertaken by an inter-agency data processing task force. The following agencies should be represented on such a body:

National Marine Fisheries Service
Alaska Commercial Fishery Entry Commission
Alaska Department of Fish and Game
International Pacific Halibut Commission
North Pacific Fishery Management Council

This coordinating body will be primarily responsible for establishing the rules for editing. It is important that this exercise be undertaken systematically with all edits being fully recorded and documented showing the reason for the change, who did it, and the date. Fishing quotas will be based on the results of this exercise and strict control must be maintained to ensure that further errors are not introduced into the data, or that fraudulent changes are not made. It is also important to establish a trail from the forms filed by fishermen through to the eventual quota allocation. Where there is a difference between a quota allocated and the forms upon which the allocation was based, clear evidence of the nature of these disparities must be available. This can only be achieved with an audit trail of edits made to the data. Any short cuts taken at this stage will be reflected in a protracted appeals process following allocation. It will be the function of the inter-agency data processing task group to establish rules and systems within which the editing exercise takes place.

5.2.2 Eligibility

To be eligible for a quota allocation, a person must have made at least one legal landing of halibut or sablefish during the years 1988, 1989, or 1990. In addition, a person must also be the owner of the vessel from which the landing was made, or be the operator of a bare-boat charter. It is at this point that difficulties with the database arise, because computer records may not contain definitive

information about the legal owner of a vessel and no agency has information to help identify bare-boat charter operators. Additionally, those who have filed fish tickets may not be the vessel owner, as in the case of fish tickets being legally filed by hired skippers.

This is further complicated because the State of Alaska has imposed restrictions on the release of information contained in fish tickets to anyone other than the filer of the ticket, without prior consent. Therefore, a skipper must approve release of his fish ticket data to a vessel owner.

A fisherman can have one of three relationships to any given fish ticket, and thus there are three relevant categories of fishermen with regards to quota share determination.

1) A fisherman may have owned the vessel used to land the fish and he may have held the permit used to land the fish. In this case, if the vessel license file gives the correct owner, if the correct Alaska Department of Fish and Game number has been attached to the ticket, and if all data have been coded and keypunched correctly, the social security numbers on the vessel license file and the permit file should match.

2) A fisherman may have owned the vessel used to land the fish, but the fish may have been landed using a permit held by someone else. In this case the social security numbers on the vessel license file and the permit file will be different. The fish may have been landed using a permit held by an employee (perhaps a relief skipper), or by someone operating the vessel under a bareboat charter or lease. In the first case the vessel owner would be entitled to the quota.

3) A fisherman may have held the permit used to land the fish, but not have owned the vessel from which it was landed. In this case the social security numbers on the vessel license file and the permit file will be different. The fisherman may have been an employee of the vessel owner, or he may have been operating the vessel under a bareboat charter or lease. In the latter case the permit holder would be entitled to the quota.

The difficulty this poses is that it will not be possible, at least for some vessel owners and most bare boat charter operators, to provide details of their catch histories and verify them. A legal opinion on the extent to which information on one person's fish tickets may be communicated to another person has been sought from the Attorney General. This opinion has not yet been forthcoming.

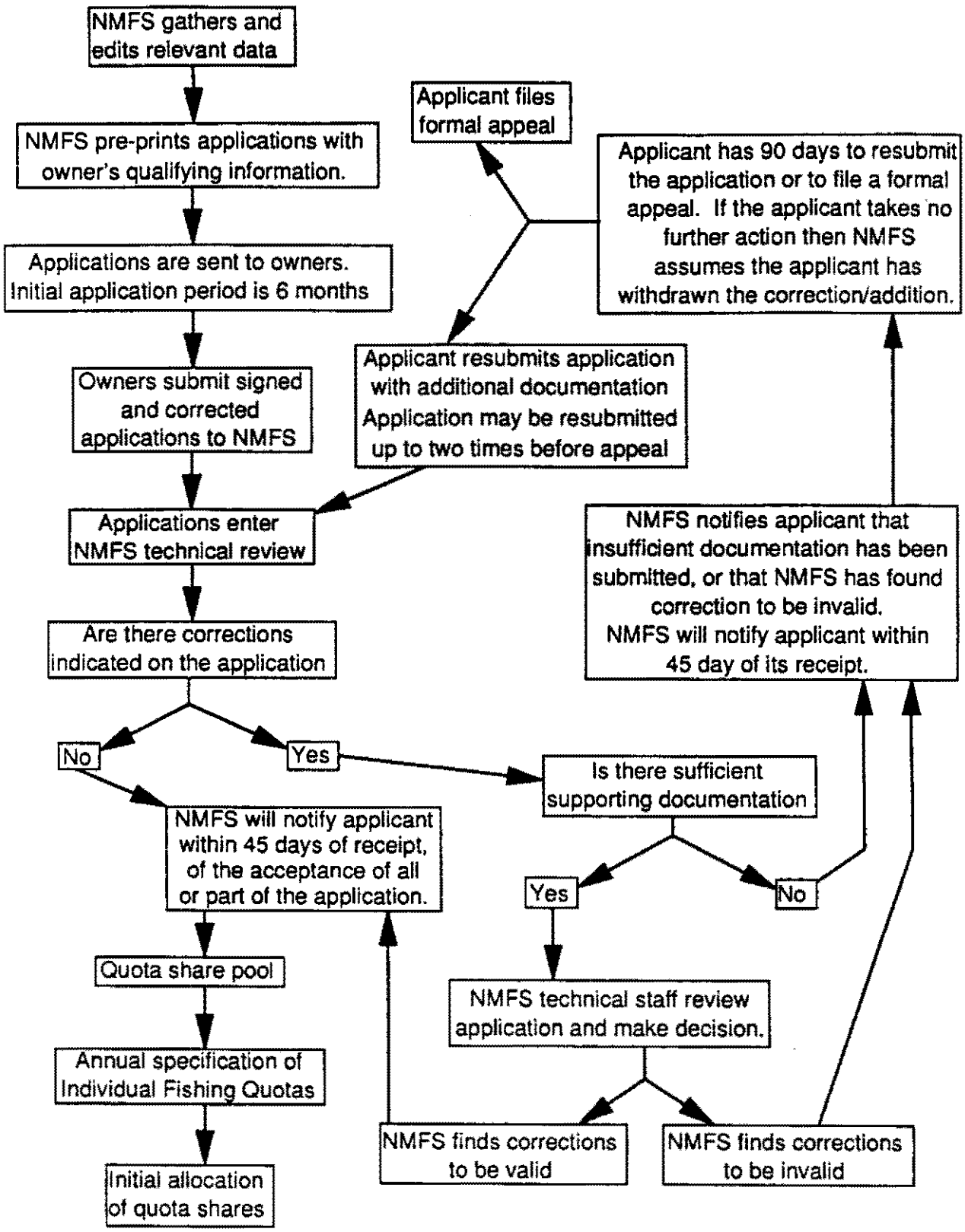
5.2.3 Application Process

As a result of the above complications, it has been decided that the most expeditious way of achieving initial allocation of quota shares is to have an application process. As shown in Figure 1 on the next page, the initial application process will be a flow of relevant data through a system of checkpoints, allowing review by both NMFS and quota share applicants. Each box in Figure 1, represents an action taken by either NMFS or by the quota share applicant, and is described in more detail below.

1) NMFS gathers and edits relevant data. Upon approval of the individual fishing quota plan by the Secretary of Commerce, NMFS will begin the process of gathering and editing the relevant data sets. It is not envisaged that approval of the quota plan by the Secretary of Commerce would occur prior to August 1992. In the meantime, some preparatory work could begin, but funding could not become available until final approval.

Figure 1

Initial Application Process



2) NMFS pre-prints applications. When funding becomes available NMFS will pre-print quota share applications with the data relevant to each known qualifying vessel owner. A prototype of the quota share application along with covering letters are detailed in Appendix B of this Chapter.

3) Applications are sent to owners. After pre-printing the applications NMFS will send them to all vessel owners indicated by the data to be quota share qualifiers. NMFS will also notify the fishing public that applications have been distributed. The initial application period will be six months. Any person believing themselves to qualify, but who did not receive an application will be asked to contact NMFS. Additionally at the time of the first mailing of quota share applications, letters will be sent to all non-owner operators, explaining the individual fishing quota system. Prototypes of these letters are contained in Appendix C of this Chapter.

4) Owners submit applications. After receiving the pre-printed application, each quota share applicant will have 6 months to gather waivers from hired skippers allowing for the release of fish ticket information to an owner, to correct and substantiate any discrepancies, and to submit the applications to NMFS. The process is planned on the expectation that fishermen will need ample time to respond. Some fishermen will be fishing when the invitation to apply is sent and will be unable to respond immediately. For others important documents may have to be gathered from accountants, ex-spouses, buyers in remote locations, and so on. If errors in the application are detected by the owner, documentation will be required to be furnished attesting to the discrepancy.

   Receipt of each application package by NMFS will be acknowledged immediately with a post card. A separate paper file will be created for each application package and it will be assigned to a NMFS technical review team for evaluation.

5) Applications enter NMFS technical review. NMFS will establish an application processing team which will review all applications. The technical review will be a first level check for corrections submitted by applicants. The technical review team will also handle applications made by lease holders or bare-boat charter holders. It is hoped that the technical review team will be able to deal with the majority of changes or corrections the applications, thereby reducing a costly, time consuming, and possibly acrimonious appeals process. A NMFS technician will evaluate each application on the basis of a carefully formulated and precise set of rules. The decisions behind the disposition of each application should be summarized in a memo to the paper file. Employees conducting evaluations will be carefully trained and supervised to ensure consistency. A strict quality control program will also be instituted to ensure accuracy and integrity in application evaluations. In many cases information on an application may be illegible or incomplete. Provisions will be developed to fix any defective applications.

6) Required corrections. This is the first sorting step in the application review process. The NMFS technician will check each application for required corrections. If none is found then the application is accepted and the landings history will be forwarded to the quota share pool (see step 7). If most of the information is correct, but corrections are indicated on only some of the landings, the uncontested landings information will be forwarded to the quota share pool.

In general there should be three types of corrections or amended information brought to the attention of NMFS as the applications come in:

1) New fish tickets will be found or fish ticket corrections will be suggested;

2) A waiver of confidentiality will be supplied, or evidence will be supplied that the permit holder was an employee. Fish tickets are a fundamental accounting record, so it seems likely that if permit holders were considered employees of a vessel owner or bareboat charterer, the owner or charterer would have access to or possession of the fish tickets;

3) Bareboat charter evidence will be supplied. This may be a copy of a contract or an affidavit obtained from the vessel owner. Verbal charter arrangements will be recognized provided supporting documentation, such as taxation forms are also submitted.

The application will be forwarded for further NMFS technical review (see step 11) if any of the following changes are indicated:

1) contested landings;

2) errors in the personal information of the applicant;

3) the existence of a bare-boat charter or lease;

4) a waiver from permit holders are submitted;

5) other miscellaneous changes.

7) NMFS will notify applicant of acceptance. Within 45 days of receipt of the application NMFS will notify the applicant of the acceptance of any uncontested landings. The application and landings will be forwarded to the quota share pool.

8) Quota share pool. Any qualifying landings accepted by both NMFS and the applicant will be forwarded to the quota share pool. An individual's qualifying pounds will be derived from round weight using product recovery factors for each product form. For years prior to the revision of rules which required reporting of product form on fish tickets, an "eastern cut" headed and gutted product form will be assumed for sablefish,while an iced, headed and gutted product form will be assumed for halibut. Other assumptions may need to be made, such as averaging product recovery rates, when no product form is recorded on a fish ticket in later years.

If an applicant made landings during the qualifying period of 100,000 lbs of Eastern Cut fish in area A, his qualifying lbs would be converted to round weight, *e.g.* 100,000/0.63, and he would receive 158,730 quota shares for area A.

The number of quota shares in the pool will be subject to change. In the first years of the system the number of quota shares in the pool is likely to increase as appeals are settled and additional quota shares enter the pool. In later years the number of quota shares in the pool is likely to decrease, as enforcement officers levy fines in the form of revocation of quota

shares. A given person's number of quota shares will not change unless he sells or buys shares or faces enforcement action. The total number of quota shares in the pool for each area will be the basis from which individual fishing quotas are issued.

9) Initial specification of individual fishing quotas. Because of the time required for Secretarial review and the time necessary for the application process to be completed, fishing under the quota system will not be possible until 1994. The annual specification of individual fishing quotas will occur after the total allowable catches for each area have been finalized. (It is also envisioned that the fishing season for halibut and sablefish will not commence until March each year.) Individual fishing quotas for each person will be calculated as follows.

For each person in an area, the individual fishing quota equals the persons quota share divided by the sum of all person's quota shares in that area (the quota share pool), multiplied by the total allowable catch for that area. Individual fishing quotas will be issued in pound units. Thus a person might receive 57,128 pounds for area A, in a given year.

$$\frac{QS_{ij}}{\sum_{i} QS_{ij}} \times TAC_j = IFQ_{ij}$$

Note, that as the number of shares in the quota share pool changes, or as the total allowable catch for an area changes, a person's individual fishing quota will change. If the quota share pool increases in size then a person's individual fishing quota decreases, and vice versa. If the total allowable catch increases then a person's individual fishing quota increases, and vice versa. Example calculations of individual fishing quotas based on 1991 total allowable catches and preliminary estimates of quota shares in the quota share pool are shown in Appendix D of this Chapter.

10) Initial allocation of quota shares. Once quota shares have been determined individual fishing quotas will be allocated. At that time transfers of quota shares and individual fishing quotas may commence. Fishing under quotas would not begin until the season opened.

For uncontested applications and landings histories, this is the end of the initial allocation process. For applications which had corrections indicated in step 6 above, the technical review process continues below. These reviews do not constitute a formal appeal, as NMFS and Alaska Department of Fish and Game recognize the errors in their own data sets and will make corrections if they are deemed valid.

11) Is there sufficient supporting documentation? If corrections were indicated in the application, the second step in the review will be to ascertain whether the corrections indicated have sufficient supporting documentation. This step will not actually check the validity of the documentation, only whether sufficient documentation was submitted. For example, if a person indicates an error in a certain landing, the correction must be accompanied by a copy of the relevant fish ticket. If sufficient documentation is submitted the application will be sent for further NMFS review (see step 12). If there appears to be insufficient documentation for further technical review, then NMFS will notify the applicant of the deficiencies, indicating the documentation required to correct those problems (see step 13). If the supporting documentation is a waiver by a permit holder releasing his landings history to the vessel owner, then NMFS will issue a revised application with the additional pre-printed landings of the permit holder. At that time the applicant will have 90 days to resubmit the application to NMFS (see step 14). If the application is not resubmitted, NMFS will assume that no additional corrections are indicated and the landings information in the second application will be forwarded to the quota share pool.

12) NMFS technical staff review. Corrections accompanied by supporting documentation will be reviewed by NMFS technical staff. Supporting documents will be checked against NMFS and Alaska Department of Fish and Game records and other necessary research will be undertaken. Applications technicians will have to follow a set of detailed rules telling how to deal with situations which may occur. The case files, precedents, and decisions of the Alaska Commercial Fisheries Entry Commission will be used as a basis for developing these rules. A wide variety of circumstances can arise in this evaluation process and rules will be prepared to deal with each of them. The following are examples of possible issues:

1) How much discretion should be given to technicians to relax procedural rules, for example accepting late applications;

2) What should be done when it is found that a fisherman did not meet all legal requirements when the original fishing was done?;

3) Suppose a vessel owner sells his vessel and his quota history to another fisherman?;

4) Suppose the buyer is not qualified to receive quota?;

5) Suppose an affidavit claiming a bareboat charter agreement is received and the technician has reason to believe, from other evidence, that none actually existed at the time?;

6) How will a conflict between two persons claiming ownership of the same vessel at the same time be resolved?;

7) Suppose fish tickets submitted in evidence appear to have been altered?;

8) What sorts of excuses will be accepted for late fish tickets?;

9) What about arrangements between fishermen who fish together (on separate vessels) and agree to split the proceeds from their joint operations? This may be common in short risky fisheries such as halibut;

10) How should fishermen's estates be handled?

If NMFS finds the corrections to be valid, then the alterations will be made and NMFS will notify the applicant of the acceptance of the application, and the landings history will be forwarded to the quota share pool (see step 7). If the corrections are not justified, or if the evidence is insufficient NMFS will notify the applicant of the deficiencies.

13) NMFS notifies applicant of insufficient documentation. If the indicated corrections are not accompanied by supporting documentation, or the supporting documentation does not justify a correction, then NMFS will notify the applicant within 45 days of its receipt. The notice will inform the applicant of the kinds of documentation acceptable for the corrections indicated, and will describe why the correction was found to be unjustified. The notice will also describe the recourse available to the applicant, *i.e.* acceptance of NMFS decision, resubmission of the application, or formal appeal.

14) Applicant has 90 days to resubmit the application or file a formal appeal. The applicant has 4 choices at this point; accept the NMFS decision and withdraw the corrections, resubmit the application with additional documentation, file a formal appeal, or do nothing. If the applicant accepts NMFS decision or does nothing within 90 days of notification, NMFS will forward the original uncorrected landings history to the quota share pool (see step 7). The applicant may resubmit the application with additional documentation supporting the corrections. If resubmission occurs within 90 days, the application will re-enter the technical review process (see step 4). The application may be resubmitted twice. If the applicant is not satisfied with a NMFS decision or its documentation requirements, the applicant may file a formal appeal.

15) Applicant files formal appeal. The formal appeals process is described in more detail below. To summarize that section, formal appeals will be heard by a hearings officer, and will be based on matters of fact. Any decision arising from the formal appeal process will be deemed final by NMFS and all landings histories will be forwarded to the quota share pool (see step 7).

Several additional points should also be made. During the application period NMFS will cross check any claims of bare-boat charter or lease arrangements. If a leaseholder makes a claim against an owner, then the disputed landings history will be pulled from the quota share pool even if the vessel owner had not indicated any lease. At this point NMFS will contact each party seeking resolution. Any application or appeal which has not reached a final decision at the time of initial allocation of quota share (step 10) will be added to the quota share pool for individual fishing quota allocation in the following year. Recipients of quota shares coming from late decisions will be granted all the rights accruing to initial quota share recipients.

5.2.4 Vessel Classes

The Council's preferred alternative has identified vessel class categories within which quotas would be issued. These are:

1. Freezer longliners;
2. Catcher Vessels.

There are further sub-categories of catcher vessels, but these vary between the two fisheries. For sablefish, catcher boat categories are:

a) vessel less than or equal to 60 feet in overall length; and

b) vessels of greater than 60 feet in overall length.

For halibut, classes will be:

a) vessels of less than or equal to 35 feet in length overall;

b) vessels greater than 35 feet but less than or equal to 60 feet in length overall; and

c) vessels greater than 60 feet in overall length.

Figures 2a and 2b on the next two pages detail the method for determining the vessel class within which a quota will be issued. Figure 2a details sablefish vessel class determination and Figure 2b does the same for halibut. Generally, quota shares will be issued to the vessel category used by an individual in his last year of fishing through September 25, 1991. If, in the final year of participation in a fixed gear fishery, a person utilized two vessels in different vessel categories, then the allocation will be split between the categories.

There are a series of conditions governing the transferability of quota shares. Quota shares must be used on the vessel category to which they are assigned. Clearly, fish caught with a catcher boat share may not be frozen aboard the vessel using those shares. Sablefish catcher boat shares may be used on a freezer vessel, provided no frozen product is on board during the use of these shares.

5.2.5 The Appeal Process

The appeals process begins when an applicant files an appeal. Fishermen have 90 days to lodge an appeal against the decision of NMFS. Appeals will be limited to claims of eligibility to apply for quota share allocation, to fish ticket errors, computational errors, vessel ownership disputes, or claims of bare boat charters or leases. All appeals will be made in writing with claims being documented by legible copies of fish tickets or other documents in support of the claim. Appeals will be heard in the order of receipt.

Appeals will be considered by hearing officers hired for this purpose by the NOAA General Counsel's office. The number of hearing officers that will be required is unknown. For the purposes of illustration, budget estimation and timing, it is assumed that there will be three officers.

The hearing officer will examine the evidence and hear appellants' testimony. An officer may travel to hold hearings in locations near appellants, or if circumstances are suitable, may conduct hearings over the telephone. Detailed and accurate records of hearings will be kept, including tape recordings. A hearing officer's findings will be carefully justified and documented in a written decision. The decision will automatically take effect in 60 days if it is not formally challenged by the appellant or the Regional Director of NMFS.

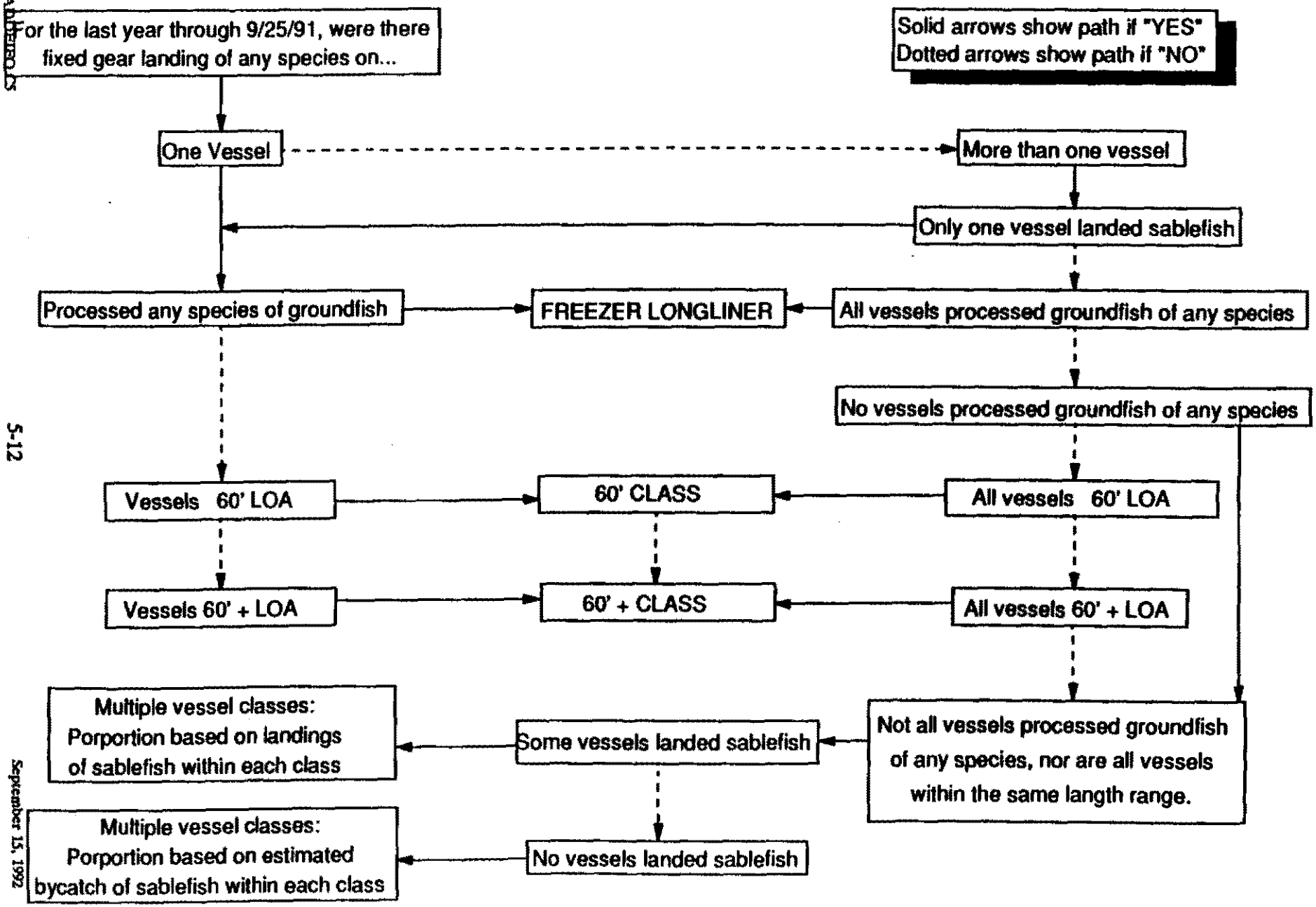
This approach to appeals has advantages over the administrative appeals board suggested in previous public documents. Under the administrative board approach a four person panel would be appointed by the Alaska Regional Director of NMFS to hear appeals. At least one member of the board would come from Alaska, Washington, and Oregon. The use of hearing officers should render the process less bureaucratic. The hearing officer will be a lawyer, familiar with the requirements of appeals processes and the need to keep accurate documentation for any subsequent proceedings. Professional hearing officers should also ensure a greater degree of consistency in decisions.

Appeals from the decisions of a hearing officer will be made to the federal courts. Because of the potential for litigation, great care should be taken in the handling of appeal lodgements within NMFS. Professional hearing officers would see that requisite attention was devoted to handling appeals in a way that would ensure equity and fairness to appellants, and preserve judicial integrity.

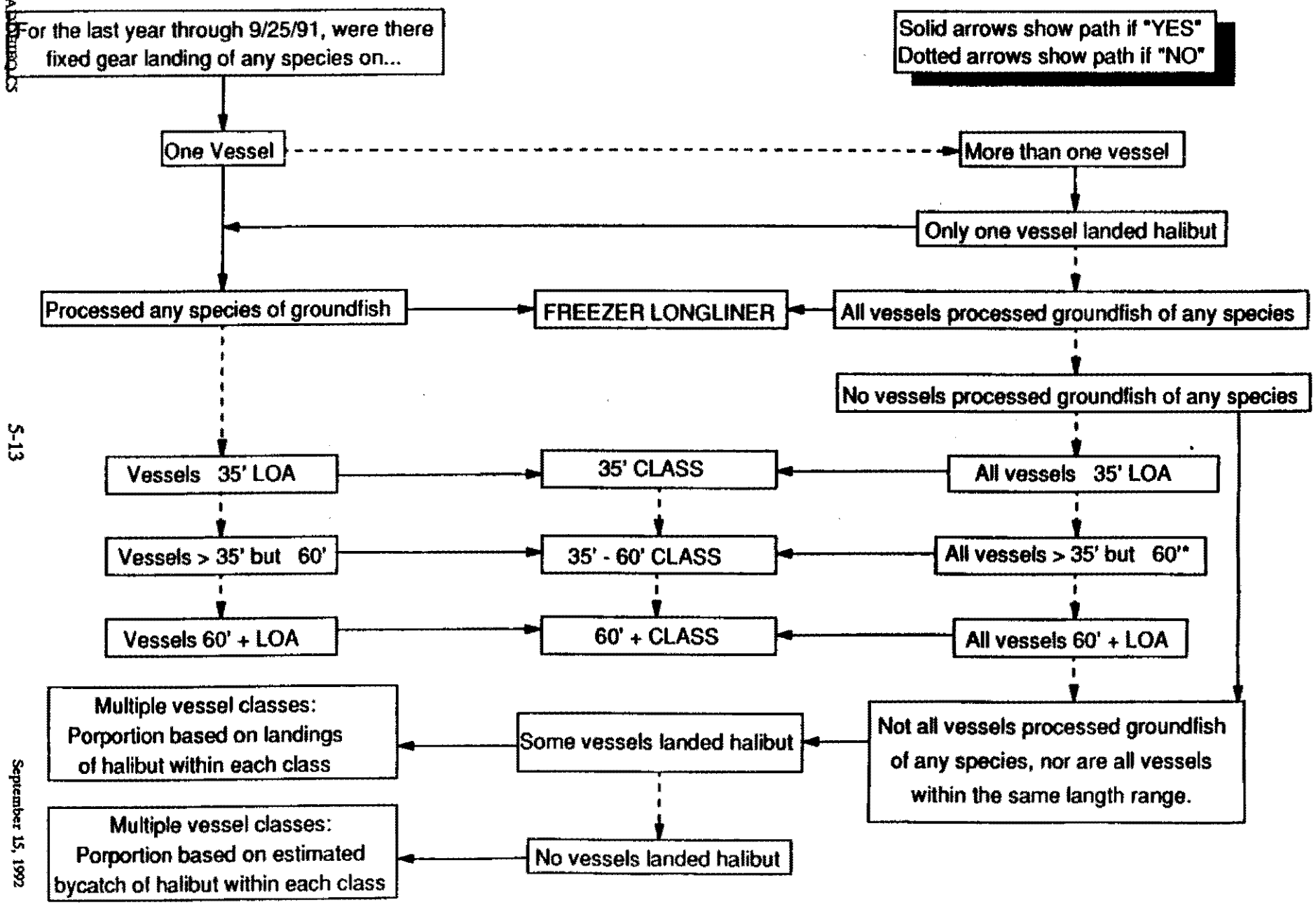
A successful appeal will change the number of quota shares in the quota share pool and therefore the future individual fishing quota allocations of every other person in a given area. Accordingly, additions to the quota share pool will only become effective at the time of specification of annual individual fishing quotas.

Figure 2a

Sablefish Vessel Class Specification Schematic



Halibut Vessel Class Specification Schematic



To avoid appeals being lodged for the purpose of fishing a disputed quota until the appeal is determined, quotas under appeal will not be available for fishing. Thus, if a person receives 1,000 pounds of halibut quota and files an appeal claiming that he was entitled to 1,500 pounds, he will be given a quota share and individual quota in the first year based on his undisputed 1,000 pounds. If the appeal is resolved in his favor in the first year, he will receive quota share and individual quota in the second year based on 1,500 qualifying pounds. There are a number of other possible approaches, but they involve administrative difficulties. For example,

1) let a fisherman fish any quota which is the subject of an unresolved appeal. Thus at the start of each year a fisherman would be allowed to fish all quota sought until such time as the claim is resolved. Clearly, this could continue for a number of years if a fisherman chose to appeal through the judicial process to the highest court in the land. This approach would encourage persons to lodge and to persist with appeals, at least some of which have little chance of success. If many fishermen chose to do this, not only would it impose a significant burden on the judicial process, it would also penalize fishermen who accepted as legitimate their qualifying poundage since their proportion of the total quota share pool would be less than if everyone either accepted their share or legitimately appealed for an amount to which they considered they were legitimately entitled. This approach would encourage fishermen to file appeals, since they would gain the proceeds from fishing during the period the appeal remained unresolved, yet the lodging of the appeal would impose no costs on the fisherman. Further, if appeals are to be heard in the order in which they are lodged, this approach would give an incentive to appeal as late as possible so that the period during which it was unresolved would be as long as possible, thus allowing for prolonged fishing.

2) Put disputed quota into a quota reserve. Lease the quota in the reserve to persons active in the fishery and put the money into a trust account. Use the trust account money to reimburse persons who were prevented from fishing quota during their appeals and then divide any remainder among all fishermen in proportion to their quota holdings. This approach is complicated and would increase administrative costs. It also provides incentives to appeal unrealistic amounts of quota, on the basis that everyone would end up with additional fish available for a short period.

There is room for discretion on the issue of quotas during the consideration of appeals. If a person lodges an appeal in good faith which involves an issue of law, the resolution of which is likely to be protracted, it may be possible to issue a special order allowing some of the quota to be fished. In other cases an appeal may not affect the amount of quota to be distributed. For example, the quantum of quota may not be in dispute, only which of two parties is entitled to it. If the parties can agree on a temporary division, it may be possible to allow them to fish prior to a decision being reached.

5.2.6 Estimated Timetable

The Council has made it clear that with the state of these two fisheries and the disposition of the fishing fleet it would like this preferred alternative implemented as soon as possible. Given the scope of the plan, and the difficulties identified above, it will not be possible to have an operational quota system until the 1994 fishing season at the earliest. Any slippage in the timing of any of the items below, may delay implementation even further. The following provides an estimate of the timetable for implementation:

Action	Start date	End date
Council Approves quota share plan.	December 1991	
Secretary Approves quota share plan.	June 1992	
Preliminary data gathering.	December 1991	April 1992
Implementation start up phase; includes hiring, calls for RFPs, thorough data editing.	April 1992	September 1992
Implementation begins when funding becomes available at start of new fiscal year.	September 1992	
Applications mailed.	September 1992	
1st application period is 6 months. All applications must be submitted for at least the first time.	September 1992	March 1993
NMFS Technical review begins.	September 1992	
Last notice NMFS mailed regarding 1st application (45 days after NMFS receipt).	May 1993	
1st resubmission of application may begin, but all 1st resubmissions must be in 90 days after notification by NMFS.	September 1992	August 1993
Last notice NMFS mailed regarding 1st resubmission (45 days after NMFS receipt).	September 1992	October 1993
2nd resubmission may begin but all 2nd resubmissions must be in 90 days after notification by NMFS.	September 1992	December 1993
Last notice NMFS mailed regarding 2nd resubmission (45 days after NMFS receipt).	September 1992	March 1994
Formal Appeals process may begin immediately, but last appeal must be filed 90 days following NMFS notice regarding 2nd resubmission.	September 1992	June 1994
Appeal process may continue indefinitely.		
Initial specification of QS and IFQs. QS deriving from any unsettled appeals or applications will be added to the QS pool but IFQs will not be recalculated or re-issued until the following year.	February 1994	
Fishing under IFQ program begins.	March 1994	

5.3 Annual Management

The previous section dealt with the initial allocation of quota shares to qualifying fishermen. This is an isolated task with a concrete start and finish. It is the exercise which is required to start the quota program. Once this has been completed, there is a need to establish a number of interdependent systems for the continuing management of the quota fisheries. The following sections detail these systems.

5.3.1 Annual Determination of Individual Fishing Quotas

The previous section addressed the initial allocation of quota shares to qualifying individuals. This allocation establishes a person's proportion of a total fishery. To arrive at a quantity of fish which is available for harvesting each year, it is necessary to multiply a person's quota share with the total allowable catch. Total catches will be set for sablefish by the Council each year at its December meeting. This will be followed by the International Pacific Halibut Commission doing the same for halibut at its January meeting. By the beginning of February, both total allowable catches will be known. During February NMFS will perform the necessary calculations, and advise fishermen of the individual fishing quotas they have available for the forthcoming year. It is proposed that the fishing year will commence on March 1 each year and end on November 30. Fishing for sablefish and halibut under quotas will not be permitted between December 1 of one year and February 28/29 of the following year.

This exercise is necessary, not only because the total allowable catch will change from year to year, but because fishermen's quota shares will vary from year to year. This results from two factors. The first is the transferability of quota shares. If someone purchases or leases a quota share through a fishing year, he will receive not only an increased individual fishing quota in the year in which the transaction took place, but will also receive a greater proportion of the total allowable catch in subsequent fishing years until such time as he sells the quota share, or the lease expires. The second element is the effect on the quota share pool of appeals and enforcement action. Successful appeals will mean more fishermen will be taking a share from the pool, which will result in everybody else receiving slightly less. Conversely, enforcement action which results in the forfeiture of a quota share will result in less people taking a share from the pool, and everybody receiving slightly more individual fishing quotas. Annual quotas may increase or decrease for an individual, either as a result of his/her purchase or lease of a quota share - *i.e.* increasing or decreasing their personal share of the pool, or as a result of increases or decreases of the pool itself.

There is a third factor which will affect all quota share holders. This is the community development quota program. Quota shares for community development are required to be removed from the total allowable catch prior to any commercial fishing quotas. This will result in a small decrease for all commercial quota holders in the year following the approval of a development quota for a community. To facilitate some certainty in this, it is suggested that the Council should approve any community development plans no later than its September meeting to allow time for commercial fishermen to plan for the resulting decrease in the quota share pool the following year.

Annual individual fishing quotas will be determined on the basis of quota shares owned or leased at midnight on December 31/January 1 of each year.

5.3.2 Bycatch

Under a quota management regime, the sum of individual fishing quotas should equate with the total allowable catch. Clearly, under a provision such as this to allow discards carries the risk of exceeding the total catch. Accordingly, no discards will be allowed for those who own or control quota shares or individual fishing quotas. Any sablefish or halibut caught by a person who owns or controls quota shares or individual quotas must be retained by that person, and recorded against the quota. The freezer long line vessel category is exempt from this provision.

At the same time, the Council does not wish a race for fish to develop for halibut in other, non-quota fisheries. To avoid this, the Council has recommended that the halibut prohibited species catch limit be suspended for the first two years of the program.

The Council has designated Pacific cod and rockfish as bycatch species for sablefish and halibut fishing under the individual fishing quota regime. This means that persons controlling quota shares or who incidentally catch rockfish or Pacific cod must retain these fish and land them unless they are designated a prohibited species. It has been suggested that NMFS may add any additional species to the bycatch list that it considers unlikely to survive being discarded.

Despite the recommended suspension of the prohibited species catch limit for halibut, the amount of bycatch needs to be monitored. The following regime will apply to the monitoring of bycatch for sablefish and halibut. For halibut, bycatch will be estimated by multiplying average observer rates by the groundfish landed in all hook and line fisheries, including sablefish. The amount of halibut landed in conjunction with sablefish directed fisheries will be subtracted from the total bycatch estimate. The remaining 'estimated bycatch discard' will be multiplied by 16 percent, the estimated discard mortality. It is proposed that halibut bycatch mortality will be monitored, but not be subject to a cap, at least for the first two years of the individual fishing quota program.

For sablefish, bycatch will occur both in the directed halibut quota fishery and in other groundfish fisheries. Sablefish is managed under a total allowable catch. If the total hook and line total allowable catch is allocated as individual fishing quotas, the inevitable bycatch in other fisheries will result in annually exceeding the total allowable catch. The simplest solution is to set aside a percentage of the total catch to support bycatch, and allocate the remainder as individual quotas each year. The same basic procedure outlined for halibut bycatch estimation will be used. The only difference is that an estimated bycatch mortality rate has not yet been established for sablefish as it has for halibut. Determination of this rate, and continued monitoring of bycatch will require an expansion of observer coverage.

Observer coverage in the Gulf of Alaska hook and line groundfish fisheries in the past two years has been limited and selective due to the large number of vessels under 60 feet in length which have been exempt from observer coverage. The data which have been collected shows halibut bycatch rates ranging from none to over 100 percent of the groundfish caught. Accurate accounting for total removals of halibut and sablefish will require increasing the level of observer coverage significantly. The 60 foot limit for observer coverage needs to be re-evaluated, as does the 30 percent requirement per quarter independent of fishery. Observer coverage will be needed in the halibut fishery, in order to establish accurate sablefish bycatch rates.

5.3.3 Catch in Excess of Quota

All fish landed by a vessel in excess of its individual fishing quota is considered to be an "overage." As stated earlier, the aim of a quota system is to have all catches stay at or below the total allowable catch. Accumulated "overages" may cause the total catch to be exceeded unless a system is implemented to prevent such an occurrence. As an example of the magnitude of "overages" and their relationship to total allowable catches, the history of the halibut fishery in Areas 3A and 3B since 1980 is presented in the following table:

Year	Catch Limit	Catch (Millions)	Underage	Overage
1980	10.0	12.2		2.2
1981	13.0	14.7		1.7
1982	17.0	18.3		1.3
1983	19.0	21.9		2.9
1984	25.0	26.5		1.5
1985	32.0	31.7	0.3	
1986	38.4	41.6		3.2
1987	40.5	39.1	1.4	
1988	44.0	44.9		0.9
1989	39.5	41.6		2.1
1990	38.2	37.5	0.7	

With the present derby style of fishery, close attainment of the catch limit is difficult. In 1980, the "overage" equaled 22 percent of the catch limit, while in 1987 the "underage" equaled 3 percent. The prevalent case is catch in excess of the total allowable catch.

One of the advantages of an individual fishing quota program is that it creates a fishery in which closer attainment of catch limits is possible. "Overages" in such a fishery can be handled in several ways. At one extreme they can be allowed, surrendered without profit and without further penalty. The likely result of this is catch exceeding total allowable catches. On the other extreme a portion, perhaps 10 percent of the catch limit, can be set aside to keep the final catch near the total allowable catch. This is a large loss of saleable fish. Clearly, neither of these outcomes is acceptable. A solution between the extremes is desirable. A system will be built into the program to encourage fishermen not to exceed their quotas. Such a system might look as follows:

1) "Overage" up to 5 percent - receive payment and have an equivalent poundage subtracted from next year's individual fishing quota.

2) "Overage" from 5 percent to 10 percent - surrender poundage and have an equivalent poundage subtracted from next year's individual fishing quota.

3) "Overage" 10 percent and more - surrender poundage, have an equivalent poundage subtracted from next year's individual fishing quota, and be subject to further prosecution.

While there can be no guarantees, it is hoped that this system will reduce any net "overage" for the fleet. Receiving payments for "overages" up to 5 percent (which will be subtracted from next years individual fishing quota) while contentious should reduce the amount of unreported landings. Other systems such as an "overage" bank from which payments for "underages" from the forfeited value of "overages" could be made may have some advantages, but they are difficult to administer. Implementation of an "overage" program requires setting aside 5 percent of the catch limit in the first year. This amount could be modified in the second year depending upon experience.

5.3.4 Transfer of Quota Shares and Individual Fishing Quotas

Every person wishing to purchase quota shares or individual fishing quotas will have to complete a "transfer eligibility application." Only bona fide crew members and initial quota share recipients are eligible to purchase quota shares or individual fishing quotas. The eligibility application would request the person's address, phone, fax, tax number, and citizenship. Persons previously eligible would be sent an application pre-printed with last year's personal information asking for any corrections. Corporations and partnerships would have to fill out a more detailed eligibility application, asking for addresses, phone and fax numbers, tax numbers, and the ownership percentage for all shareholders and partners with at least a 5 percent ownership interest. Only corporations or partnerships which receive initial allocations of quota share would be eligible to purchase quota shares or individual fishing quotas. The additional information regarding individual members of the corporation or partnership is required to track quota shares ownership levels. It will also be used to ensure that the membership of that corporation or partnership has not changed since initial allocation, thereby rendering it ineligible to continue the grandfathered right to employ hired skippers. Prototype transfer eligibility forms for individuals, and for corporation and/or partnerships are shown at Appendix E of this Chapter.

A registered bona fide crew member, must have accumulated at least 5 months of commercial fishing time. The fishing time must have occurred in the United States, either in state or federally managed waters. To be registered as a bona fide crew member an individual will have to complete an application form which provides details of the fisheries in which he served as a member of the fish-harvesting crew, including time, place, vessel, and so on. In this case the fish harvesting crew are all those deploying and retrieving fishing gear, their on board supervisors, and those on board persons involved in the decision making process of when, where, and how to fish. The application will have a signature section which constitutes an affidavit swearing that all the information is true. A prototype of the crew member application form is shown at Appendix F of this Chapter.

A transfer would require both parties to sign a transfer form duly certified by a notary public. The form would have a check box to indicate which type of transfer is involved, the amount and price of quota share being transferred, the amount and price of individual fishing quota being transferred, and an affidavit stating that each party is a willing participant in the transaction and that no further agreements requiring either party to make subsequent transfers of quota share or individual fishing quota are in effect.

The completed form would be sent by mail or delivered in person to NMFS offices where the transfer would be entered into the transfer data bank. The transfer would not be valid until the database confirms that the purchaser was eligible to purchase, *i.e.* a bona fide crew member or an original recipient of quota shares. Further queries would be undertaken to ensure that the transfer would not put the purchaser above the ownership cap, or if the two parties involved had made a reverse transfer in the past. Provided none of the conditions detailed by the Council had been violated the transfer would be valid. NMFS will notify each party by mail, and if necessary by fax, confirming the

transfer. With an adequate computer program it is quite likely that validation and confirmation of any transaction could occur within 24 hours of receipt by NMFS. In the future transfers could be completed at other NMFS offices with phone/computer links to NMFS regional office, or by registered brokers. Initially however a more constrained system is envisioned. A prototype transfer form is shown at Appendix G of this Chapter.

A database will be established to process and monitor transfers of quota. This will be established in a way that it will be able to monitor the following:

a) amount of quota share as at December 31/January 1;

b) amount of individual fishing quota issued at the commencement of the fishing year;

c) amount of individual fishing quota available for leasing (10 percent of annual individual fishing quota);

d) amount of quota share or individual fishing quota transferred in the current year;

e) amount of fish landed against an individual fishing quota in the current year;

f) status with regard to ownership caps;

g) known relationship between the owner and other quota holding entities, *e.g.* corporations, partnerships, etc.;

h) eligibility to purchase, *i.e.* is the purchaser or lessor a bona fide crew member or initial quota recipient;

i) status with regard to initial allocation;

j) history of all quota share and individual fishing quota transfers by the owner.

There are three types of quota share or individual fishing quota transfer. The first involves the permanent transfer of quota shares and current year individual quotas. The purchaser of this quota share and individual fishing quota will retain the quota share until such time as he sells it, and he will receive the annual fishing quota as a result of holding this quota share. The second type of transfer involves the permanent transfer of quota shares, but not the current years individual fishing quota. Under this arrangement, the original owner would fish the individual fishing quota in the current year, but the new owner would be allocated the annual individual fishing quota in subsequent years. The third type of transfer involves the transfer of an individual fishing quota in the current year, but not the quota share. This is a lease of quota, and is permitted up to 10 percent of the individual fishing quotas allotted to a person in the current year.

The following are a series of examples detailing potential transfers:

1) A transfer of both QS and current year IFQs. The amount of IFQs transferred for the current year cannot exceed the Quota Shares transferred. The amount of QS transferred can

however exceed the amount of IFQ transferred. Two examples illustrate this type of transfer:

A) "X" owns 50,000 Quota Shares in area "A". In 1996 his IFQ allotment in area "A" is 10,117 lbs. In April before going fishing, "X" decides to retire and sell all his QS and 1996 IFQs. He transfers all 50,000 QS and 10,117 IFQ lbs. to "Z". "Z" may fish his 10,117 lbs. in area "A" in 1996, and in 1997 will receive a new IFQ allotment resulting from his 50,000 QS.

B) "Y" also owns 50,000 Quota Shares in area "A", and also receives 10,117 IFQ lbs. in 1996. On his first trip, "Y" sets one skate and miraculously catches 9,800 lbs. "Y" decides to retire and sell all of his QS and the remaining 317 IFQ lbs to "Z". "Z" may fish the 317 IFQ lbs in 1996 as if he had received them at the beginning of the year, and in 1997 will receive an IFQ allotment resulting from the 50,000 QS.

2) A transfer of Quota shares without any current year IFQs. Again, two examples illustrate this type of transfer.

A) "X" owns 50,000 Quota Shares in area "A". In 1996 his IFQ allotment in area "A" is 10,117 lbs. In April before going fishing, "X" makes the decision to retire after fishing this last year. He sells all his QS to "Z", but retains all of his current year IFQs. In June "X" fishes his 10,117 IFQs lbs, sells his boat and leaves the country. In 1997, "Z" will receive his first allotment of IFQs resulting from the newly purchased 50,000 QS.

B) "Y" also owns 50,000 Quota Shares in area "A", and also receives 10,117 IFQ lbs. in 1996. On his first trip, "Y" sets one skate and miraculously catches exactly 10,117 pounds. "Y" decides to go into semi-retirement in Barrow and sells 60% of his QS to "Z". In 1997, "Z" will receive an IFQ allotment resulting from his 30,000 QS, and "Y" who kept 40%, or 20,000 QS, will also receive IFQs.

3) A transfer of current year IFQs without any QS. This is a lease of QS, which is allowed in the first three years up to a level not to exceed 10% of the IFQs allotted to a person in that year. Two examples again illustrate this type of transfer.

A) "X" owns 50,000 Quota Shares in area "A". In 1996 his IFQ allotment is 10,117 lbs. In April before going fishing, "X" is invited by the New Zealand government to spend a year, unpaid, to tour the country demonstrating longline techniques. Being somewhat of an idealist "X" decides to take the offer. He sells 10% (1,012 lbs) of his IFQs to "Z", but retains all of his QS. In 1997 "X" plans to resume fishing against his full quota. The remaining 9,105 lbs. of 1996 IFQs will have to go unharvested. "Z" may fish his 1,012 lbs. in area "A" in 1996, but in 1997 will not receive IFQs.

B) "Y" also owns 50,000 Quota Shares in area "A" and also receives 10,117 IFQ lbs in 1996. In April, before fishing he decides to take the year off and go to Hawaii for fun and relaxation. He sells 1,012 lbs. of IFQs to "Z", but unlike "X" who let his remaining 1996 IFQs go un-fished, sells 44,999 QS with its corresponding 9,105 IFQ pounds to "Q". The following March, "Y" purchases 45,000 QS and the corresponding 9,105 IFQ lbs for 1997 from "W", and with the 1,012 lbs. remaining from his original allocation is able to fish at his normal level of 10,117 lbs.

Several type of transfers will not be permitted, among them are; 1) transfers of QS and IFQs where the amount of IFQ transferred exceeds the corresponding amount of QS, 2) transfers of IFQs alone in excess of 10% of the amount issued directly to a person in a given year, and 3) transfers with subsequent buy-back involving the same parties. 4) transfers to persons ineligible to purchase QS/IFQ, such as person not qualified as bona fide crew members, or corporations or partnerships which did not receive initial allocations. 5) transfers which would push the ownership level of the purchaser over the ownership cap. Examples of the first four types of non-allowed transfers follow. Ownership levels and ownership caps are discussed in more detail in a separate section of this document.

1) "X" owns 50,000 Quota Shares in area "A". In 1996 his IFQ allotment in area "A" is 10,117 lbs. In April before going fishing, "X" becomes ill and decides to go into semi-retirement. He wants to sell half of his QS, and because he is currently in a hospital, all of his 1996 IFQs. He attempts to transfer 25,000 QS and all 10,117 IFQ lbs. to "Z", but the transfer is rejected by NMFS. The maximum amount of IFQ which can accompany 25,000 QS is 5,508 lbs. NMFS would however allow "X" to sell an additional 1,012 lbs. as per the 10% lease provision.

2) "X" owns 50,000 Quota Shares in area "A". In 1996 his IFQ allotment in area "A" is 10,117 lbs. "X" would like to sell all of his QS and IFQs but is uncertain of what price to ask. In order to test the market "X" wishes to sell all of his 1996 IFQs to ascertain the appropriate one year price. He would then be able to make a better estimate of the value of QS which would grant fishing privileges many years into the future. He attempts to transfer all 10,117 IFQ lbs. to "Z", but the transfer is rejected by NMFS. The maximum amount of IFQ which "X" can sell without accompanying QS is 1,012 lbs., or 10% of the IFQs issued directly to him at the beginning of the year.

3) "Y" owns 50,000 Quota Shares in area "A" and receives 10,117 IFQ lbs in 1996. In April, before fishing he decides to take the year off and go to the South Island of New Zealand for fun and relaxation. He sells 1,012 lbs. of IFQs to "Z", and additionally sells 44,999 QS with the corresponding 9,105 IFQ pounds to "Q", with an written contract stating that in 1997 "Q" would sell back to "Y" the 44,999 QS and the corresponding IFQ. The following March "Y" attempts to purchases back from "Q" his QS as per their agreement. NMFS however, in enforcing the Council's ban on leasing would not approve the transfer. "Y" may never again purchase QS or IFQ from "Q", or from anyone else to whom he has previously sold QS. This holds not only in the current year, but also the next year, and at any time in the future.

4) "X" owns 50,000 Quota Shares in area "A". In 1994 his IFQ allotment in area "A" is 10,117 lbs. In April before going fishing, "X" becomes ill and decides to go into retirement. He wants to sell all of his QS and 1994 IFQs to "Z", who has been set netting for salmon since 1967, and since 1984 has accompanied "X" on each and every halibut opening in area "A". "X" attempts to transfer 50,000 QS and all 10,117 IFQ lbs. for 1994 to "Z", but the transfer is rejected by NMFS. "Z" is ineligible to purchase QS or IFQs because he did not receive an initial allocation of QS, and because he does not qualify as a bona fide crew member. Even though he has fished with "X" during each and every halibut opening in area "A" over the last 10 years, his total at sea fixed gear fishing time is only 38 days, far short of the 4 months minimum fixed gear fishing time required to qualify as a bona fide crew member.

5.3.5 Ownership Caps

The Council has established limits on the amount of quota shares which may be owned or controlled by one person. In this case, a person includes all individuals, corporations, partnerships or other entities. The ownership level of an individual is calculated by adding quota shares owned personally as well as by any partnership or corporation of which the person is a part. This does not, however, include families or other blood relations. The ownership cap also does not apply to initial allocations. It is possible for a person to receive above the ownership cap level on the basis of his catch history. Anyone in this situation will be entitled to retain the excess amount. They will not, however, be able to purchase or lease any additional quota without first divesting themselves of any quota in excess of the ownership limit. The following diagram details the level of ownership caps:

Sablefish		Halibut	
Area	Ownership Cap	Area	Ownership Cap
All sablefish mgmt. areas combined	1%	All IPHC areas combined	0.5%
East of 140° (WY and EY/SO)	1%	IPHC areas 2C, 3A, and 3B combined	0.5%
		IPHC areas 4A,4B,4C, 4D, and 4E combined.	0.5%
		IPHC area 2C	1.0%

In addition to individual ownership caps, the Council has also established caps on the amount of quota which may be fished from one vessel. For sablefish no more than one percent of the combined Gulf of Alaska and Bering Sea/Aleutian Islands quota may be taken on any one vessel, and no more than one percent of the total allowable catch east of 140° W longitude may be landed on the same vessel.

For halibut, no more than one-half of one percent (.5%) of the combined International Pacific Halibut Commission area quotas may be taken from one vessel. In both sablefish and halibut, anyone receiving above the individual ownership cap may fish in excess of the vessel cap from one vessel.

The following examples may clarify ownership levels and caps:

1) "X" is allocated sablefish QS which translates in the first year of IFQs, to 150 mt in area "A", 60 mt in area "B" and 100 mt in area "C". The TAC for all areas combined is 29,000 mt. "X" exceeds the overall ownership cap because his overall ownership level is 310 mt or 1.07% (310 mt / 29,00 mt). "X" is not allowed to purchase any additional QS or IFQs, but because his excessive ownership level came about through no action of his own, no enforcement action will be undertaken. In the following year the TAC for area "A" changes such that "X" receives only 100 mt in area "A". The TAC in area "D" however has doubled so the overall TAC remains at 29,000 mt. "X's" ownership level is now 260 mt or 0.9% (260 mt / 29,000 mt), and he may purchase up to an additional 30 mt of QS/IFQ without exceeding the overall ownership cap.

2) "X" owns QS, registered in his name, which in 1995 amounts to a total of 250 mt of IFQs in several different areas. "X" is also a 50% owner of the partnership "XY". "XY" owns QS, registered in the partnership's name, which in 1995 amounts to a total of 100 mt of IFQs in several areas. "X's" ownership level is 300 mt, ie. the sum of his individual holdings (250 mt) and his corporate or partnership holdings (50% of 100 mt or 50 mt). The overall TAC in 1995 is 30,000 mt, so X equals but does not exceed the 1% cap. However, neither "X" nor the partnership "XY" may purchase additional IFQs or QS in 1995. "Y" on the other hand, if he is registered as a bona fide crewman and has completed a transfer eligibility application, may purchase, in his own name, up to 250 additional 1995 IFQs tons.

3) "X" and "Y" own QS in their own names, which in 1995 resulted 200 mt of IFQs allocated to each. "X" and "Y" are married, and as a family unit control 400 mt of IFQs in 1995. The overall TAC in 1995 is 30,000 mt. Both "X" and "Y" may purchase an additional 100 mt of 1995 IFQs, staying within the 1% ownership cap. Note however, that the family now controls 2% of overall TAC.

4) "X" and "Y" are married and own two vessels which they have incorporated separately for liability purposes. Each corporation lists "X" as the owner, but QS and the ensuing IFQs have been allocated in the individual corporations names. In the initial allocation each corporation receives QS and the resulting IFQs in 1995 totaled 200 mt. The family unit controls 400 mt of IFQs in 1995 and would be prevented from purchasing additional QS or IFQs because they exceed the 1% ownership cap. If in 1996 they change their corporate structure, and show on their transfer eligibility form that "X" owns 50% and "Y" owns 50%, they may purchase additional QS and IFQs, but forfeit their right to utilize hired skippers on their vessels. (See the section entitled, "Right granted to initial recipients of QS".

5.3.6 Community Development Quotas

Operation of community development quotas are seen as being similar to the operation of commercial fishing quotas in terms of their daily administration and enforcement. Detailed community development plans are required to be prepared by communities and submitted through the Governor of Alaska to the Council. It was considered important that any community development plan be approved through the Council no later than September to allow sufficient time for the commercial industry to plan for the following fishing year.

As far as administration and enforcement are concerned, community development quota holders would be required to meet all the conditions attaching to commercial fishing quotas. The only significant difference concerns the nature of the quota and the accounting for it. Where an individual will have a quota card which will relate to his quota alone, someone fishing a community development quota will carry a quota card which relates to a quota being fished by the community - *i.e.* a number of people. All the other reporting and landing requirements are the same. Similarly, quota abuses by communities would be treated in the same way as quota violations by individual operators.

Community development quotas are to be established by setting apart a proportion of the total allowable catch prior to the setting of commercial quotas. It was considered unfair that fishermen in areas where community development quotas are to be established should bear the full brunt of reductions in available commercial total catches. Accordingly, fishermen operating in areas where community development quotas are established will be partially compensated in the form of IFQs in other areas. For example, a person who traditionally fishes in area 4C would receive additional QS and/or IFQs in all of areas 2C, 3A, 3B or 4A. A person would receive this quota even if he had no

history of fishing in the area. At the same time, those in other areas will receive slightly less quota shares.

5.4 Monitoring and Enforcement

The introduction of individual fishery quotas into the groundfish management off Alaska will necessitate a dramatic shift in the way fisheries regulations are enforced. Under traditional fisheries regimes, enforcement focuses primarily upon at sea activities. Under an individual fishing quota system that focus shifts to the point of landing and beyond.

The proposed enforcement program has four goals. The first and foremost goal is to create an environment conducive to voluntary compliance. This program contains a number of enforcement checks and balances. Multiple checks are provided to discourage casual cheating within the system. The checks further provide trip wires throughout the fishing, processing, transportation and marketing system to detect illegal transactions by more determined miscreants. The objective is to coax those fishermen who may be inclined to cheat, to stay within the legal bounds of the program.

The second goal is to design a program which provides adequate enforcement resources to respond to known violations. For any enforcement program to be effective it is vital to be able to apprehend and prosecute known violators. The simple ability to detect a violation is no guarantee of compliance. Failure to prosecute known violators can have the effect of encouraging even more noncompliance.

The third goal is to provide an enforcement program that is cost effective and realistic in terms of today's budget concerns. Certainly, an enforcement program could be designed to overwhelm the most determined fishery violator. The cost of such a program would however exceed the current national budget for the NMFS Office of Enforcement. It is not likely that any proposal of that magnitude would be approved by the Secretary. The proposed program is adequate to achieve a level of compliance that equates to a successful individual fishing quota program.

The final goal is to provide an enforcement program that does not unnecessarily interfere with normal and traditional business practices. The net result of an individual fishing quota program should be a better product for the consumer and a higher return from the fishery. With that in mind the proposed program has been tailored to blend with current landing, transportation and marketing practices. An individual fishing quota program provides fishermen with substantially more freedom in deciding how to operate. Enforcement of individual fishing quotas, however, necessitates a substantial increase in reporting requirements. Instead of monitoring one quota for each management area, individual fishing quotas result in monitoring thousands of individual quotas. The personalization of quotas requires a direct link between the fisheries manager or enforcement officer and the individual fisherman. This point must be carefully considered in the design and implementation of a quota system. For example, the landing, reporting, and shipping requirements within the program are absolutely necessary to the success of the program. These requirements could not be removed without a substantial and costly increase in enforcement and monitoring resources.

No enforcement program can guarantee absolute compliance. However, the proposed program is the minimum necessary to result in successful implementation of the Council's proposed plan. Certainly, this program could be strengthened, but this would be more expensive. The program outlined below has been submitted to central office enforcement supervisors and has received tentative approval. Nevertheless, this proposed enforcement program will undergo continuing review.

It must be presumed from the outset that adjustments to individual fishing quota enforcement will be necessary as our experience with the program grows. Currently, there is no perfect model of what an ideal individual fishing quota program should look like. There are no programs in the world today that are potentially as large as the one represented by the groundfish resources off Alaska. Although research of existing programs is instructive, none of the existing programs adequately addresses the entire range of enforcement issues present in the Council's proposed program for Alaska sablefish and halibut fisheries.

5.4.1 Annual Individual Fishing Quota Statement and Quota Share Account Card

Under the proposed individual fishing quota regulatory system, all harvesting vessels fishing for or possessing quota species would have to have a quota share holder or a lawful designee on board during fishing operations. This individual would have to remain on board until the individual fishing quota fish are off-loaded, and would have to have a quota share account card in possession. Quota share card holders would be required to have individual fishing quota poundage in their account which is equal to or, in excess of, the poundage of quota fish in possession.

The first enforcement check point would be random boardings at sea and in port by the Coast Guard and NMFS enforcement officers. Vessels found in possession of fish subject to individual fishing quotas would be required to produce a quota share account card. An account query would allow the boarding personnel to determine if the card holder had sufficient poundage in their account to cover individual fishing quota fish in possession. Failure to have sufficient poundage would trigger immediate enforcement action, providing the allowed overage had been exhausted (see section 5.3.3). Queries to the individual fishing quota data center would also flag the quota share holder's account to ensure that a later landing is made.

5.4.2 Vessel Landings

The second check point in the system is the advance notice of landing. All vessels would be required to notify NMFS six hours before off-loading. Notices could be by phone, INMARSAT, or marine operator. Notices could be made before departure to the grounds, by a vessel at sea, or after a vessel's return to port. A one to two hour grace period could be provided. NMFS would establish a toll-free telephone line to accept all notices required by these regulations. Data clerks, specifically tasked with receiving these messages, would receive calls on this line 18 hours a day, seven days a week. Multiple lines with call waiting would be available. Notices required by these regulations would only be accepted between the hours of 6 a.m. and 12 midnight.

Landings could be made to registered buyers both in or out of Alaska, however, there would be special requirements for vessels landing outside Alaska. Registered buyers would have to make application to NMFS and may be required to post a bond. Landings would be limited to the hours of 6 a.m. through 6 p.m. Off-loading that begins during the allotted window would be allowed to continue to completion. Alternate off-loading schedules could be authorized on a port by port basis at the discretion of the Regional Director.

Advance notices would alert enforcement to legal landings. Enforcement and monitoring personnel would be able to query the individual fishing quota data center at any time to ascertain in-progress or pending landings. Legal landings would be randomly monitored by enforcement, shoreside observers or IPHC port samplers. Landings which have not been preceded by advance notice would be illegal and trigger immediate enforcement action.

5.4.3 Verification of Landings

Before commencing any unloading of quota fish, the harvesting vessel operator would have to present a quota share account card to the receiving fish buyer. Once the unloading is complete, the buyer would query the individual fishing quota data center using a standard credit card "swipe" machine. The sellers account information would be read from the card's magnetic stripe by running the account card through a slot in the card-reading machine. The buyer would then input the delivering vessel name, Alaska Department of Fish and Game number, length overall, individual fishing quota species, landing condition, and poundage. The sellers account would be automatically queried to determine if sufficient individual fishing quota poundage were available to cover the landing. The buyer would receive a confirmation of sale authorizing completion of the transaction. If there is insufficient quota available, no confirmation would be given. NMFS enforcement would be immediately alerted to the overage and the buyer would be unable to complete the transaction until cleared by NMFS. Confirmation of landings would be required within six hours of the completion of the unloading.

Harvesting vessels delivering individual fishing quota species would be required to unload all quota fish on board including any home pack or exceptional sales. Home packs and exceptional sales would have to be reported by the buyer along with all other quota fish sold to the buyer. Overdrawing an individual fishing quota account would trigger immediate enforcement action. Failure to obtain a confirmation within six hours would similarly trigger an enforcement action when detected.

5.4.4 Shipping by Registered Buyers

Registered buyers of individual fishing quota species would be required to report all shipments of quota fish from the original landing site to any other site. All later shipments of quota fish within or from Alaska would also have to be reported (sport catch and end-user consumers would be exempted). Reporting would be similar to current reporting requirements. Registered buyers would be allowed to use their own company bill of lading. Bills of lading would include specific information including species, product type, number of shipping units, product weight, shipper and details of the shipping means and route. For domestic shipments, the bill of lading would have to be received by NMFS before shipment. A copy of the bill of lading would have to accompany the shipment to it's first point of landing outside of Alaska.

Shipments detected within Alaska by NMFS that are not accompanied by a bill of lading would trigger enforcement action. Shipments that are not reported before transportation would also trigger enforcement action.

Shipments in foreign commerce would have to be reported 24 hours before transportation from Alaska. In addition, foreign commerce shipments would be required from or through a primary port or the ports of Anchorage or Juneau. The purpose of advance notice and routing through a primary port is to allow NMFS an opportunity to inspect the fish before departure from United States jurisdiction.

5.4.5 Motherships and Tenders

Motherships and tenders would operate in a similar manner as a shoreside registered buyer. Tenders and motherships would have to be registered as individual fishing quota buyers. The primary difference would be that motherships and tenders could use INMARSAT or marine radio to report deliveries and receive sale confirmations. The use of credit card machines would not be mandatory for these buyers unless suitable telecommunication devices were available. Motherships and tenders

would have to have the ability for voice communications with NMFS from any receipt location. Motherships and tenders would need to meet trans-shipment, or vessel clearance requirements of these regulations. Requirements for advance notice of landing and shipping would apply to the unloading of a mothership or tender.

5.4.6 Transshipments

Transshipping individual fishing quota species from one vessel to another would be restricted. Only motherships and tenders operating as registered buyers could receive unfrozen quota fish at sea. All processing vessels transshipping frozen or processed product vessel-to-vessel would give 24 hours advance notice of any such transshipments. All transshipments of individual fishing quota fish would be required to be completed within the confines of a primary port. Advance notice and restriction to primary ports would provide NMFS opportunity to inspect the fish before its departure from U.S. jurisdiction.

5.4.7 Dockside Sales

Vessels operators wishing to sell their individual fishing quota fish at dockside or to market their own fish through means other than a registered buyer could do so by becoming registered buyers. Such vessels would have to meet all the requirements of a registered buyer including the reporting of landings and shipments. Such vessels would also have to report and receive landing confirmation for all individual fishing quota fish on board before any dockside sales, shipments or unloading occurred.

5.4.8 Vessel Clearances

Harvesting vessels, catcher/processors, motherships, and tenders landing catch outside Alaska would have to obtain a vessel clearance at a primary port before departure from Alaska. The vessels would have to enter a primary port to receive clearance. At time of clearance the vessel may undergo inspection and have it's holds sealed. The vessel would have to present a quota share card with individual fishing quota for all quota fish on board. The vessel would additionally announce its catch and provide intended date, time and location of unloading. All such vessels would have to provide the same advance notice of landing requirements as a vessel landing in Alaska. Harvesting vessels would have to become registered buyers and report their landings in the same manner as dockside sales in Alaska.

Proposed primary ports would be:

Akutan	Cordova
Craig	Dutch Harbor/Unalaska
Excursion Inlet	Homer
Ketchikan	King Cove
Kodiak	Pelican
Petersburg	St. Paul
Sand Point	Seward
Sitka	Yakutat

5.4.9 Individual Fishing Quota Enforcement: a "Four-Tier" Approach

Research on enforcement of other transferable quota-type programs worldwide has shown that enforcement operations must first protect the integrity of the program and participants, and second provide an environment that fosters an accurate accounting of landed fish. To accomplish the goal of ensuring program integrity and regulatory compliance, a "four-tier" enforcement approach is recommended.

The four-tier enforcement concept consists of four separate enforcement functions. Each tier cohesively interfaces with the others. The system provides the ability to detect violations on and off the fishing grounds through patrol and investigative functions, while creating an adequate level of compliance through the possibility of violation detection. This detection/ deterrence balance is a cornerstone of the individual fishing quota enforcement operation.

No quota system would be adequate if it could not accurately account for expended quota shares and fish landed. The proposed individual fishing quota program already provides for a significant "paper trail." This paper trail will be automatically created through the required logs and existing commercial documents. Using this documentation, the four-tier enforcement approach fully addresses both the ability to ensure accurate accounting of the resource and the ability to apprehend commercial enterprises which operate outside the auspices of the individual fishing quota program.

The four-tier enforcement system consists of:

1) Patrol Operations;

2) Monitoring Activities;

3) Auditing Activities; and

4) Investigative Operations.

5.4.9.1 Patrol

Patrol operations are divided into offshore and shoreside segments. The primary offshore patrol function is to detect non-participants who engage in fishing for quota species, including those fishermen who may be "quota busting." Quota busting is a term that describes a fisherman who has exceeded his quota but continues to fish. The offshore patrol segment would also be tasked with detection and deterrence of vessels "high grading" individual fishing quota fish, *i.e.*, catching and discarding fish of lower value without reporting the catches.

Shoreside patrol functions as a unit designed to detect and deter persons landing fish outside authorized channels. These would include non-participants who land fish to unlicensed buyers, or licensed buyers who purchase illegally harvested fish. The shoreside units also would be tasked with:

- Random monitoring activities,
- Random inspections,
- Monitoring of transshipments, and
- Enforcement of regulations.

5.4.9.2 Monitoring

The primary method of assuring accurate individual fishing quota harvest data would be through random monitoring of landings and transshipments. Monitoring also would be conducted through various enforcement efforts such as vessel clearances and tracking; inspections of fishing vessels, processing plants, and shipping containers. The fundamental enforcement concept is to establish an environment conducive to program compliance by elevating the probability of detection and apprehension of illegal activities.

5.4.9.3 Auditing

The auditing section is tasked with the random inspection of processing facilities and other licensed buyers as well as random observation of commercial traffic of non-participants. These inspections and observations would include shipping records and other documents which will reflect the accuracy of individual fishing quota fish received and processed.

5.4.9.4 Investigation

The investigation section is divided into routine and complex operations. Routine investigations would consist of a myriad of routine tasks including the enforcement of ownership caps, fraud in applications for initial quotas and verification of the status of bona-fide crew members.

Complex investigations would involve interstate or international shipments of fish which were taken or possessed in violation of individual fishing quota regulations. These types of cases would be investigated by specialists trained in fraud and "white collar" crimes. Investigators would be thoroughly trained to follow commercial "paper trails" as an integral part of their investigations.

5.5 Personnel and Budget Requirements

5.5.1 NMFS Alaska Region, Management Division

The principal role of the Alaska Region, NMFS, would be in managing a large amount of information (data) relevant to the initial allocation and annual management of the individual fishing quota program. This work would be carried out within the Fisheries Management Division located at the Alaska Region Office in Juneau. To enter and extract data necessary for the establishment, monitoring and enforcement of individual fishing quotas, the Division would require a new computer system, new software, and additional personnel. While the computer system would initially deal only with the halibut and sablefish quota program, the system would be designed to be expandable to accommodate similar programs that may emerge from the comprehensive rationalization study.

The individual fishing quota data management system would be designed to accomplish three basic tasks:

- To establish a master data base of individual catch histories and vessel ownership for initial allocation purposes;

- To determine the annual specification of individual fishing quotas based on individual quota share holdings, and to monitor catches of sablefish and halibut against the total individual fishing quotas of each fisherman by area; and

- To monitor and facilitate transfer of quota shares and individual fishing quotas among fishermen.

For budget estimating purposes it has been assumed that the data center would be located in Juneau. Cost and available technical expertise, however, could dictate that it be located elsewhere.

5.5.1.1 Data Management System Configuration

A. Software

The individual fishing quota program requires creating and maintaining a database which will serve different users with different applications. For flexibility, it would be desirable if the software could run on more than one brand of computer. Communications capabilities are important also because the users are geographically remote from the data center in Juneau. A Unix operating system is desired because it is the leading operating system for multi-user, multi-application environments. The likely database manager is Oracle. Since NMFS is already an Oracle user, training costs would be reduced.

Properly designed, the system will provide many levels of security. Individual users will have their own encrypted password to access the system. Only the System Administrator will be able to assign passwords. Each individual fishing quota holder will also have an account number encoded on his or her magnetic card. Each user will be able to access only information pertaining to themselves. Enforcement may be allowed access to information pertaining to all users, but not the ability to change the data. A careful analysis of the information needs of all users will ensure this multi-level security system.

B. Hardware, Data Center

Assuming selection of Oracle running under Unix, the data center hardware could be purchased from manufacturers such as DEC, Sequent, or Sun. The availability of local service in Juneau could influence which brand is purchased. An alternative would be to place the computer servers in a city where service is more readily available such as Anchorage or Seattle.

The hardware configuration could consist of one computer, or for increased reliability, two computers operating as a pair. If two computers are chosen, one computer would operate the database, the other would operate the application. Normally both computers are running together, but if either computer fails the other can operate the entire system. For simplicity and reliability, servers should be used exclusively to run the individual fishing quota data system. Existing applications should remain on the existing file server at the installation site. The initial hardware configuration could include two 300 megabyte disk drives, a CD-ROM drive for historical records, diskette drives, a magnetic tape drive for program input and tape interchange with other agencies, 3 to 5 personal computers, an optical scanner to read input forms, and data communications hardware and software.

C. Hardware, Field Terminals

Roughly 200-300 principal field sites are estimated where sablefish and halibut will be bought by registered buyers. These sites will use card-swipe terminals with 80-column printers for receipts, fish-tickets, and other reports. All variable input entered in the field will be numeric data. As backups to automatic input, fish-catch data could be phoned to data entry clerks at the NMFS Management Division office in Juneau. The individual fishing quota data system would operate 24

hours a day, always available to accept automated input from field terminals. Enforcement may call at any time, for the status of an account.

D. Telecommunications

Telephone lines link the field terminals to the data center. Telephone communications within Alaska typically use satellite links which can be affected by weather and solar activity. The reliability of telephone service needs further investigation. Solutions will be based on recommendations from telephone companies and the experience of credit card companies, banks, and other data communicators in the region.

E. Security

Adequate security can be provided by magnetic cards issued to individual fishing quota holders and fish buyers. The possession of the magnetic card combined with use of personal identification numbers, uniquely identifies each fisherman and each buyer. For increased security, cards and personal identification numbers could be issued only to individuals, not to companies or organizations. A sophisticated password feature, built into Oracle, encrypts identification numbers and allows the assignment of unique access privileges to each individual person. In the case of community development quotas, several individuals with unique account numbers and personal identification numbers will input catch data to a common account.

When entering a fish ticket, both the fisherman and the fish buyer present their cards. Each also enters his personal identification number. With two parties participating in the transaction, there is a greater likelihood of accuracy. A magnetic stripe on the card encodes data unique to each holder, and speeds up the input of header information for each transaction. Entering the data is a two step process. Data for the catch and sale are entered into the system and then verified with the magnetic card and personal identification number. Once the data are entered, a transaction confirmation number will be returned to fisherman. A fall-back solution needs to be developed with enforcement for exceptional situations such as when a magnetic card is not available, or the card-swipe terminal is not working, or catch information is called in by voice-telephone.

5.5.1.2 Data System Activities

The individual fishing quota data management system would have one database that stores all data and provides all information. The design of this database is a crucial activity and must be done by qualified personnel. The database can be organized into tables which address specific subjects. Each table has fields (attributes), and the content of each field is one item in the database.

When building the database, it will be necessary to establish an audit trail which traces data back to its source. In the event of appeals, it would be possible to reconstruct the information sources.

Information in the database will come from other federal and state agencies. An early activity will be the identification of information needed, and sources of data. Key sources of information are expected to be fish ticket and vessel registration databases. All sources must be studied and evaluated. Data from these sources will be filtered, validated, and copied to the individual fishing quota database.

It would also include training for NMFS staff in the use of the hardware and software. The one-time costs for this category are estimated to be $400,000.

The second category involves coding, testing and conversion of existing data into the Oracle database. This work would be the actual implementation of the computer system defined in the first category, and is estimated to cost about $240,000.

The third and fourth categories involve the purchase of software and hardware. One-time costs for the Oracle, communications, and word processing software are estimated to be $40,000. Hardware costs would involve the purchase of all computer hardware for the data center described above. This one-time cost is estimated to be $120,000. Field terminal hardware used by registered buyers is not included in this estimate. Currently this field hardware consisting of a card-swipe terminal and 80-column printer would cost in the range of $800 to $900.

In summary, one-time start-up costs for the individual fishing quota data management system are as follows:

Planning, Analysis, Design, Documentation and Training	$ 400,000
Coding, Testing and Conversion	$ 240,000
Software Purchases	$ 40,000
Hardware Purchases	$ 120,000
Total	$ 800,000

These start-up costs would be distributed over three fiscal years as follows:

Fiscal Year 1992 (6/92 - 9/92)	$ 250,000
Fiscal Year 1993 (10/92 - 9/93)	$ 500,000
Fiscal Year 1994 (10/93 - 9/94)	$ 50,000
Total	$ 800,000

B. Annual Operating Costs (Personnel)

In addition to the on-time start-up costs, the regular operation of the individual fishing quota data management system would require the employment of five additional persons in the Fisheries Management Division staff. This additional staff would include one system manager (Federal GS grade 12), one programmer (grade 11), and three data entry clerks (each at a grade 6). The annual budget necessary to pay for salaries, benefits, office space, telephone, training, supplies, etc. for these personnel would total $320,000. This estimate does not include annual or promotional pay raises.

One System Manager	$ 90,000
One Programmer	$ 80,000
Three Data Entry Clerks	$ 150,000
Total	$ 320,000

This estimate also does not include potential costs of relocating these personnel. The cost of moving government personnel to Juneau could cost about $15,000 per person. Also not included are fixed costs of office furniture and supplies. One time office furniture costs are estimated at $875 per person. Hence, the one-time costs of relocating two of the individual fishing quota data management personnel, and purchasing office furniture for all five would add $34,375 to personnel costs as a one-time cost. Computer training, hardware and software costs are included in the start-up cost estimates above.

5.5.2 NMFS Enforcement

5.5.2.1 Enforcement Personnel Organization

A. Individual Fishing Quota Investigation Unit.

The investigative unit would consist of three agents. The unit would be tasked with investigating more complex violations of individual fishing quota regulations that cannot be readily enforced at the point of landing. Primary tasks would include:

- Investigation of fraudulent entry claims (application for quota share or as bona-fide crewmen),
- Investigation of ownership cap violations,
- Investigation of illegal marketing, shipping or sale of individual fishing quota fish,
- Complex audits of landing and shipping records, and
- Enforcement of individual fishing quota regulations.

B. Patrol Unit

The patrol unit would consist of 22 fishery enforcement officers. The unit would be tasked with detecting illegal landings, shipping and marketing of individual fishing quota fish in addition to routine monitoring of legal landings. Primary tasks would include:

- Random monitoring of landings,
- Random inspection of shipments,
- Monitoring of transshipments,
- Vessel Clearance,
- Surveillance and detection of illegal landing, sale and shipment of individual fishing quota fish, and
- Enforcement of resource regulations including individual fishing quota and routine management measures.

C. Enforcement Aides

The enforcement aides component would consist of seven permanent part-time aides to be stationed at those primary ports that do not have a permanent agent/fishery enforcement officer presence (seven ports). The unit would be tasked with clearing vessels, monitoring landings and providing limited port surveillance. Primary tasks would include:

- Random monitoring of landings,
- Random inspection of shipments,
- Vessel clearances, and
- Port surveillance.

Enforcement aides would not have arrest, search, or seizure authority. They would have limited inspection authority. Enforcement aides could be either government employees or contract employees reporting directly to NMFS enforcement.

D. Support Staff

Additional support staff would include one administrative assistant for the investigative unit and one administrative officer for the entire division. Support would also include four clerks to provide a seven-days-per-week telephone hot line.This would involve 18 hours pay each. The line would be to receive requests for vessel clearance, shipping and landing notices. Staff would also provide data entry services.

5.5.2.2 Enforcement Staffing Plan Summary and Cost Estimate

STAFF	CURRENT TOTAL	TOTAL W/IFQs	INCREASE
Agents (Supervisory)	6	7	1
Agents (Field)	12	14	2
Fishery Enforcement Officers	4	22	18
Enforcement Aides	0	7	7
Support Staff	7	13	6
Total Personnel	29	63	34
COSTS (in thousands)			
Supervisory and Field Agents at $ 100,000 each	$ 1,800	$ 2,100	$ 300
Fishery Enforcement Officers at $ 80,000 each	$ 320	$ 1,760	$ 1440
Enforcement Aides at $48,000 each	0	$ 336	$ 336
Support Staff*	-	-	-
Total cost (in thousands)	$ 2,120**	$ 4,196	$ 2,076

* Costs of support staff are prorated in agent/fishery enforcement officer costs at the rate of one support staff for every three agents and one for every five fishery enforcement officers for a total of 13. Additional support staff are needed for a special section to staff a 18-hours-per-day, seven-days-per-week hot line to receive required notices. This section would also notify enforcement personnel of unloadings, vessel clearances, trans-shipments, and shipments. Estimated costs for this section are $40,000 per person. An administrative officer would also be added to handle increased personnel matters. These estimated figures include salaries, wages, office space, equipment, and so on, and are stated in round numbers.

** The actual current budget is approximately $1,300,000. Current staff consist of 12 agents and 2 FEO's. Most rents are assumed by the NMFS Alaska Region. Personnel costs assume journeyman level pay scale.

No component has been included in the above cost estimates for coast guard activities. No additional funding will be sought by the coast guard provided NMFS is funded at the levels indicated.

ENFORCEMENT STAFFING PLAN

PORT	CURRENT		IFQ PROPOSAL	
Juneau	Supervisory Agents	(3)	Supervisory Agents	(3)
	Staff Agents	(2)	Staff Agents	(2)
			IFQ Investigative Unit	(3)
	Admin. Support	(4)	Admin. Support	(6)
			1-800 Hot Line Staff	(4)
Kodiak	Supervisory Agent	(1)	Supervisory Agent	(1)
	Staff Agents	(3)	Staff Agents	(3)
	FEOs	(4)	FEO	(3)
	Admin. Support	(1)	Admin. Support	(1)
Anchorage	Supervisory Agent	(1)	Supervisory Agent	(1)
	Staff Agents	(2)	Staff Agents	(2)
	Admin. Support	(1)	Admin. Support	(1)
Sitka	Staff Agents	(3)	Staff Agents	(3)
			FEOs	(3)
	Admin. Support	(1)	Admin. Support	(1)
Dutch Harbor	Staff Agent	(1)	Staff Agent	(1)
			FEOs	(3)
Homer	Staff Agents	(2)	Staff Agents	(2)
			FEOs	(2)
Ketchikan			FEOs	(3)
Petersburg			FEOs	(2)
Yakutat			FEOs	(2)
Cordova			FEOs	(2)
Seward			FEOs	(2)
Craig			Enforcement Aide	(1)
Pelican			Enforcement Aide	(1)
Excursion Inlet			Enforcement Aide	(1)
King Cove			Enforcement Aide	(1)
Akutan			Enforcement Aide	(1)
Sand Point			Enforcement Aide	(1)
St. Paul			Enforcement Aide	(1)
TOTAL		(29)		(63)

5.5.3 NOAA General Counsel

The NOAA General Counsel office in Alaska would be substantially augmented to deal with appeals of initial allocations, litigation and individual fishing quota enforcement cases. Although the Alaska General Counsel office is currently understaffed to handle its present work load, the following personnel requirements are estimated as necessary only for individual fishing quota program work and not to cover other needs.

Disagreements over an initial allocation that cannot be resolved between NMFS and the affected fisherman could be appealed. Such appeals would be heard by an Alaska General Counsel hearings officer who would recommend a resolution to the Secretary, or his/her designee (probably the NMFS Alaska Region Director). Subsequent appeals could require litigation. Based on the experience of the Alaska Commercial Fisheries Entry Commission, approximately 1,000 appeals are anticipated from 10,000 quota share applicants. This experience also indicates that each hearings officer could be expected to resolve about three appeals per week. Hence, an additional three attorneys would be required by Alaska General Counsel to function as hearings officers. This corp of hearings officers at assumed rates would be able to resolve roughly nine appeals per week or nearly all appeals within two years. As the appeal work load decreases these additional three attorneys would be retained to work on litigation and enforcement cases.

Each additional attorney is expected to cost about $100,000 annually. This estimate includes salary and benefits, office space and furnishings, training, computer hardware and software, telephone, supplies, and additional paralegal or administrative assistance. Hiring and relocation costs are not, however, included in this estimate. This proposed level of funding is purposely general and does not attempt to differentiate between fixed (one-time costs such as a computer, or desk) and variable (salary and benefits) costs. Nevertheless, $100,000 per attorney is a reasonable estimate for individual fishing quota budget planning purposes.

Based on these assumptions and estimates, the General Counsel, Alaska budget would need to be augmented by $300,000 per year for purposes of implementing the proposed program. All three additional attorneys would not be needed at once, however. Only one additional attorney would be needed in fiscal year 1993 and the other two could be added in fiscal year 1994.

5.5.4 Cost Estimate Summary

Authority to spend funds on implementing the proposed individual fishing quota program could not begin until the program is approved by the Secretary. Currently, this would not happen until near the end of fiscal year 1992 (assuming the Council submits the proposed program for Secretarial review in May, 1992, and assuming that the Secretary finds it to be consistent with the Magnuson Act and other applicable law).

5.5.4.1 Estimated Start-Up Costs by Fiscal Year

Study and design of methods for transmitting data from remote locations could proceed prior to Secretarial approval because it is applicable to currently authorized data collection. Such work also would be applicable to necessary individual fishing quota data management system design work, and if done now would serve to advance this aspect. The following summary of estimated implementation costs by fiscal year includes such work in the FY 92 estimate. It is also assumed that unspent funds from the 1992 fiscal year budget would be carried over to fiscal year 1993.

The following estimate is lower than the latest previous estimate because more effort in planning and designing the individual fishing quota data management system is anticipated to require fewer data entry and monitoring personnel. Hence, Fishery Management Division estimated costs are higher in the 1992 and 1993 fiscal years than previously estimated, but lower in 1994. Generally, estimated costs increase through the years of initial implementation which reflects the hiring of additional (primarily enforcement) personnel.

	1992	1993	1994
FMD	250	820	370
ENF	75	660	2,076
GCAK	0	100	300
Totals	325	1,580	2,746

Dollar figures are in thousands.
FMD denotes the Fishery Management Division of the Alaska Region, NMFS,
ENF denotes Alaska Region enforcement, and
GCAK denotes NOAA General Counsel for Alaska.

5.5.4.2 Estimated Continuing Implementation Costs

The estimated annual costs of continuing the proposed individual fishing quota program decrease slightly after the initial start-up work is completed. This decrease would probably be offset by inflation, annual cost of living adjustments, or costs of fine tuning the program, all of which are not included in this estimate. The addition of more species or fisheries to the quota program in subsequent years would not cause a substantial increase in implementation costs since the existing data management, monitoring and enforcement infrastructure could be used. Annual implementation costs would increase significantly, however, if more ports were designated as primary ports or if there were increased levels of non-compliance which would require the hiring of additional enforcement and Alaska General Counsel personnel. Without these assumptions, annual individual fishing quota implementation costs would be as follows:

FMD	$ 320,000
ENF	$ 2,076,000
GCAK	$ 300,000
Total	$ 2,696,000

APPENDIX A

Participant	Representing
Jay Ginter (Chair) David Flannagan David McKinney Joe Terry Galen Tromble Janet Wall	National Marine Fisheries Service
Ben Muse Kurt Schelle	Alaska Commercial Fisheries Entry Commission
Earl Krieger	Alaska Department of Fish & Game
Ian McGregor Gordon Peltonen	International Pacific Halibut Commission
Russell Harding Marcus Hartley Chris Oliver	North Pacific Fishery Management Council
Mark Saelens	Oregon Department of Fish and Wildlife
Jim Seger	Pacific Fishery Management Council
Commander Joe Kyle	United States Coast Guard
Sam Wright	Washington Department of Fisheries

Membership of the industry team included the following:

Kris Norosz (Chair)	Petersburg Vessel Owners Association
Linda Behnken	Alaska Longline Fishermen's Association (Sitka)
Perfenia Pletnikoff	Central Bering Sea Fishermen's Association (Pribilof Islands)
John Bruce	Deep Sea Fishermen's Union (Seattle)
Jack Knudsen	Fishing Vessel Owners Assn (Seattle)
Don Iverson	Freezer Longliner (Jubilee Fisheries)
John Woodruff	Icicle Seafoods and Halibut Association of North America
Linda Kozak	Kodiak Longline Vessel Owners Association
Drew Scalzi	North Pacific Fisheries Association (Homer)
Harold Thompson	Sitka Sound Seafoods
Jeff Stephan	United Fishermen's Marketing Association (Kodiak)

APPENDIX B

NOTE: **All forms and letters in this section are for descriptive purposes only. Official forms will be supplied if an IFQ program is approved.**

Prototype Quota Share Application Letters.

Dear Commercial Fisherman:

The National Marine Fisheries Service in co-operation with the North Pacific Fishery Management Council has embarked on a system of individual quotas for managing sablefish and halibut in the waters of the North Pacific. Quota shares, which will be allocated to everyone who participated in the sablefish and/or halibut fisheries during the years 1988 - 1990, represent a privilege to fish for these species. The level at which you will be permitted to fish will be determined by the number of quota shares allocated to you. This will be based upon landings for your best five years from the period 1984 - 1990 in the case of halibut, and your best five years from the period 1985 - 1990 in the case of sablefish. It is proposed that this scheme will be introduced from 1 March 1994. From that time only those persons who own or control quota shares or individual fishing quotas may participate in these fisheries.

Much information has been printed and disseminated on this program over the last three years. Despite this, the proposed system is complex, and you are urged to read the accompanying documentation carefully. If, however, you require any help with this form, or need information on the system generally, please contact your local National Marine Fisheries Service office. A free call phone has been provided for this purpose. Its number is 1 - 800 - ___-____. If you require any assistance in completing the attached documentation, or wish to know how you should complete it, please contact either the National Marine Fisheries Service or your professional advisor. The deadline for submitting applications is August 31, 1992. Any application post-marked after August 31, 1992 will be disregarded. Note that by signing the application you swear that all information provided is true to the best of you knowledge. Knowingly submitting false information will be regarded as a criminal offense.

Catch records show that fixed gear landings of sablefish and/or halibut were made from your vessel(s) during the years 1988, 1989, or 1990. It has been determined that, subject to your meeting the conditions contained herein, that you will qualify for the allocation of quota shares. These will be based on catches for the periods detailed in the first paragraph. This application details your participation as a vessel owner in the quota share allocation base years, 1984-1990 in the case of halibut, and 1985 - 1990 in the case of sablefish. If the information attached is accurate and complete, please sign and date this application where indicated, and return it in the envelope provided.

If the information supplied is not accurate or complete, please indicate any corrections or alterations in the spaces provided. Any alterations you make to the information provided by the National Marine Fisheries Service must be substantiated by written documentation. No correction or addition regarding ownership or catch history will be included unless there is adequate documentation to verify your claims. Applications with undocumented corrections or additions to ownership or catch histories

will be returned to you for verification. At this point you will no longer be considered an applicant for quota shares unless you resubmit the application. Failure to provide the requested documentation will result in the alterations not being incorporated in your catch history.

Landings under a qualified bare-boat charter on your vessel(s) during the catch history years, will not be counted toward your quota share. These will be credited to the charterer of your vessel for the period in question. Any attempt to claim those landings as your own will be considered a criminal offense. There is a section in the application which allows you to name any bare-boat charter holders during the years 1984-1990 for halibut or 1985 - 1990 for sablefish.

Part 1 of the form provides information held on your vessel(s) from state and federal vessel registration files, and information of all landings made by you, as a permit holder, on your vessel(s), with corresponding dates and areas, from state records and International Pacific Halibut Commission files.

Part 2 of the form lists information regarding landings made on your vessel(s) by other permit holders. The quantities involved in these landings cannot be released to you at this stage. They are confidential, and considered the property of the permit holder. If you would like to receive credit for the landings made by other permit holders on your vessel(s), you will need to supply evidence that the landings information has been released to you by the other permit holders. This evidence would include, a notarized waiver signed by the other permit holder, bona-fide copies or original fish-ticket records, logbook records, and so on. Please note that if the other permit holders had a qualified bare-boat charter for the vessel, they rather than you would be eligible for any quota shares. Any attempt to cover-up the existence of such a lease or any attempt to submit false records will be considered a criminal offense.

Note, if you made landings of either halibut or sablefish on your permit from another person's vessel those landing will not count toward your quota share allocation, unless you had a bare-boat charter for that vessel. If records indicate that you made such landings, you will be notified by a separate letter, and will be asked to supply a qualified bare-boat charter if it existed to receive credit for those landings.

If you are dissatisfied with your allocation you will be given the opportunity to file a formal appeal. Documentation for this purpose and an explanation of the how it will work will be contained with the notification of quota share allocation which will be sent to you.

Sincerely

Regional Director
NMFS, Alaska Region

Section 1 Owner Information

Please verify all the pre-printed information below. Make any corrections necessary in the space below the pre-printed information and sign the form where indicated. Note that corrections in this section, with the exception of social security number, and Commercial Fisheries Entry Commission permit numbers, need not be accompanied with supporting documentation. If this vessel was in fact owned by a corporation or a partnership please list the corporation or partnership's name, address and membership.

Last Name	First Name	Middle Initial
Address		
City	State	Zip
Home Phone	Work Phone	Fax Number
Social Security Number	CFEC limit entry permit number	
If the information listed above, as corrected or amended by you is correct to the best of your knowledge, please sign your name and date the form in the space provided. If you have corrected SSN or CFEC numbers please provide supporting information.		
Signature		Date

Section 2 Vessel Information

The following section contains information held regarding your ownership of vessels during the period 1984-1990 for halibut and 1985-1990 for sablefish, as well as 1991. Please review the information and make any corrections necessary. Any changes or additions you make in this section must be accompanied by supporting documentation. Note that there is a separate sheet for each vessel on record. If you owned vessels not on record or leased a vessel during the base period please use the attached extra copy.

Vessel Name	ADF&G Vessel Registration Number	USCG Vessel Number	Federal Vessel Registration Number	Registration Numbers in other states, list state and registration number	
Date of purchase	**Date vessel was sold**	**Purchaser's Name**	**Vessel length (LOA) in last year of ownership**	**Processing or freezing capacity on board**	**Last vessel operated as processor**
If this vessel is or was owned by a corporation please complete the following information.					
Shareholder's name	**Shareholder's SSN.**	**Shareholder's Address**		**Shareholder's City, State and zip code.**	**Shareholder's ownership %**
If this vessel is or was owned by a partnership, please complete the following information.					
Partner's name	**Partner's SSN.**	**Partner's Address**		**Partner's City, State and zip code.**	**Partner's ownership %**
If this vessel was leased by another party for the purposes of fixed-gear fishing for halibut and/or sablefish, please submit the following information.					
Lessee's Full Name	**Lessee Address**	**Lessee's City, State, and zip**	**Lessee's phone**	**Lessee's CFEC permit number.**	**Dates lease was in effect.**
If the information in this section is correct to the best of your knowledge, please sign your name and date the form in the space provided.					
Signature				**Date**	

Section 3 Personal Catch History Of The Vessel Owner

This section lists the landings records during the quota share base years for each species, made on the owner's vessels by the vessel owner listed in Section 1. The next section, Section 4, summarizes information on landings made on vessels owned by this vessel owner, but upon which other person's permits were used. Please verify the information below. This catch history will be the basis for the vessel owner's quota shares, and therefore accuracy and completeness is in the owner's best interest. Note however, that any corrections or additional information supplied must be documented with copies of original fish tickets, or other verifiable documents.

Vessel Name	ADF&G Number	CFEC Permit #	Permit Holder's Name	Landings Date	IPHC Area	Landed Weight

If the information in this section is correct to the best of your knowledge, please sign your name and date the form in the space provided.

Signature	Date

Section 4 Catch History Of Permit Holders Other Than The Vessel Owner

This section lists as far as is legally permissible, details of activity on the owner's vessels by permit holders other than the vessel owner. Landed weights may not be released to persons other than the permit holder without the prior consent of the permit holder. This information will be released upon production of original or copies of fish tickets, or a notarized waiver, signed by the permit holder allowing release of the information. If fish tickets or waivers are unobtainable, the vessel owner may supply evidence that he or she has full knowledge of the landed weights in question. Acceptable evidence would include logbooks or tax records. Quota shares will be issued in respect of such evidence of landings. Corrections, however, will only be made on the basis of fish tickets. Note, if any of the permit holders shown below made the landings while operating under a lease or bare-boat charter, then the permit holder is the rightful recipient of the quota shares for those landings. Please note the existence of any such lease or charter by placing a check mark in the space provided. Failure to divulge the existence of such a lease a lease or charter may be a criminal offense.

Vessel Name	ADF&G Number	CFEC Permit #	Permit Holder's Name	Landings Date	IPHC Area	Lease or charter existed.
If the information in this section is correct to the best of your knowledge, please sign your name and date the form in the space provided.						
Signature					Date	

The following is a suggested letter to be sent to those vessel owners who are recorded as having landed fish on another person's vessel.

Dear Commercial Fisherman:

The National Marine Fisheries Service along with the North Pacific Fishery Management Council, the International Pacific Halibut Commission and the State of Alaska, Department of Fish and Game, have begun the implementation of a plan to convert the fixed-gear halibut and sablefish fisheries off the coast of Alaska to one managed by an individual transferable quota system. The quota system would allocate harvest privileges, and eliminate the open access fishery. From 1994 only persons who own or otherwise control quota will be allowed to participate in the halibut and sablefish fisheries.

Quota shares will be issued to all vessel owners and bare-boat lease-holders whose vessels made legal fixed-gear landing of halibut or sablefish off the coast of Alaska during the eligibility years, 1988-1990. The amount allocated to each vessel owner or lease-holder will be based on landings during the period 1984-1990 for halibut, or 1985-1990 for sablefish.

National Marine Fisheries Service records indicate that landings of halibut and/or sablefish were indeed made on a vessel licensed to you during the eligibility years. For those landings you should have already received an application for quota shares. Records also indicate that you made landings of halibut or sablefish as a permit holder during the relevant period on a vessel for which you were not the licensed owner.

No record of bare-boat charters has been maintained. This letter has been sent to you to inform you that if you have fished under a bare-boat lease during the quota share allocation period, you may be eligible to receive quota shares for those landings as well. To receive an allocation you will need to document that a bare-boat charter was in effect when you made landings of halibut or sablefish as a permit holder on a vessel actually owned by another person.

Sincerely,

Regional Director
NMFS, Alaska Region

APPENDIX C

Letters to Be Sent to Non-Owner Permit Holders

The following is a prototype letter to persons who have made halibut or sablefish landings as a permit holder, but have never been licensed as a vessel owner.

Dear Commercial Fisherman:

The National Marine Fisheries Service and the North Pacific Fishery Management Council, the International Pacific Halibut Commission, and the State of Alaska, Department of Fish and Game, have begun the implementation of a plan to convert the management of the fixed-gear halibut and sablefish fisheries of the North Pacific to an individual transferable quota system. The quota system would allocate harvest privileges, and eliminate the open access fishery. From 1994 only persons who own or otherwise control quota will be allowed to participate in the halibut or sablefish fisheries.

Quota shares will be issued to all vessel owners and bare-boat lease-holders whose vessels made legal fixed-gear landings of halibut or sablefish off the coast of Alaska during the eligibility years, 1988-1990. The amount of quota shares allocated to each vessel owner or lease-holder will be based on landings during the quota share base period 1984-1990 for halibut or 1985-1990 for sablefish.

National Marine Fisheries Service records indicate that you made landings of halibut and/or sablefish as a permit holder during the eligibility years. The records fail to show however, that you were a licensed vessel owner during that period.

No records of bare-boat leases are maintained. This letter has been sent to you to inform you that if you have fished under a bare-boat lease during the eligibility years, 1988-1990, you may be eligible to receive a quota share allocation. To receive quota shares you will need to document that a bare-boat charter was in effect when you made landings of halibut or sablefish.

Sincerely,

Regional Director
NMFS, Alaska Region

APPENDIX D

CALCULATING HALIBUT AND SABLEFISH QUOTA SHARES AND IFQS UNDER THE PROPOSED INDIVIDUAL FISHING QUOTA SYSTEM

An individual's halibut (sablefish) quota share or qualifying pounds for a management is the sum of his best five years of catch for that area from 1984 to 1990 (1985 to 1990). For each area, a fisherman"s halibut (sablefish) IFQ for 1991 or 1992 would have equaled his halibut (sablefish) qualifying pounds for that area multiplied by the halibut (sablefish) TAC divided by the total halibut (sablefish) qualifying pounds for that year and area. The 1991 and 1992 TACs in pounds, estimates of the total qualifying pounds, and estimates of the TACs divided by total qualifying pounds are presented below by management area. Note that a fisherman's actual IFQ will be slightly less than his qualifying pounds multiplied by TACs/Q lbs due to the western Alaska community development quotas.

	TACs			TACs/Qlbs	
	1991	1992	QS Pool	1991	1992
Halibut					
2C	7,400,000	10,000,000	57,575,315	0.129	0.174
3A	26,600,000	26,600,000	175,411,162	0.152	0.152
3B	8,800,000	8,800,000	50,180,143	0.175	0.175
4A	1,700,000	2,300,000	13,107,298	0.130	0.175
4B	1,700,000	2,300,000	8,262,195	0.206	0.278
4C	600,000	800,000	3,743,128	0.160	0.214
4D	600,000	800,000	4,258,456	0.141	0.188
4E	100,000	130,000	165,417	0.605	0.786
Sablefish					
EY/SEO	10,370,000	10,449,804	59,944,419	0.173	0.174
WY	8,485,000	7,832,944	48,038,512	0.177	0.163
CG	18,654,000	16,878,418	100,932,906	0.185	0.167
WG	5,160,000	4,409,200	31,299,366	0.165	0.141
AI	5,292,000	4,215,195	27,996,580	0.189	0.151
BS	3,418,000	1,311,737	14,741,721	0.232	0.089

NOTE: Qualifying pounds in the QS Pool will likely be less than numbers shown, depending on the number of applicants.

APPENDIX E

Prototype Transfer Eligibility Application.

In its preferred alternative, the Council has determined that quota shares and individual fishing quotas may only be owned or controlled either by initial recipients or by bona fide fixed gear crew members. A bona fide fixed gear crew member is some-one with at least five months commercial fishing experience within United States fisheries waters. Because no records have been collected or kept on persons who have participated in the fisheries, it will be necessary for those who wish to purchase or lease quota shares or individual fishing quotas to complete a form detailing their experience. This should be completed annually to enable the National Marine Fisheries Service to maintain an over-view of those who may participate in the fisheries.

The following is a prototype individual transfer eligibility form:

Individual Transfer Eligibility Form		
First Name	Last Name	Middle Initial
CFEC Permit #	QS/IFQ registration #	Bona Fide Crew Member #
Address		Citizenship
State	City	Zip
Phone Number	Fax Number	Social Security #
Signature		Date

A similar form to the one above is also required for corporations or partnerships. These entities are not able to purchase or lease quota shares or individual fishing quotas unless they received an initial allocation. It is, however, important to maintain a record of their membership or ownership composition. A significant change in ownership of a corporation or membership of a partnership will constitute a different entity, thus preventing purchase or lease of further quota shares or individual fishing quotas. On the following page is a prototype form for completion by partnerships and corporations. This form should be completed on an annual basis.

Corporate/Partnership Transfer Eligibility Form		
Company Name		QS/IFQs Registration #
Company Address		
State	City	Zip
Phone Number	Fax Number	Company Tax ID #
CEO's Signature		Date

List all individuals or companies which own 5% of more of this company		
First Name & Middle Initial	Last Name	Citizenship
Address		Percent Ownership
State	City	Zip
Phone Number	Fax Number	Social Security #
Signature of person or CEO of company listed above.		Date
First Name & Middle Initial	Last Name	Citizenship
Address		Percent Ownership
State	City	Zip
Phone Number	Fax Number	Social Security #
Signature of person or CEO of company listed above.		Date

APPENDIX F

Prototype Bona Fide Fixed Gear Crew Member Application.

In order to purchase or lease halibut or sablefish quota shares or individual fishing quotas, an individual must either be an initial quota share recipient, or a bona fide fixed gear crew member. To become a crew member, a person must have amassed at least five months commercial fishing time at sea as a part of the fish harvesting crew. This experience may be gained in any United States fishing waters. Completion of this documentation is necessary because no records of fishing experience have been collected or maintained.

On the following page is a prototype crew member application form.

Crew Member's Personal Information		
First Name	Last Name	Middle Initial
Address		
State	City	Zip
Phone Number	Fax Number	Social Security #

Crew Member At-Sea Commercial Fish Harvesting History				
Vessel Name	Vessels Owners Name			
Vessel Owner's Address				
City	State, Zip	Owner's Phone		
State in which vessel was licensed		State Vessel Id		
Federal Vessel Permit #		U.S.C.G. Vessel ID		
Describe your at-sea fishing activity on board this vessel				
From	To	Fishery	Gear	Duties
From	To	Fishery	Gear	Duties

Crew Member At-Sea Commercial Fish Harvesting History				
Vessel Name	Vessels Owners Name			
Vessel Owner's Address				
City	State, Zip	Owner's Phone		
State in which vessel was licensed		State Vessel Id		
Federal Vessel Permit #		U.S.C.G. Vessel ID		
Describe your at-sea fishing activity on board this vessel				
From	To	Fishery	Gear	Duties
From	To	Fishery	Gear	Duties

By signing this form, you swear that all information contain herein is true.

Signature	Date

The assignment of community development quotas will also be recorded in the database, using rules defined by the Council. For these management areas, quotas will be set by species with minimum and maximum limits established for individual communities.

After the initial allocation phase, the primary task of the individual fishing quota data management system will be to track fish-catches against quota. The system will, however, also be used also to monitor the ownership levels of quota shares and to effect quota share and individual fishing quota transfers. During the off-season, the system would be used to calculate and assign quotas for the following season.

The database will provide six primary tables:

A. Catch History Table

The catch history table contains historical data gathered for the purpose of making the initial allocation of quota shares. Once quota shares are established, data in the catch history table for these years is frozen. This table stores catch history, by fisherman, by species, by area and by vessel category. It will use data from fish tickets. Tapes will be scanned for fish tickets containing halibut and sablefish, and those fish tickets provide data for the catch history table. Information on catch history will occupy about 120 megabytes if there are 20,000 fish tickets per year (10,000 for each of two species), 1,000 bytes per record, and an average of 6 years of history (5 for sablefish, 7 for halibut).

B. Catch Record Table

Once the individual fishing quota system is in operation, the catch record table accumulates running catch history for the current year. This table stores information contained on each fish ticket. It is distinctly different from the catch history table which only contains historical data. The catch record table will be designed to track any species, not just halibut and sablefish. This information could be useful to fishermen for tracking their business, to fisheries analysts, and for possible future programs.

C. Vessel Table

This table stores information on vessels owned or leased by qualified fishermen. It will use information on vessels extracted from databases maintained by the Coast Guard; Alaska, Washington, Oregon, and California vessel registration records; and IPHC vessel records. This table organizes vessels into the categories necessary for assigning quota shares. Information on vessels will occupy about 10 megabytes if there are 10,000 vessels with an average of 1,000 bytes of information per vessel.

D. Person Table

This table stores information on qualified individuals and corporations. It will use information collected from several sources including sworn affidavits. Information on people will occupy about 10 megabytes if there are 10,000 people in the file and 1,000 bytes of information per person. As transfers of quota shares and individual fishing quota occur, the person table will be updated.

E. Transfer Table

This table stores information on transfers executed, with details related to each transfer such as quota share owner, quota share buyer, and vessel.

F. Bills of Lading Table

This table stores information on sales made by fish buyers. With information keyed in at terminals when fish buyers resell catches, the individual fishing quota data management system could prepare a bill of lading. Such information could include packaging size, product type, shipper, receiver and date of shipment. Since the pounds of fish sold under bills of lading should approximately balance the pounds of fish purchased under fish-tickets, enforcement would be able to monitor activity.

Based on information in the database, the individual fishing quota data management system could routinely provide the following applications:

- Standard reports for enforcement.
- Assign individual fishing quotas, based on quota shares and total allowable catches.
- Respond to inquiries from fishermen, enforcement and other authorized persons, with quota share information.
- Monitor overages, compute penalties, and make reports.
- Add, delete, and monitor quota cards and personal identification numbers.
- Provide business reports useful to fishermen, fish processors, and others in the industry.
- Handle applications for transfers of quota shares and individual fishing quotas. Provide forms which can be optically scanned. Check the qualifications of quota share buyers and sellers. Record closed transactions by updating the database.
- Monitor ownership caps.
- Provide information on unfished individual fishing quotas.

5.5.1.3 Data System Estimated Costs

A. Start-up Costs

The larger costs in establishing the individual fishing quota data management system would be in developing and testing the computer system, not in operating it. In this respect, the project would be front-end heavy and back-end light. Investment of sufficient time and resources in planning is crucial because of the large array of technical issues yet to be resolved.

Start up costs are divided into four categories and would be spread over three fiscal years. The first category involves planning, analysis, design, documentation, and training. This category includes a detailed written definition of the entire system operation with concept prototypes to prove the design.

APPENDIX G

Prototype Quota Share/Individual Fishing Quota Transfer Form.

In order to effect a transfer of quota shares or a lease of individual fishing quotas a form must be completed by both parties and submitted to the National Marine Fisheries Service.

The following is a prototype of the suggested form.

QS/IFQ Transfer Form			
Seller's Name		Buyer's Name	
Seller's QS/IFQ Registration #		Buyer's QS/IPQ Registration #	
Type of Transaction		# of QS transferred	IFQ lbs. transferred
I.	Both QS and Current Year IFQs		
II.	QS only		
III.	IFQs only (limited to 10% of allocation)		
Price per share of QS transferred			
Price per lb. of IFQs transferred			
The undersigned are willing participants in the above transaction, and further both parties swear that no further agreements requiring the purchaser to transfer QS or IFQs back to the seller exist. Witness must be Notary Public.			
Signature of Seller			Date
Witness to Seller's Signature			Date
Signature of Buyer			Date
Witness to Buyer's Signature			Date

6.0 REGULATORY IMPACT REVIEW SUMMARY

As compared to the status quo (Alternative 1), the implementation of an IFQ program (Alternative 2) would tend to increase the benefits derived from the halibut and sablefish resources off Alaska and change the distribution of these benefits; it would increase reporting, administrative, and enforcement costs, and it could provide increased benefits to consumers in the United States and elsewhere. Estimates of these changes are summarized below.

6.1 Benefits from the Halibut Resources

By replacing the race for fish with an efficient and impartial mechanism for allocating fixed gear halibut and sablefish quotas among competing users, an IFQ program would tend to result in decreased harvesting and processing costs, increased product quality and prices, and a decreased need for the Council to become involved in allocation disputes. Although an IFQ program could result in increases in both highgrading discards and unreported landings of halibut and sablefish, it will decrease halibut and sablefish bycatch discards in other fisheries, decrease the discards of other species in these two fisheries, and decrease mortality resulting from lost or abandoned halibut and sablefish gear. The net effect on fishing mortality that is not accounted for in reported landings is not known.

The following estimates of the benefits and costs of an IFQ program were discussed in Chapter 2.

Annual Benefits

The IFQ program recommended by the Council is expected to result in a variety of benefits. Only some of the following benefits have been quantified.

1. An increased in vessel safety will result in an unestimated benefit.

2. Increased flexibility in scheduling halibut and sablefish landings, increased product quality, and the increased supply of fresh halibut will increase exvessel value by $4.8 to $38.5 million.

3. Increases in the quality of halibut and sablefish and increases in the supply of fresh halibut will result in unestimated benefits to consumers.

4. A decrease in the amount of halibut that is frozen and a decrease in the length of time frozen halibut and sablefish is stored will decrease processing and marketing costs by $6.2 million. Note that it is assumed that half of this cost savings is accounted for in the estimate of the increase in exvessel prices.

5. Increased flexibility in scheduling halibut landings will result in an additional unestimated decrease in processing costs.

6. The decrease in fishing mortality caused by lost gear will increase the exvessel value of retainable fishing mortality by $1.2 to $2.0 million.

7. A reduction in redundant gear would decrease harvesting cost by $3.0 million.

8. The opportunity cost of foregone fishing or other activities would be reduced by an unknown amount.

9. The increased flexibility in selecting fishing strategies and the redistribution of catch and effort to lower cost fishing operations would reduce harvesting cost by $12.4 to $13.6 million.

10. The increase in flexibility with respect to scheduling landings will provide an increased opportunity to use residential labor forces.

11. The decrease in rockfish discards in the halibut fishery will increase exvessel value by $1.7 to $2.9 million and provide an unestimated benefit in terms of improved information concerning rockfish mortality in the halibut fishery.

12. The decrease in the discard mortality of sublegal halibut in the halibut fishery will increase the exvessel value of retainable halibut catch by $0.5 to $1.1 million.

13. The elimination of the problems associated with the halibut PSC limit for the Gulf longline fisheries would have increased the exvessel value of the sablefish catch by $2.3 million and reduced the cost of harvesting halibut by $1.1 million. The potential benefits of using a halibut IFQ program to address halibut bycatch problems in other groundfish fisheries are substantially greater.

14. The use of an IFQ program to solve the halibut bycatch problem in the salmon troll fishery would provide additional unestimated benefits.

15. The ability to manage reported landings within halibut quotas probably would be improved.

16. Eventually, the cost of the Council having to respond to allocation issues would be reduced.

17. The ability of the IPHC to attain OY would be increased by preventing excessive fishing on some components of the halibut stock.

18. The total of the estimated annual benefits that have been quantified ranges from $30.1 to $67.6 million.

19. The estimates would be increased by $11.0 to $13.9 million if the vessel restrictions that prevent the redistribution of catch to the lowest cost vessel classes were eliminated. The benefits also would be increased if vessel class restrictions posed less of a problem for solving the halibut bycatch problem in the longline groundfish fisheries.

Annual Costs

With the exception of increased administrative and enforcement costs, the costs of an IFQ program have not been quantified. The types of costs are listed below.

1. An IFQ program would increase annual administrative and enforcement costs by about $2.7 million. In addition to this increased annual cost, there would be a one time implementation cost of $1.9 million.

2. An IFQ program is expected to result in increased highgrading.

3. An IFQ program will increase intentional under-reporting of landings.

4. An IFQ program will result in transition costs due to decreased employment opportunities for some and increased opportunities for others.

5. The extended seasons resulting from an IFQ program may increase gear conflicts between the halibut or sablefish fishery and other fisheries.

6. An IFQ program for the halibut and sablefish fisheries could increase participation in other fisheries.

7. An IFQ program could increase the pressure on the IPHC and Council to increase quotas.

8. There will be additional record-keeping and reporting requirements.

6.2 Administrative and Enforcement Costs

There would be additional one-time costs and additional annual costs to administer and enforce the groundfish fishery management plans. The one-time startup costs are estimated to total $1.9 million and the additional annual costs are estimated to be $2.7 million. Part of this startup cost would not occur again if this system were used for other fisheries.

6.3 Impacts on Consumers

The quality of the halibut and sablefish products and the availability of fresh halibut would be expected to increase as a result of an IFQ program. Both will tend to increase the average price consumers pay for halibut and sablefish. The combination of increased quality and prices and the interactions between the prices of fresh and frozen halibut make it difficult to determine the net effect on consumers as a whole. The increase in total halibut landings and the increased supply of what is considered a preferred product should benefit consumers.

However, because expenditures on halibut and sablefish account for a small part of consumer expenditures, because there are a variety of substitutes for halibut and sablefish, and because relatively few people consume halibut or sablefish, the effect would be zero for most domestic consumers and minimal for most of the rest. The total effect on all domestic consumers is not expected to be large enough to significantly alter the relative merits of the two alternatives. The effects of the sablefish IFQ program are further diminished by the fact that most of the sablefish catch is exported.

6.4 Redistribution of Cost and Benefits

In addition to potentially providing a substantial increase in the benefits derived from the halibut and sablefish resources, the IFQ program would change the distribution of those benefits. As noted in Chapter 2, those who participated in the fishery as vessel owners or lease holders during the qualifying period but who have left the fishery would clearly gain with IFQs. Those who would continue to participate in the fishery would also tend to gain, particularly if they had consistently participated in the fishery during the qualification period. There are some who have been active in the fishery for so few years that they would have to purchase substantial amounts of QS or IFQ to maintain their average landings. At least in the short-run, some of these people would be better off with the status quo. However, this is only true because they would have to buy QS or IFQ and thus transfer income to others. Over time, they would be expected to do approximately equally well in the IFQ system. If technological advances increase fishing efficiency and initial QS purchase prices do not reflect this, these people would be better off under IFQs. Therefore, for the group as a whole of those who buy or sell QSs and IFQs there is a net gain.

An IFQ program will tend to decrease the number of vessels and fishermen participating in the fixed gear halibut and sablefish fisheries. The concentration of effort among fewer vessels and fishermen will mean that those who remain in the fishery will be employed more fully. The change in the nature of the fishery will tend to reduce the premium on speed and increase that on efficiency and product quality. This will tend to increase the employment opportunities for some, perhaps those who are more experienced, and decrease the employment opportunities for others.

The gains in economic profits should be compared to losses which will occur. Many of these losses are social in nature and involve changes in employment or lifestyle. These losses are difficult to quantify because they hinge on the values different people place on type of employment, community welfare, and lifestyle.

The actual transferability of IFQs will allow a much broader range of benefits and costs to be considered than are considered by the cost model. As a result, it is difficult to estimate what transfers will actually take place. However, because the transfers will reflect comprehensive values of alternative uses, and not just economic profits, the resulting transfers are expected to increase the benefits derived from the halibut and sablefish fisheries where the benefits are broadly defined.

An important social consideration is the seasonal round of activities associated with halibut and sablefish fishing. This involves both fishermen and processing workers who participate in the halibut fishery for part of the year and other activities during the remainder. To some, the present, regulated fishing season constrains other activities. These people would find a year round fishery less restrictive since they could more easily participate at their own pleasure. There are others who are dependant on halibut activity during a set part of the year and who do not have the ability to reschedule it. While some of these people, especially fishermen, can still participate in the fishery others will have less latitude since there will be less halibut employment during any one period. Conversely, there are fishing industry persons who currently do not participate in the halibut fishery due to other, concurrent activities. A year round fishery would allow these people to participate. It is not certain how many persons fit into each of these categories.

On the whole, a change in the seasonality of halibut should provide a benefit in terms of flexibility to those whose lives are involved in the fishery. An IFQ system increases the number of choices that are available compared to the open access system. Industry members will be able to schedule their activities rather than having the activities dictated by regulatory seasons. Such flexibility would be compatible with the lifestyles of many fishermen and processing workers.

6.5 Executive Order 12291

While this proposed amendment would have an effect on costs, prices, competition, employment, investment, and productivity it is not anticipated to have annual effect of over $100 million. Allowable catches of halibut would still be determined annually by the IPHC and economic contributions from the halibut fishery overall would remain largely dependent upon stock fluctuations. The same is true for the sablefish fishery, with annual quotas being determined by the Council in the same manner as is currently done. While given levels of stock abundance may result in greater economic benefits to the nation under an IFQ system, as opposed to open access, it is not likely to result in a change of over $100 million.

7.0 CONSISTENCY WITH MAGNUSON ACT AND OTHER APPLICABLE LAW

7.1 Magnuson Act Requirements

The Council's IFQ alternative for the sablefish and halibut fisheries must be consistent with the provisions of the Magnuson Fishery Conservation and Management Act of 1976 as well as other applicable law including the Halibut Act. While the approved IFQ program is a combined system incorporating both the sablefish and halibut fixed gear fisheries, portion of the amendment dealing with the halibut fisheries would be submitted under authority of the Halibut Act as opposed to the Magnuson Act. The following section dealing with the National Standards was originally written in the context of sablefish, but much of the language is applicable to the halibut fisheries as well. A separate section is devoted to specific Halibut Act requirements, which are similar to Magnuson Act requirements. Much of the following is borrowed from previous Council documents prepared relevant to this issue but is updated where necessary to reflect specific provisions of the Council's Preferred Alternative.

7.1.1 Consistency with National Standards

The problems described in Chapter 1 include gear conflicts on the grounds, fishing mortality resulting from fish left on lost gear, bycatch loss, product wholesomeness, and the safety of both vessels and fishermen. Many of these are exacerbated by another of the identified problems, excess harvesting capacity. These problems are not unique to the halibut and sablefish fixed gear fisheries. However, in these fisheries they have increased to such a level that limited access is being examined in an attempt to correct them.

The use of limited access as a means of controlling the problems in the sablefish and halibut fisheries has been suggested by the industry and discussed by the Council for many years. After numerous public hearings, workshops, meetings and the recommendations of the Advisory Panel, the Council provisionally decided that licenses would not sufficiently resolve the problems which exist in the sablefish fixed gear fishery. IFQs were determined to be the best alternative to the status quo. In approving IFQs, the Council is exercising its discretion to limit access to the sablefish fixed gear fishery as provided for in section 303(b)(6) of the Magnuson Fishery Conservation and Management Act (MFCMA). Similar authority is granted to the Councils under the Halibut Act.

The MFCMA lists seven National Standards with which any fishery management plan (FMP) shall be consistent (Section 301(a)). National Standard 4 specifically addresses allocation of fishing privileges. In addition, the MFCMA invests the Council with discretion to establish a system for limiting access to a fishery in order to achieve optimum yield. Section 303(b)(6) of the MFCMA lists certain criteria that must be taken into account by the Council and Secretary when establishing a limited access system.

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

Optimum yield (OY) is defined as the amount of fish which will provide the greatest overall benefit to the Nation including maximum sustainable yield (MSY) as modified by any relevant economic, social, or ecological factors [see 54 CFR §602.11(f)(1)]. Preventing overfishing is of paramount importance to the Council and an important goal under all management systems. This Amendment does not change sablefish TACs, estimates of maximum sustainable yield, or determinations of optimum yield. As has been discussed elsewhere in the Amendment, there are biological concerns

with the present management system such as bycatch, discards, unaccounted for fishing mortality, and overfishing concerns. Under IFQs biological concern would center on highgrading and underreporting of landings. The IFQ management regime could reduce these losses overall and lead to a better environment for managing the fishery and maintaining removals within the allowable biological catch limits. The ability of an IFQ program to do so will depend heavily on the effectiveness of the enforcement program. With an inadequate program and without sufficient enforcement support from the industry, the conservation benefits of an IFQ program could be more than offset by increases in both highgrading and unreported landings.

Open access management is unable to deal with allocation issues mentioned in Chapter 1 including the economic and social problems of overcapacity in the harvesting sector and increasing harvesting costs. Conversely, the change to IFQ management will benefit some more than others and will disadvantage some. While there may be fewer fishermen under an IFQ system, more of them will be full time longliners. Those retaining more full-time positions would be receiving benefits from the change. By choosing IFQs, the Council would be stating that the benefits, such as reducing harvest costs, increasing product quality and prices, and increasing safety, outweigh the costs, such as additional administrative and enforcement costs and the additional costs some would bear. These latter costs would include the social costs associated with a change in employment opportunities for some.

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

In developing this Amendment, numerous data bases were repeatedly accessed in order to obtain the most up to date information available. This is particularly the case with fish ticket data since that data base is continually updated as new tickets arrive and errors are detected. Numerous managers and fishermen with experience in limited access systems in other parts of the world were contacted as were some of the leading theoreticians in North America. A list of data sources is included in the reference chapters of previous analysis documents. Some of these data sources have been utilized in preparation of this document as well. Much of the summary data and analyses in this document have been available for public review for an extended period of time as the Council has developed its preferred alternative.

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

This Amendment maintains the management of both halibut and sablefish as an interrelated stocks throughout the range of each. While this Amendment focuses solely on fixed gear harvests, the Council recognizes that the species caught by fixed gear, and all gears, are interrelated. To that end, the Council is considering limited access alternatives for all fisheries under its management.

National Standard 4: Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be: (1) fair and equitable to all such fishermen; (2) reasonably calculated to promote conservation; and (3) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

The allocation of fishing privileges as set forth in this Amendment does not discriminate among residents of different states. The prohibition on discrimination is "an extension of the Federal privilege and immunities clause of the U.S. Constitution, which means that Councils may not rely on,

nor incorporate within an FMP, a State law that discriminates against residents of a different State. Discrimination is a distinct concept from equity." (54 CFR §602.14). This Amendment furthers neither the reliance on nor incorporation of any State laws. Based on the analysis of quota share distribution throughout this Amendment, it is apparent that it reflects recent participation levels without regard to state of residency. Although, for instance, individual residents of Washington receive on average larger share quota amounts than residents of Alaska, these allocations are based directly and entirely on past landings.

The community development quotas do not discriminate between residents of different states because not all residents of any state are eligible to receive the benefits of these quotas. A relatively small percentage of Alaskan residents live in communities that will receive CDQs.

The greatest test of equity faced in allocating fishing privileges is determining which group of people to include and which to exclude. While this system is designed to allow almost anyone to purchase IFQs, those initially receiving harvesting privileges will have a competitive advantage by not having to amortize the cost of their privileges. Four major groups of current and past industry participants were readily identifiable as possible recipients: vessel owners, permit holders (those whose name is associated with the landing, often the skipper), crewmen, and processors. The Council did not want to disrupt the complex business relationships among these groups. Processors, at least in recent years, have not had great participation directly in the harvesting of sablefish or halibut with the exception of catcher/processors for sablefish. Although the distribution of allocations could affect the distribution of processing, the Council decided that those directly involved in fishing should be granted the initial fishing privileges. The Council concluded that vessel owners were those who have traditionally supplied the means to harvest the fish, suffered the financial risks, and directed the operations. The one exception would be those fishermen who paid to lease a vessel with a bareboat charter; bareboat charterers take over the same position as the traditional vessel owner. The crew, of which the permit holder is one, are rewarded for their labor and risks through a profit sharing wage system.

Some fishermen have not participated in recent years while others have only just become vessel owners or otherwise entered the fishery. While the Council wishes to treat all of these participants equally, it is mindful of the many concerns raised by the industry. Specifically, the Council wishes to minimize disruption to the fishing industry and allow those who have fished the longest and most recently to continue with a minimum of inconvenience. In order to reward present participation in the fishery, only those fishermen making legal, fixed gear landings of sablefish (or halibut) in either 1988, 1989, or 1990 will be eligible to receive quota shares in the initial allocation. For those who qualify, past participation will be taken into account by utilizing landings history back to 1984 and 1985, respectively, for halibut and sablefish. The best five years of landings by person and area through 1990 will be used when calculating initial quota shares. This results in the greatest allotments to those who have participated at least five years and less to those who have participated fewer years.

While a number of factors were considered as equitable considerations in the allocation formula for this fishery, it must be pointed out that the allocation formula is not intended to be a guarantee that participants in the fishery will receive an allocation consistent with their vessel's best performance. It need not be. See the guidelines for the national standards at 50 CFR §602.14. It is understood that there will be negative impacts, possibly even for some of the long term participants in the fishery. These impacts are the result of equitable consideration which the Council, in the reasonable exercise of its discretion, believes should be part of the allocation scheme. The other negative impacts are those associated with a vessel owner's allocation vis-a-vis the vessel's performance in the fishery. These negative impacts are the result of attempting to achieve the objectives of this Amendment. The Council believes that an IFQ allocation system is the best means of achieving this objective.

While there are several bases for allocating the resource, each with its own set of negative impacts, the Council believes that a formula based on recent participation, along with landings history from a reasonable time period, represents the fairest and least disruptive means of allocation. Other equity concerns are discussed elsewhere in this section and in previous Council documents.

The allocations made by this Amendment promote conservation by encouraging both a rational, more easily managed use of the resource and a move towards a more optimal yield in terms of value, market mix, price, and economic and social benefit. The use of IFQs allows the fishermen to adjust his harvests and retain sablefish and halibut bycatch on other fishing trips. This decreases discards and reduces overall fishing mortality. Since fishing seasons will be longer then, there will be much less likelihood of harvests in excess of the total allowable catch (TAC) even though highgrading and underreporting may occur. As discussed elsewhere in this Amendment, the overall yield of the fishery will increase in most senses of the term, if the enforcement program is successful in limiting increases in both highgrading and unreported landings. In those instances where a decrease might be experienced, such as a change in lifestyle, it is expected to be more than offset by gains in other factors of yield.

The issue of excess share of fishing privileges being allocated or amassed is addressed in this Amendment by restricting control to no more than one percent of the combined area fixed gear TACs. In the case of halibut, the ownership cap is one-half of one percent. After a review of preliminary allocation data, it was determined that the concentration of ownership only ten owners would receive over one percent of the combined TACs for sablefish based on their past participation in the open access fishery. No one would receive greater than one-half of one percent of the halibut quota in the initial allocation. It is possible that a one percent limit, if concentrated, would allow localized excessive shares and an oligopsony for processing or harvesting. This would not, however, lead to overall market control of the fishery. The Council is aware of the other checks already existing on accumulation of excessive shares as presented earlier in this Amendment. Therefore, in the Council's opinion, the ownership caps, along with other provisions of the plan, would allow for growth for almost all "persons" and still maintain a limit which would preclude any person amassing an excessive share.

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

With IFQs, fishermen will have the opportunity to land halibut and sablefish during much of the year, including halibut and sablefish harvested in conjunction with other fixed gear fisheries. This will lead to a multi-species fishery approach on the part of fishermen with associated savings in harvesting costs. As discussed elsewhere in this Amendment, harvesting costs will be lowered because the need to race to harvest fish will be eliminated; the quality, quantity, and value of landings and processed products will be increased; harvesting costs will be decreased; and there will be increased employment opportunities for the permanent local labor force.

Throughout this Amendment, analysis has compared the economic waste associated with overcapitalization, congestion, and inefficiencies in harvesting between the present system of open access and an IFQ system. The net benefits to the nation, both quantitatively and qualitatively, have been shown to be, in sum, potentially greater under IFQs than under the present system. The IFQ system encourages all industry sectors to use the most combined overall efficient techniques of harvesting and processing. The analysis presented in this Amendment clearly demonstrates that IFQs would lead to reduced harvest costs and savings overall to most if not all segments of the industry. By reducing overcapacity through market means, the industry itself will decide on the most efficient

methods to harvest halibut and sablefish with fixed gear. This will reduce the future use of management measures based on operating inefficiencies and allow for even greater savings.

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

While this Amendment would not directly affect the fishery resource it would allow fishermen flexibility to enter and leave the fishery on a more secure basis. For instance, if the sablefish or halibut stocks begin to decline, less efficient fishermen might find themselves unable to profitably harvest sablefish or halibut. They would, however, have the option of selling their harvest privileges and receiving a sum of money to assist entry into new fisheries or enterprises. They might also choose to lease their IFQs annually (subject to leasing restrictions) and receive a continued flow of income from the resource.

Overall, the use of IFQs will allow the industry to self-adjust to harvest levels, for whatever reason, through normal market mechanisms rather than through regulations. This will, for instance, reduce allocation conflicts between fixed gear fisheries that take sablefish or halibut as a target species and as bycatch. Management agencies will be able to focus their limited resources towards other issues rather than concentrating on regulations restricting effort levels and settling allocation disputes.

If regions or governments wish to develop the economies of certain areas they can supply communities with secured harvest privileges by purchasing either IFQs or quota shares on the open market. With the community allocations concept included in the IFQ program, the Secretary can allocate sablefish harvest privileges directly to those qualifying communities deemed in need of such assistance.

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

The intent of this standard is to ensure that management measures "be designed to give fishermen the greatest possible freedom of action in conducting business ... consistent with ensuring the wise use of the resources and reducing conflict in the fishery." (50 CFR §602.17) As shown elsewhere in this Amendment, the regulatory burden on fishermen will be lessened under IFQs as compared to continued open access. Likewise, fishermen will have greater freedom to design their own fishing, operating, and cost schedules. The result will be a net gain to society.

7.1.2 Section 303(b)(6)

Section 303(b)(6) requires the Council and Secretary to take into account the following factors when developing a limited access system: (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 (F) any other relevant considerations.

In order to take into account present participation in the fisheries, the Council chose to require that a 'person' must have made legal, fixed gear landings of sablefish or halibut in either 1988, 1989, or 1990 in order to qualify for initial quota shares. The rationale for this requirement is that the Council wished to distribute initial quota share only to those 'persons' actively engaged in the fishery. If a 'person' had not been active in the fishery in at least one of these three years, then it was assumed that they were no longer a viable participant in the fishery. The use of these three years as a qualifying period still distributes quota shares to 'persons' who may no longer be active in the

fishery, but, reduces substantially the distribution to non-active fishermen when compared to some of the other options previously considered by the Council.

Past landings history, as substantiated by mandatory fish ticket reports, is a barometer, in the Council's opinion, of participation in the fishery, historical fishing practices, and dependance on the fishery. A vessel's landings history is the most important characteristic of its operation. It determines a vessel owner's ability to survive and thrive within the fishery. It is not directly related to the size of the vessel, since many smaller vessels have outperformed larger vessels. Using the size of the vessel in the allocation formula would create windfalls for owners of large vessels that have been relatively inactive in the fishery. It would penalize those small vessel owners who have outperformed their larger competitors. Likewise, equal allotments to all participants would penalize those who have participated each year since 1984 or 1985 by rewarding them the same as those who participated only in 1984, for example, and subsequently retired from the fishery, or just entered the fisheries. Consequently, the Council concluded that a formula based entirely on legal, reported landings is the most fair and equitable method of allocating harvesting privileges.

The vessel's landing performance is a recognition of the investment that historical participants have in the fishery. The Council has determined that only legal landings of sablefish and halibut will count towards IFQ allocations. Although there are no doubt illegal landings which have gone undetected or not been prosecuted, it is beyond the ability of the Council or NMFS to adjust for these. In any event, in terms of fairness and equity to all fishermen, those making known illegal landings should not be rewarded with IFQs for their transgressions.

The economics of the fishery are varied and complex as reflected in the economic analysis presented elsewhere in this Amendment and in previous analyses. There has been an ebb and flow in the landing histories of vessels in the fleet as market accessibility shifts, breakdowns occur, and inclement weather conditions prevent fishing operations. The Council has been very mindful of these and other economic factors affecting the industry. The means of calculating the allocation formulas reflect a consideration of the economics of the fishery. Vessel safety is of great concern to the Council. The IFQ system will allow vessel owners to harvest sablefish or halibut whenever they so choose, without being concerned about lost fishing time due to weather or breakdowns. Also, with greater flexibility in fishing time, the pace of fishing should slow down. This should result in more time to set and retrieve gear and a corresponding reduction in injuries.

The Council recognized that some circumstances may affect a vessel's performance. Circumstances such as breakdowns and injuries are a hazard of the fishery and shared by all vessels and crew. However, certain events are abnormal and radically affect the performance of the vessel. The Council concluded that some mechanism should be included in the plan to take into account such circumstances. The result is a provision which allows qualified quota share recipients to drop one year's landings history from their total poundage used in calculating quota share. In the case of halibut, they are allowed to drop two year's landings history. By using their best five of six years (or five of seven years for halibut quota share), this provides fishermen the benefit of not having a bad year or two count against them in the initial allocation of quota shares. From the Council's perspective, it is also a provision which should tend to reduce the amount of appeals in the initial distribution process.

The reduction in fleet size through market transfers of IFQs will decrease the number of vessels that will participate in the halibut and sablefish fisheries. Preliminary analysis contained in the fleet operating cost model indicates that these vessels will vary in size by area due to differing economics of harvest. All vessels leaving the fisheries will do so voluntarily and with some monetary compensation at least equal to their own appraisal of future profits if they remain in the fishery. This

is opposed to vessel exit from an overcapitalized, open access fishery where owners are more likely to enter bankruptcy and lose their vessel. As described earlier in this Amendment, many vessels in the fishery are multipurpose and engage in other fisheries with other gear types. Those vessels which are solely fixed gear vessels for groundfish are able to target other, non-IFQ fisheries and still harvest sablefish, or halibut, as bycatch; provided they retain or acquire a sufficient amount of IFQs. Indeed, some operations, with small amounts of quota share, may find this to be the best possible use of their quota shares.

The Council has observed that one of the most difficult aspects of instituting limited access is the change in management style and its affect on fishermen's perceptions. While limited access in general is not a foreign concept to sablefish and halibut fishermen and some are involved in other limited access programs, few if any have experience with IFQs. With IFQs, the premium on the ability to harvest quickly is replaced by a premium on the ability to efficiently harvest fish and maintain product quality. Based on public testimony, such change may well prove unsettling to some fishermen as they are forced to redefine their relative performance. Of equal concern to the industry is the change from a common resource with "free" access to one where the resource is valued with quasi-private harvest privileges. These changes will be felt through the industry and fishing communities as status positions change. However, the Council believes that the type of economic and social dislocation which might occur with over-regulation and overcapitalization in the open access fishery will be greater than that experienced with IFQs. As discussed earlier, this Amendment would also allow greater flexibility for seasonal fishing and provide greater opportunities to those already in the fishery and those currently not participating due to conflicting activities. After examining the expected future of the sablefish and halibut fixed gear fisheries, under both open access and IFQ management, it is expected that the social and cultural dislocation will be less with the institution of this Amendment.

7.1.3 Fisheries Impact Statement

Section 303(a)(9) of the Magnuson Act requires that any plan or amendment submitted by a Council to the Secretary include a description of the potential impact of the plan or amendment on the participants in the fisheries and on the participants in fisheries managed by adjacent Councils. This and previous analysis documents have attempted to describe the potential effects of an IFQ program on participants in the sablefish and halibut fisheries off Alaska. Regarding the effects on other fisheries, Chapter 4 of this document is devoted to assessing the possible effects on non-IFQ fisheries, recreational fisheries, and fisheries in areas managed by other Councils. It is not expected that this action would directly affect participants in those fisheries managed by other Councils. Please refer to Chapter 4 for a more detailed discussion.

7.2 Regulatory Flexibility Act

The Regulatory Flexibility Act requires examination of the impacts of proposed actions on small businesses, small organizations, and small jurisdictions to whether a substantial number of small entities will be significantly impacted by the management measures. Data utilized in the analyses of the proposed alternatives show that up to 7,200 vessels/owners may be affected by a change in management from open access to an IFQ program. This is the number of 'persons' receiving quota share (QS) under the qualification option which has been adopted by the Council. In general, these fishing vessels or operators are considered to be small businesses. Current active participants in the halibut fisheries off Alaska number close to 4,000, with about 650 in the sablefish fisheries. Of these current participants, it is the vessels (owners or leaseholders) who have fished only in the 1991 fishery who would be most affected by the proposed IFQ action. These and potential future participants would not be allocated QS under the options in this proposed amendment.

This analysis indicates that those who have participated in the past but no longer are involved in the fishery would benefit from the proposed action in the form of a 'windfall profit' realized from issuance of QS in the initial allocation. The major burden imposed on small business entities by an IFQ program would be the cost of acquiring QS/IFQs by those who did not receive them in the initial allocation process. All participants would be affected, either positively or negatively, by the proposed action due to the change which would occur in the nature of the halibut fishery.

The alternative of continued open access would also affect a substantial number of small entities, although the effects are less quantifiable and would likely be felt sometime in the future of the fishery. Depending on stock fluctuations, continued open access would likely necessitate additional, traditional management measures related to timing of seasons, gear restrictions, and other effort limitations. Future impacts of such actions on the harvesting fleet are unclear.

7.3 Halibut Act Requirements

The nature of the limited access alternatives approved for the halibut fisheries parallels those under consideration for sablefish, and the Council expressed its intent that, if IFQ alternatives are implemented for these fisheries, they would be implemented concurrently in a joint IFQ system. The difference is that the halibut limited entry EIS will be submitted under authority of the Halibut Act while the sablefish limited entry SEIS will be submitted under authority of the Magnuson Act. After the Council has selected its preferred alternative, this section will be revised and each Halibut Act requirement will be specifically addressed in terms of the elements of the preferred alternative. Regulations will be drafted to implement the Council's decision under authority of the Halibut Act.

The use of limited access as a means of controlling the problems in the halibut fishery has been suggested by some segments of industry and discussed by the Council for many years. After numerous public hearings, workshops, meetings and the recommendations of the Advisory Panel, the Council provisionally decided that licenses would not sufficiently resolve the problems which exist in the halibut fishery. IFQs were determined to be the best alternative to the status quo.

The Northern Pacific Halibut Act of 1982 (16 U.S.C. 773(c)) provides that the Regional Fishery Management Council having authority for the geographic area concerned may develop regulations governing the Pacific halibut catch in U.S. Convention waters which are in addition to, but not in conflict with, regulations of the International Pacific Halibut Commission. 'Convention' refers to the Convention between the U.S.A. and Canada for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and the Bering Sea (signed at Ottawa, Ontario on March 2, 1953) as amended by a Protocol Amending the Convention (signed at Washington, D.C. on March 29, 1979.

The Halibut Act provides that such regulations shall only be implemented with the approval of the Secretary of Commerce, 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 title 16 U.S.C. which authorizes the Council or the Secretary to establish a system for limiting access to a fishery, if, in developing such a system, the Council and the Secretary take into account:

(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,
(f) any other relevant considerations.

The Act further states that 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 the 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. The conformity of the proposed halibut IFQ program with these requirements was addressed above.

7.4 NEPA Consistency

This document is consistent with National Environmental Policy Act (NEPA) requirements that an environmental assessment or environmental impact statement be prepared for any proposed federal action. The basis for preparation of this EIS was that this proposed action constituted a major action due to its controversial nature and potential socioeconomic effects. This document, along with previous analysis documents, is being submitted for NEPA review prior to submission to the Secretary of Commerce.

7.5 Coastal Zone Management Act

The alternatives in this amendment are consistent, to the maximum extent practicable, with the provisions of the Coastal Zone Management Act of 1972 and would not conflict with State of Alaska laws or regulations. The halibut fisheries are managed by the IPHC and the NPFMC all the way to the shoreline and fishing permits are issued by the IPHC which also aggregates all fish ticket landings records. In terms of sablefish, this amendment would affect only those fishing under authority of a federal groundfish permit.

7.6 Effects on Marine Mammals

The proposed actions in this amendment, either continued open access or an IFQ system, are not anticipated to have any adverse effects with regards to marine mammal interactions. Under an IFQ system, the patterns of fishing in this fishery would change from a very brief opening with highly concentrated effort to an extended fishery over both time and space with effort being less concentrated but occurring over a longer time period and possibly over greater areas. Adverse interactions between fisheries and marine mammals have often been thought to be directly related to the concentration of fisheries in time and space. To the extent that this is true for the fixed gear halibut and sablefish fisheries, the IFQ program, which will disperse the fishery in time and space, will decrease such effects.

In the history of the halibut hook and line fishery, marine mammal interactions have not been a factor. Some interactions with killer whales have been documented in the sablefish fisheries. However, it is not expected that the IFQ program would have any adverse effects on this or any other existing marine mammal interactions.

7.7 Endangered Species Act

Section 7 consultations, under the Endangered Species Act, are required if a management action is likely to jeopardize survival of endangered or threatened species. The current halibut and sablefish fisheries pose no threat to any endangered species, and the approve IFQ alternative is not likely to result in such a threat to any endangered or threatened species.

APPENDIX A

Draft Supplemental Environmental Impact Statement for Longline and Pot Gear Sablefish Management in the Gulf of Alaska and the Bering Sea/Aleutian Islands - dated November 16, 1989

TABLE OF CONTENTS

TABLE OF CONTENTS

APPENDICES:

LIST OF TABLES

LIST FIGURES

TABLE OF CONTENTS

APPENDICES:

I- Survey of Individual Quota Programs
II- Fishing Cost Model
III- Regional Distribution of Halibut Vessel Owners and Halibut Landings by IPHC Regulatory Area During 1984-1990 and in Proposed IFQ Program
IV- A Generalized Assessment of the Benefits of an IFQ System
V- Estimating Your Quota Shares and Individual Quotas

LIST OF TABLES

LIST OF FIGURES

APPENDIX B

Sablefish and Halibut Fixed Gear IFQ Management Plan

This is the Council's halibut and sablefish fixed gear management plan as approved at their December 1991 meeting. The amendment package and implementation plan will be completed and forwarded for Secretarial review early next year. There will be further opportunity for public comment then. The plan will be implemented no sooner than 1994.

Sec.1. DEFINITIONS. Definitions for terms used herein shall be the same as those contained in the Magnuson Fishery Conservation and Management Act, except as follows:

(A) "Person" means any individual who is a citizen of the United States or any corporation, partnership, association, or other entity (whether or not organized or existing under the laws of any state) which meets the requirements set forth in 46 CFR Part 67.03, as applicable. This definition is subject to other restrictions and conditions as set forth in Sec.(2)(C) and (D).

(B) An "individual" means a natural person who is not a corporation, partnership, association, or other entity.

(C) "Quota shares" (QS) are equal to a person's fixed gear landings (qualifying pounds) for each area fished.

(D) The "Quota Share Pool" is the total amount of QS in each area. The QS pool may change over time due to appeals, enforcement, or other management actions.

(E) "Individual Fishing Quota" (IFQ) means the annual poundage of fish derived by dividing a person's QS into the QS pool and multiplying that ratio by the annual fixed gear TAC for each management area.

(F) "Fixed gear" is defined to include all hook and line fishing gears (longlines, jigs, handlines, troll gear, etc.) and pot gear for sablefish in the BS/AI. (For purposes of initial allocation, legal pot gear landings from the Gulf of Alaska will be counted)

(G) "Catcher boat" or "catcher vessel" means any vessel which delivers catch or landing in an unfrozen state.

(H) "Freezer longliner" means any vessel engaged in fishing in the fixed gear fishery which, during a given trip, utilizes freezer capacity and delivers some or all of its groundfish catch in a frozen state.

(I) "Bona fide fixed gear crew member," is defined as any person that has acquired commercial fish harvesting time at sea (i.e. fish harvesting crew); that is equal to 5 months of any commercial fish harvesting activity *(in a fishery in state or federally managed waters of the U.S.)*[1] Additionally any individual who receives an initial allocation of QS will be considered a bona fide crew member.

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1. Text shown in *italics* provides clarification by the staff to indicate Council intent.

Sec.2. FIXED GEAR QUOTA SHARE AND INDIVIDUAL FISHERY QUOTA SYSTEM

(A) AREA. Quota shares and Individual Fishery Quotas (IFQs) shall be made available for each of the management areas identified for the Bering Sea and Aleutian Islands and the Gulf of Alaska.

(B) INITIAL QUOTA SHARE ASSIGNMENT.

(1) Initial assignments of Quota Shares shall be made to:

(i) a qualified person who is a vessel owner who meets the requirements in this section; or

(ii) a qualified person who meets the requirements of this section engaged in a lease of a fishing vessel (written or verbal) or other "bare-boat charter" arrangement in order to participate in the fishery. (For instances identified under this section, the qualified person shall receive full credit for deliveries made while conducting the fishery under such a lease or arrangement.) *(Documentation proving such a lease existed will include the lease document itself if it exists, or other proof that the lessee did in fact control the disposition of the vessel, its gear, crew, and catch.)*

(2) Initial quota shares for sablefish or halibut will be assigned only to persons who meet all other requirements of this section and who have landed those species in any one of the following years: 1988, 1989 or 1990. These three years shall be known as the quota share qualifying years.

(3) Quota shares shall be assigned initially for each management area to qualified persons based on recorded landings, as documented through fish tickets or other documentation for fixed gear landings. Historical catch of sablefish will be counted from 1985 through 1990. Historical catch of halibut will be counted from 1984 through 1990. These historical periods shall be known as the quota share base period. For each species and management area, NMFS will select a person's best five (5) years (subject to approval of the person involved) from the quota share base period to calculate their quota shares.

(4) The sum of the catch in each person's five (5) selected years for each area shall equal that person's quota shares for that area. All QS in any area shall be added together to form the "Quota Share Pool" for that area.

(C) VESSEL CATEGORIES. Quota shares and IFQs shall be assigned by vessel category as follows:

(1) Freezer Longliner Shares:

(i) A vessel is determined to be a freezer longliner in a given year, if during that year it processed (froze) fixed gear (as defined above) caught groundfish. If a vessel is determined to be a freezer longliner and that vessel was used in the most recent year of participation by the owner, through 9/25/91, then all qualifying pounds landed by that vessel owner during the qualifying years shall be assigned as freezer longliner shares, unless the owner also participated in the most recent year through 9/25/91, using a catcher only vessel, then shares will be assigned to separate categories, in proportion to the catch made aboard each of the vessels. (*The Council's intent is that if a vessel is determined to be a freezer longliner that all QS accruing to that vessel will be issued as freezer vessel shares.*)

(ii) Any person owning freezer longliner quota shares may sell or lease those quota shares to any other qualified person for use in the freezer longliner category.

(iii) Fish caught with freezer longliner IFQs may be delivered frozen or unfrozen.

(2) Catcher Boat Shares:

(i) All landings made during the QS base period by a vessel owner, whose last vessel that participated in a fixed gear fishery through 9/25/91 is determined to be a catcher vessel, shall be allocated catcher boat quota shares.

(ii) There shall be two categories of catcher boat shares for the sablefish QS/IFQ fishery;

(a) vessels less than or equal to 60 feet in length overall, and

(b) vessels greater than 60 feet in length overall.

(iii) There shall be three categories of catcher boat shares for the halibut QS/IFQ fishery;

(a) vessels less than or equal to 35 feet in length overall,

(b) vessels greater than 35 feet but less than or equal to 60 feet in length overall, and

(c) vessels greater than 60 feet in length overall.

(iv) For initial allocation of catcher boat Quota Shares:

(a) if, during the last year of participation in a fixed gear fishery through 9/25/91, a QS recipient simultaneously owned or leased two or more vessels on which halibut or sablefish were landed, and those vessels were in different size (or type) categories, then the QS allocation shall be for each vessel category and may not be combined into a single category.

(b) if a QS recipient bought or sold vessels in succession during the qualifying period, and to the extent the QS recipient operations were in one vessel category during one year and the next vessel owned was in another vessel category, the QS will be combined and applied to the last vessel category of ownership as of 9/25/91.

(v) Any person owning catcher boat quota shares may sell those quota shares to any person meeting the provisions outlined under Sec. 2(C)(3). Ten percent of an individual's catcher boat quota shares may be leased during the first three years following implementation. (*The Council's intent is that 10% of a QS owner's shares may be leased in any given year.*)

(vi) Fish caught with catcher boat quota shares may not be frozen aboard the vessel utilizing those quota shares.

(vii) Sablefish catcher boat shares may be utilized on a vessel with freezer capacity as long as no frozen product of any species is on board the vessel while those catcher boat shares are being utilized. Further, sablefish freezer shares may not be utilized at the same time as sablefish catcher vessel shares.

(3) General Provisions For Catcher Boats Following Initial Allocation:

(i) In order to purchase or lease QS, the purchaser must be an individual who is a U.S. citizen and a bona fide fixed gear crew member. Additionally, corporations or partnerships which received an initial allocation of catcher boat QS may purchase catcher boat QS and/or IFQs.

(ii) In order to use catcher boat IFQs the user must: 1) own or lease the QS, 2) be a U.S. citizen, 3) be a bona fide crew member, 4) be aboard the vessel during fishing operations, and 5) sign the fish ticket upon landing except as noted in (iii), below.

(iii) Persons, as defined below, who receive initial QS may utilize a hired skipper to fish their quota providing the person owns the vessel upon which the QS will be used. These recipients may purchase up to the total share allowed for the area. There shall be no leasing of such QS other than provided for in Sec.2(C)(2)(v). For the sablefish fishery east of 140°W longitude and for the halibut fishery in Area 2C, the above allowance for hired skippers applies only to corporations and partnerships. (*Additional shares purchased by these corporations or partnerships for the area east of 140°W. will not be exempted from the provisions of this section, nor does this exception apply to individuals using IFQs east of 140°W.*)

This provision will cease upon the sale or transfer of QS or upon any change in the identity of the corporation or partnership as defined below:

a) **Corporation:** Any corporation that has no change in membership, except a change caused by the death of a corporate member providing the death did not result in any new corporate members. Additionally, corporate membership is not deemed to change if a corporate member becomes legally incapacitated and a trustee is appointed to act on his behalf, nor is corporate membership deemed to have changed if the ownership shares among existing members changes, nor is corporate membership deemed to have changed if a member leaves the corporation. *(In the case where ownership of shares is initially allocated to a publicly held corporations, the Council did not make a recommendation regarding what constitutes a change in membership of the corporation.)*

b) **Partnership:** Any partnership that has no change in membership, except a change caused by the death of a partner providing the death did not result in any new partners. Additionally, a partnership is not deemed to have changed if a partner becomes legally incapacitated and a trustee is appointed to act on his behalf, nor is a partnership deemed to have changed if the ownership shares among existing partners changes, nor is a partnership deemed to have changed if a partner leaves the partnership.

c) **Individual:** any individual as defined in Sec.1(B).

(iv) Quota shares, or IFQs arising from those quota shares, for any vessel category or any management area may not be transferred to any other vessel category or any other management area or between the catcher boat and the freezer boat categories.

(v) The Secretary may, by regulation, designate exceptions to Sec.2(C)(3)(ii) to be employed in case of personal injury or extreme personal emergency which allows the transfer of catcher boat QS/IFQs for limited periods of time.

(D) LIMITATIONS ON OWNERSHIP AND USE OF QUOTA SHARES.

(1) Quota Shares Ownership Caps

(i) For sablefish each qualified person or individual may own, hold, or otherwise control, individually or collectively, but may not exceed, 1% of the combined total for the Gulf of Alaska and Bering Sea/Aleutian Islands; additionally QS holdings in the area east of 140°W. (East Yakutat and Southeast Outside) shall not exceed 1% of the QS or IFQs for that management area.

(ii) For halibut each qualified person or individual may own, hold, or otherwise control, individually or collectively, but may not exceed any of the following ownership caps.

(a) 0.5% of the total QS or IFQs from the combined IPHC areas 2C, 3A, and 3B.

(b) 0.5% of the total QS or IFQs from the combined IPHC areas 4A, 4B, 4C, 4D, and 4E.

(c) 0.5% of the total QS or IFQs from all IPHC areas combined.

(d) 1.0% of the total QS or IFQs from IPHC Area 2C.

(2) Any person who receives an initial assignment of quota shares in excess of the limits set forth in paragraph (D)(1) of this section shall:

(i) be prohibited from purchasing, leasing, holding or otherwise controlling additional quota shares until that person's quota share falls below the limits set forth in (D)(1) above, at which time each such person shall be subject to the limitations of paragraph (D)(1) above; and

(ii) be prohibited from selling, trading, leasing or otherwise transferring any interest, in whole or in part, of an initial assignment of quota share to any other person in excess of the limitations set forth in (D)(1) above.

(3) For IFQ accounting purposes:

(i) The sale of catcher vessel caught sablefish or halibut to other than a legally registered buyer is illegal, except that direct sale to dockside customers is allowed provided the fisher is a registered buyer and proper documentation of such sales is provided to NMFS.

(ii) Frozen product may only be off-loaded at sites designated by NMFS for monitoring purposes;

(iii) QS owners wishing to transport their catch outside of the jurisdiction of the Council must first check in their catch at a NMFS specified site and have the load sealed.

(iv) Persons holding IFQs and wishing to fish must check-in with NMFS or their agents prior to entering any relevant management area, additionally any person transporting IFQ caught fish between relevant management areas must first contact NMFS or their agents.

(E) INDIVIDUAL FISHERIES QUOTAS. Individual fishing quotas are determined for each calendar year for each person by applying the ratio of a person's QS to the QS pool for an area to the annual fixed gear Total Allowable Catch for each management area. In mathematical terms, IFQs = (QS / QS pool) x fixed gear TAC. Persons must control IFQs for the amount to be caught before a trip begins, with the exception that limited overages will be allowed as specified in an overage program approved by NMFS and the IPHC.

(F) VESSEL AND GEAR RESTRICTIONS.

(1) Vessel Quota Share Caps

(i) For sablefish, no more than 1% of the combined Gulf of Alaska and Bering Sea/Aleutian Island quota may be taken on any one vessel, and no more than 1% of the TAC east of 140°W. (EY/SO), may be landed on the same vessel, except that persons who received an initial allocation of more than the 1% overall ownership level (or 1% in the area east of 140°W.) may continue to fish their QS on a single vessel.

(ii) For halibut, no more than 0.5% of the combined IPHC area quota may be taken on any one vessel except that persons who received an initial allocation of more than 0.5% overall ownership level (1% in area 2C) may continue to fish their QS on a single vessel. *(This differs from the ownership cap in that the limit applies to the whole North Pacific combined area TAC rather than the TAC combined for areas 2C, 3A, 3B, or for areas 4A, 4B, 4C, 4D, and 4E combined.)*

(2) Quota shares and IFQs arising from those quota shares may not be applied to; 1) trawl-caught sablefish or halibut, or 2) sablefish or halibut harvested utilizing pots in the Gulf of Alaska, or 3) halibut harvested utilizing pots in the Bering Sea/Aleutian Islands.

(G) ADMINISTRATION AND ENFORCEMENT.

(1) All sales, transfers, or leases of quota shares (or IFQ arising from those quota shares) must occur in a manner approved by the Secretary. All quota share and IFQ assignments and transfers will be administered by NMFS based on regulations established by the Secretary. The Secretary, in promulgating such regulations, shall hold at least one public hearing in each state represented on the Council and in at least one community in each of the management areas governed by the Council.

(2) The Secretary will promulgate regulations to establish a monitoring and enforcement regime to assure compliance with this program. Persons holding QS, who are found to be in violation of these sections or in violation of under-reporting catch, will be subject to appropriate penalties as designated by the Secretary, including forfeiture of their

Quota Shares. *(The Council also directs the implementation teams to develop and recommend appropriate penalties and strictures to the Secretary of Commerce.)*

(H) DURATION. QS are a harvest privilege, and good indefinitely. However, they constitute a use privilege which may be modified or revoked by the Council and the Secretary at any time without compensation.

(I) DISCARDS *(The intent of the following sections is to eliminate high-grading by persons fishing under the IFQ program.)*

(1) DISCARDS OF SABLEFISH. Discard of sablefish is prohibited by persons holding sablefish IFQs and those fishing under the community development programs (CDQs).

(2) DISCARDS OF HALIBUT. Discard of legal sized halibut is prohibited by persons holding halibut IFQs and by those fishing under the CDQ program. Persons holding freezer longliner shares are exempt from this discard prohibition.

(J) Any person retaining sablefish or halibut with commercial fixed gear must own or otherwise control IFQs. *(The intent of the Council is to prohibit open access fixed gear fisheries for sablefish and halibut, and to require that persons in fixed gear fisheries who retain sablefish and/or halibut as bycatch must own or control IFQs for those species.)*

(K) In order for the continued prosecution of non-IFQs fixed gear fisheries, the Council recommends the suspension of the halibut fixed gear Prohibited Species Catch limit for the first two years of the IFQ program.

(L) Fish harvested incidentally during the operation of a QS/IFQ fishery shall be termed bycatch species for the purpose of this program. Bycatch species shall be Pacific cod and rockfish, but other species may be included by NMFS by regulatory amendment if it can be shown that the species is unlikely to survive if discarded. Any species identified as a bycatch species that is taken during the operation of a QS/IFQ fishery shall be retained and landed unless designated a prohibited species.

(M) Persons holding IFQs may utilize those privileges at any time during designated seasons. Retention of fixed-gear caught sablefish or any halibut is prohibited during closed seasons. Seasons will be identified by the Council and the IPHC on an annual basis. *(The IPHC and IFQ implementation teams have recommended initially that the season for IFQ sablefish and halibut should open on March 1 and close on November 30.)*

Sec.3. WESTERN ALASKA COMMUNITY DEVELOPMENT QUOTA PROGRAM.

(A) PURPOSE AND SCOPE. The Western Alaska Community Development Quota Program is established to provide fishermen who reside in western Alaska communities a fair and reasonable opportunity to participate in the Bering Sea/Aleutian Islands sablefish and halibut fisheries, to expand their participation in salmon, herring, and other nearshore fisheries, and to help alleviate the growing social economic crisis within these communities. Residents of western Alaska communities are predominantly Alaska Natives who have traditionally depended upon the marine resources of the Bering Sea for their economic and cultural well-being. The Western Alaska Community Development Quota Program is a joint program of the Secretary and the Governor of the State of Alaska. Through the creation and implementation of community development plans, western Alaska communities will be able to diversify their local economies, provide community residents with new opportunities to obtain stable, long-term employment, and

participate in the Bering Sea/Aleutian Islands sablefish and halibut fisheries which have been foreclosed to them because of the high capital investment needed to enter the fishery.

The NMFS Regional Director shall hold the designated percent of the annual total allowable catch (TAC) of sablefish and halibut for each management area in the Bering Sea and Aleutian Islands for the western Alaska halibut community quota as noted below. These amounts shall be released to eligible Alaska communities who submit a plan, approved by the Governor of Alaska, for its wise and appropriate use. The portions of sablefish and halibut TACs for each management area not designated to CDQ fisheries will be allocated as QS and IFQs and shall be used pursuant to the program outlined in the Sections (1) and (2) above.

(B) WESTERN ALASKA SABLEFISH COMMUNITY QUOTA

(1) The NMFS Regional Director shall hold 20 percent of the annual fixed-gear Total Allowable Catch of sablefish for each management area in the Bering Sea/Aleutian Islands Area for the western Alaska sablefish community quota.

(2) Not more than 12 percent of the total western Alaska sablefish community quota may be designated for a single community, except that if portions of the total quota are not designated by the end of the second quarter, communities may apply for any portion of the remaining quota for the remainder of that year only.

(3) Those persons that would otherwise have received a full complement of sablefish IFQs in the Bering Sea and Aleutian Islands area, but would receive less due to the provisions of CDQs, will be partially compensated and the cost of the compensation will be borne equally by all initial sablefish QS/IFQ recipients. In general this compensation plan will issue incremental amounts of QS and/or IFQs in each non-CDQ area to each disadvantaged person.

(C) WESTERN ALASKA HALIBUT COMMUNITY QUOTA.

(1) For IPHC management area 4E, 100% of the halibut quota shall be made available only to residents of coastal communities physically located in or proximate[2] to each management subarea. Trip limits of less than 6,000 pounds will be enforced.

(2) For IPHC management area 4C, 50% of the halibut quota, exclusive of issued QS, shall be made available for a community fisheries development program for residents of communities physically located in the management area.

(3) For IPHC management area 4B, 20% of the halibut quota, exclusive of issued QS, shall be made available for a community development program for residents of disadvantaged western Alaska coastal communities physically located in or proximate[2] to the management area.

(4) For IPHC management area 4D, 30% of the halibut quota shall be made available for a community development program for residents of disadvantaged western Alaska coastal communities located in IPHC areas 4D and 4E for a community fisheries development (CDQ) program.

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2. *(In determining whether a community qualifies, the Governor of Alaska will determine the interpretation of the word "proximate".)*

(5) Those persons that would otherwise have received a full complement of IFQs in areas 4B, C, D, & E, but would receive less due to the provisions of CDQs, will be partially compensated, and the cost of compensation will be borne equally by all initial halibut QS/IFQ recipients. In general this compensation plan will issue incremental amounts of QS and/or IFQs in each non-CDQ area to each disadvantaged person.

(D) ELIGIBLE WESTERN ALASKA COMMUNITIES. The Governor of Alaska is authorized to recommend to the Secretary that a community within western Alaska which meets all of the following criteria be eligible for the western Alaska community quota program (hereinafter "the Program"):

(1) be located on or proximate to the Bering Sea coast from the Bering Strait to the western most of the Aleutian Islands or a community located on an island within the Bering Sea, that the Secretary of the Interior has certified pursuant to section 11(b)(2) or (3) of Pub. L. No. 92-203 as Native villages are defined in section 3(c) of Pub. L. No. 92-203;

(2) be unlikely to be able to attract and develop economic activity other than commercial fishing that would provide a substantial source of employment;

(3) its residents have traditionally engaged in and depended upon fishing in the waters of the Bering Sea coast;

(4) has not previously developed harvesting or processing capability sufficient to support substantial participation in the commercial groundfish fisheries of the Bering Sea/Aleutian Islands because of a lack of sufficient funds for investing in harvesting or processing equipment; and

(5) has developed a community development plan approved by the Governor, after consultation with the North Pacific Fishery Management Council.

(E) COMMUNITY DEVELOPMENT PLANS. Within 60 days of the effective date of these regulations, the Governor shall submit to the Secretary, after review by the North Pacific Fishery Management Council, initial criteria which the community must, at a minimum, include in a community development plan to be eligible to participate in the program. The criteria shall include provisions concerning the following:

(1) amount of quota requested;

(2) length of time community is requesting to receive a share of the quota;

(3) benefits that will accrue to the community from approval of their plan and release of quota, including how the plan will assist in diversifying the community's economy and provide opportunities for training and employment;

(4) how individual resident harvesters will be provided an opportunity to participate in the fishery;

(5) how the benefits will be shared within the community;

(6) business plan which will provide adequate information to complete a financial feasibility assessment;

(7) business arrangements which are entered into between a community and residents who reside outside of the community, provided that residents of a community shall received a preference for a portion of the harvesting quota over any arrangements for harvesting with persons who reside outside of the community; and

(8) within 30 days of receipt of the criteria from the Governor, the Secretary will approve, disapprove, or return the criteria to the Governor with recommendations for changes necessary to comply with the provisions of this Act, or other applicable law.

(F) APPROVAL OF PLANS

(1) Within 45 days of receipt of an application for a community, the Governor shall review the community's eligibility for the program and the community development plan, and at least 14 days prior to the next NPFMC meeting, forward the application to the North Pacific Fishery Management Council for its review and recommendations. The Governor of Alaska may hold a public hearing and submit a synopsis of that hearing to the Council in lieu of a hearing by the Council itself. The application shall be subject to a public hearing before the Council, or a committee of the Council. If the Council does not review the plan at its next regularly scheduled meeting, the Governor shall then submit the application to the Secretary for designation of a portion of the quota. The Governor shall submit the application to the Secretary within 14 days of Council action or within 14 days of the date of the adjournment of the Council meeting without any action taken on the application, unless the application is withdrawn by the applying community.

(2) Within 30 days of the receipt of an application approved by the Governor, the Secretary will designate a portion of the quota to the community, if the community development plan satisfies the criteria developed by the Governor and approved by the Secretary, or return the application to the Governor with reasons for denial.

Sec.4. AD HOC WORKING GROUPS

(A) Two ad hoc working groups have been established: One group was established by the Council composed of but not limited to representatives from fixed gear vessel owners, crew members and processors, who would likely be affected by the Council's action on IFQs. The second group was established by the Alaska Regional Director, NMFS, composed of administration, data management, enforcement, and legal professionals. The groups developed a detailed implementation plan covering all aspects of the carrying out the Council's preferred alternative for a fixed gear IFQ management program (for sablefish and halibut). All states represented on the Council were given an opportunity to provide technical input to the groups. A Draft Implementation Plan, dated November 1991, contained details of the implementation plan, and except where modified by the Council, was accepted as part of the IFQ preferred alternative. The implementation groups are also authorized to continue their work to implement the Council's QS/IFQ program.

APPENDIX C

Major Elements of the New Zealand Individual Transferable Quota System

With an exclusive economic zone in excess of 1.5 million square nautical miles, the New Zealand zone is comparable with the North Pacific fishery management area and New Zealand currently manages 30 of its major commercial species by individual transferable quotas under what is termed the quota management system. It is this concept of a unified system, of which individual transferable quotas are the central element which characterizes the New Zealand experience. The following provides a overview of the New Zealand system.

Species

New Zealand's fisheries are characterized as multi-species and multi-method. Species targeted by one fisherman will be a by-catch for another fisherman, and vice versa. Fishermen using different fishing methods will target the same species in the same areas.

A non-transferable quota system had existed in the deepwater fisheries in New Zealand since 1983. The quota management system, of which ITQs is a part, was not introduced until 1 October 1986 for 27 of the major commercial species. Species were chosen based on their level of depletion. The following species were initially covered:

Alfonsino*
Barracouta*
Blue Cod
Blue Moki
Bluenose*
Blue Warehou
Elephant Fish
Flatfish (includes a number of species of flatfish and sole)
Gemfish
Grey Mullet
Gurnard
Hake*
Hapuku and Bass
Hoki*
John Dory
Ling*
Orange Roughy*
Oreo Dories*
Paua
Red Cod
Rig
School Shark
Silver Warehou*
Snapper
Stargazer
Tarakihi
Trevally

The following species were added later:

squid*
jack mackerel
rock lobster

(* Denotes species covered by the non-transferable quota, deepwater policy).

The Government has recently signalled that changes in the management of fisheries are desirable. It has, however, confirmed that the quota management system will remain a central feature of fisheries management. Further species would be added to this system, with the intention that eventually all commercial species would be managed this way. Indeed, the Government has suggested that the concept be extended to the recreational fisheries. This has proven to be extremely contentious in a country in which recreational fishing has the largest number of participants of any leisure activity.

Total Allowable Catches

One of the central pillars of the quota management system is the establishment of total allowable catches (TACs). Initially, individual transferable quotas were allocated as a fixed tonnage of fish which could be caught in perpetuity. Under this system, alterations to TACs were to be made by the Government purchasing ITQs from fishermen in the case of TAC decreases, or selling additional ITQs in the case of TAC increases. Unfortunately, the system was plagued by a number of substantial TAC reductions shortly after its introduction. This led the Government to change the basis of ITQs from a fixed tonnage to a proportion of TAC. In doing this the risk of TAC fluctuations has been transferred to the industry. By shifting the risk, the Government has agreed to forego any revenue which it could derive from the sale of ITQs as a result of TAC increases.

This change has tended to make the TAC setting exercise far more sensitive, with TAC debates now focussing on the setting of TACs for stock recovery, versus the setting of TACs for maximum commercial harvest. Under fisheries legislation, quantities of fish required for recreational and traditional purposes must be allowed for prior to the setting of a commercial TAC. As discussed above, the Government has recently signalled that the recreational fishing sector must shoulder its share of responsibility for the management of the fisheries. As a result, recreational catch limits have recently been cut drastically, down from 30 fish per person per day to 5 fish per person per day for some species. It has been further suggested that a modified form of the quota management system could be applied to recreational fishing.

Government Buy-back

It became clear that many of the prominent commercial species were in trouble, and that fishermen had to be encouraged to leave the industry. This view was reinforced when fishermen's aggregate catch histories were totalled. These exceeded the TACs, substantially in some areas. The Government advised that it was prepared to advance money to the industry to assist with restructuring, but it would only do this if it could be satisfied that there was substantial industry support for the policy. This support was required to extend to the concept of resource rentals through which the restructuring assistance given to the industry would be recouped.

The buy-back involved the Government accepting offers from fishermen for all or some of their averaged catch history. In this way, it was hoped that fishermen would elect to forego sufficient of their catch history, or to leave the industry altogether, so that the aggregate catch histories of those who remained would equal the TAC. The buy-back took the form of an open tender where fishermen determined how much money they would accept to forego a quantity of catch history. This involved fishermen tendering back baskets of species. Valid bids were ranked, and those who were successful were paid out at the level of the highest accepted bid. Some fishermen who wished to leave the industry tendered $0 for all their catch history. They did this in the knowledge that they would be paid out at the highest accepted level.

The initial tender round was partially successful. Following this, the Government had the option of pro-rating everyone's catch history down to the TAC. Instead it held a further, fixed-price tender. In this round the prices accepted in the first round were discounted by 20 percent and fishermen were invited to submit quantities of their catch histories for this amount. They were invited to do so on the clear understanding that if insufficient catch history were obtained that uncompensated pro-rata reductions would be made. The Government received most of the fish it sought in this round, and fishermen were pro rated down to the level of TACs without compensation for the balance.

Resource Rentals

An important aspect of the New Zealand system is the imposition on quota holders of a fee or a resource rental. This is payable to the Government and is set to recognize the private, commercial activity which takes place in a publicly owned resource. It is through resource rentals that the owners of the resource derive the national benefits of commercial fish harvesting. Resource rentals ensure that quotas are fished. No-one is going to sit on an unused quota when they have to pay money for it. If a fisherman cannot fish it himself, he will arrange for it to be fished by someone else. It is in this way that New Zealand ensures that TACs are caught each year.

Resource rental levels were initially set low, at $3.00 per tonne of quota held. They were to be raised as further information became available. The setting of resource rentals has been controversial. Initially the Government hoped to base resource rentals on the traded value of quotas which it was believed would provide a guide to industry profitability. It was argued that the price paid for quotas reflected the uncaptured value of access to publicly owned resources. Quota trading prices, however, proved to be an unreliable guide to industry profitability. Indeed, it has been concluded by Ian Clark, chief economist with the New Zealand Fishing Industry Board, that quota trading prices are not a reliable guide to anything. There is a wide divergence of opinion on the level of industry profitability.

There are some high valued species upon which resource rentals are levied but which are not managed under the quota management system. These include Bluff oysters and scallops. In these cases, resource rentals are assessed on the quantity caught.

Ownership of Quotas

There are few restrictions on the ownership of quotas in New Zealand. The philosophy which is followed is that quotas should be held by those who value them most. These will be the people who are able to catch the available fish for the least cost, and may include companies, lawyers, accountants, banks, and so on. Quotas may not be used by the foreign fleet fishing in New Zealand waters pursuant to Government bilateral fishing agreements. Quotas may not be held by those not ordinarily resident in New Zealand. Ordinarily resident is deemed to mean having lived in New Zealand for 2 1/2 of the previous 3 years, and be able to satisfy the Director-General of Agriculture and Fisheries that you intend to stay in New Zealand. Companies with greater than 25 percent foreign ownership are not permitted to own quotas. A prominent, public company exceeded the foreign ownership provisions in the course of normal share trading. That company was advised to rectify the situation or face losing its quota.

Transferability

Individual transferable quotas are freely transferable. They may be bought, sold, leased, assigned, can be used as collateral for loans, and so on. In short they behave exactly the same as any other real asset. The minimum parcel which may be traded is 100 kilograms of any fish stock. This has been

introduced to prevent overburdening administrative systems with many small trades. Because a trade involves a legal transfer of assets, there is a degree of formal documentation and verification required prior to a transfer becoming effective. Two parties must jointly sign a form (in triplicate) and have their signatures witnessed. The same criteria applying to other legal documentation applies here. Any errors are required to be corrected and initialled by both parties. These forms, along with the required fee must be lodged with the registrar of fisheries at the local Ministry of Agriculture and Fisheries office. The trade does not become effective until it has been verified. This occurs within 24 hours. All transactions are processed at midnight each night. The free transferability has resulted in some consolidation, which was one of the aims of the policy in the first place. Quotas have been purchased by a few large processing companies. These companies, in turn have chosen to lease their inshore quotas back to small concerns or individual operators to catch. The companies catch their deepwater species using their own large vessels. The effect of these lease-back arrangements has been an increase in the number of vessels.

Quota holding Levels

Limits have been established to limit both the maximum and the minimum amount of quota which may be held by any one entity. For most species the aggregation limit is 20 percent of a species in an area. For the deepwater species (denoted with an * above) the upper limit is 35 percent by species over the whole of the New Zealand exclusive economic zone. For rock lobster the limit is set at 10 percent. These limits were established in response to concern about monopoly control of quotas.

Conversely, minimum limits have also been established. All quotas (with the exception of rock lobster and paua) are specified in units of 100 kilograms. Rock lobster and paua, because of their relatively small TACs, the relatively small size of individual fish and the fragility of the resource, are specified in kilograms. Minimum holdings have been established for two main reasons. First it was not seen as desirable to have the administrative system over-burdened with large numbers of very small trades. Secondly, it was not seen as desirable to have very large numbers of small fishermen each holding a very small quota. It was considered that this increased the opportunity for quota busting, and hamper effective enforcement. Very large numbers of fishermen exceeding their quotas by a small amount can have a significant effect on the TAC. To address the first concern, the minimum tradable quantity of quota was set at 100 kilograms. To meet the second concern, minimum holdings have been established. It is a requirement that a person hold a minimum quantity of quota before commencing fishing. These minima are:

in the case of finfish, 5 tonnes;

in the case of rock lobster, 3 tonnes; and

in the case of shellfish, 1 tonne.

Clearly people can own or lease less than these amounts, but they may not commence fishing until they hold at least the above quantities. New entrants to the fishery may begin acquiring small amounts of quota, involving a few hundred kilograms. While they can continue to hold this quota, they may not fish until they achieve the minimum level. They are able to lease it out or have it fished on their behalf by others until they reach the minimum holding.

Discard of Fish

Discard of fish covered by ITQs is prohibited, except in very specific circumstances involving diseased or damaged fish, fish below legal size, or for vessel safety. The theory is that every fish caught should be recorded and counted against a quota. This provision has placed pressure on fishermen in terms of by-catch. Because TACs were set individually for species and areas, the natural proportions of by-catch to target species have been upset. Some fishermen also sold back by-catch species to the Government during the tender rounds. This has placed them in a position of catching fish for which they do not hold quotas. Generally, someone in this position has a limited time to acquire quota to cover his/her activity. In addition, a number of mechanisms have been developed to allow this fish to be landed, yet depriving fishermen of any monetary gain from it.

Fish Caught Without a Quota

The underlying philosophy of the quota management system is that fishermen should have a quota prior to commencing fishing. New Zealand fishermen are generally regarded as being optimists. It was considered that if they were to be allowed to catch fish with the opportunity to acquire a quota to cover it later that there would be severe TAC over-runs. Because of the monthly reporting requirements, fishermen have until the due date of the next report to equate their quota holdings with their fishing activity.

For a fisherman catching fish for which he does not hold a quota, a hierarchy of actions is available. First he must attempt to buy or lease a quota to cover the fish. If this is not possible, he can land the fish against another person's quota. This is known as "fishing on behalf" and has become popular. If this is not possible, he can arrange a trade-off with the Government. Under this arrangement, he may be allowed to retain the fish he has caught without a quota, but in return he must forego quota of another species for the balance of the fishing year. In practice, he retains the caught fish, and leases an equivalent amount of another quota to the Government for the year.

If he is unable to do any of these things, he is able to surrender the fish to the Crown. This involves landing the fish and having it processed through normal channels. Instead of the fisherman receiving money for the fish, though, it goes to the Government. At the time of landing, a fisherman is required to notify the Ministry of Agriculture and Fisheries of his desire to surrender fish. He must advise the processor that the fish is to be counted against the Government's quota number. The processor will notify the Ministry of the species and weight of fish, and an invoice is sent to the fisherman. It is intended that this system will provide an avenue for fish caught without a quota to be retained and landed, but will not provide an incentive for target fishing on species for which quotas are not held. This has been partially successful. A processor with his own vessels may catch fish without a quota, surrender the money to the Crown, yet still make a profit on the processing and marketing of that fish. The other problem with the system is the establishment of port prices for surrendering fish. Port prices are established to ensure uniformity in surrender prices between fishermen. Differentials in port prices for the same species have resulted in some transportation of illegally caught fish for surrender at ports where the prices are lower.

Reporting

Reporting forms the core of the monitoring and enforcement parts of the quota management system. Misreporting or failure to report on time are considered serious offenses and have resulted in prosecutions. Within a short period after introduction of the system, 100 percent reporting on time was achieved. There are three main reporting forms involved. A fisherman is required to file a

monthly quota management report detailing the amount of fish he caught for the month. He is also required to file a catch and effort landing form which records catch effort information, and details of species and quantities of fish at each landing. The third form is also to be filed monthly but needs to be completed by processors. It records species and quantities of all fish received from each fisherman. So that any one fish is reported on twice - once by a fisherman and once by a processor. It is in the discrepancies which arise from these two reports that enforcement becomes targeted. Penalties for misreporting by processors are severe, involving fines, confiscation of plant and equipment, and a prohibition on participating in the fishing industry in any capacity for up to five years. It is through such measures that it is hoped collusion between fishermen and processors to misreport fish caught will be kept to a minimum.

Enforcement

The emphasis in enforcement has changed with the introduction of ITQs. It has moved from a game-warden type approach with fisheries enforcement officers present on the water, detecting offenses as they occurred and mounting prosecutions. The new approach is based more heavily on intelligence gathering, auditing and surveillance. The emphasis has moved from detecting offenses as they occur to targeting likely offenders and placing them under surveillance. Likely offenders are identified in the first instance through discrepancies in reports or from intelligence. These individuals or companies are then targeted. The term "enforcement" has been replaced with the term "compliance." The object is not to enforce the law, but to encourage compliance with it. This involves education as well as prosecution.

The nature of offenses has also changed significantly under an ITQ regime. Offenses of the type involving taking fish out of season, or with illegal gear or in closed areas which have traditionally occurred will continue. Under an ITQ regime, however, fraud involving quotas also occurs. This is in the field of commercial law rather than criminal or administrative law. New Zealand is grappling with the balance between these three type of law at the moment. The enforcement structure has been re-organized to reflect this changed emphasis with fraud and investigative auditors and other specialists having been recruited. Investigative audits of company records is now used as an important tool in detecting and proving fisheries abuses.

Penalties

Penalties under New Zealand fisheries legislation are stringent. Maximum fines are $250,000 per offence. In addition any equipment, including motor vehicles, premises, boats, or fishing gear used in the commission of the offence are forfeited to the Government. An offender who is found to be guilty automatically loses his quota, unless the court hears of extenuating circumstances which suggest that this course should not be followed. These stringent penalties are all very well, but are worthless if the judiciary does not impose them. Following implementation, an education campaign aimed at judges was undertaken. They were advised that fisheries offenses could no longer afford to be regarded as innocent poaching. That under an ITQ system, illegal fishing was theft perpetrated against the owners of the resource, and against all other quota holders. The judiciary have been receptive to this view and have been imposing fines and other penalties commensurate with the offenses being committed. This view is an important one in maintaining the confidence of fishermen in the integrity of their property right in the fishery. If they cannot feel confident that the state will protect their rights against other's cheating, then the system breaks down, and widespread quota busting can be expected.

Appeals

Under New Zealand constitutional arrangements it is necessary to provide a forum within which fishermen can be heard concerning their quota allocations. This took the form of an appeal process. This is handled by the quasi-judicial Quota Appeal Authority, a three person body chaired by a lawyer with at least seven years practicing experience. The other members are nominated, one by the Government and one by the New Zealand Fishing Industry Board respectively. It is hoped that through this mix adequate weight can be given to the legal process, Government concerns and industry interests. All decisions from the Quota Appeal Authority are in writing and signed under the Authority's seal. The appeal process has been adversarial with fishermen being represented as well as the Ministry of Agriculture and Fisheries. As a result, appeals have taken a considerable time to complete. Well over 1,500 appeals were lodged, and these took some four years to hear, consider and determine. While this seems a vast amount of time, they have now all been resolved, and the system is functioning smoothly. For species such as rock lobster which was brought under the quota management system later, the criteria for appealing was tightened. This has helped to have these resolved far more quickly.

One of the main reasons for the appeal process taking so long was one of the tenets underlying the program. It was always believed that quota allocations should mirror activity current at the time of introduction. The catch history period was seen as being indicative of that activity. If, however, a fisherman was able to demonstrate that his activity had changed significantly at the date of introduction, he was entitled to have his quota re-assessed. This inevitably involved some subjective assessments, which tended to require careful deliberation, and therefore, more time.

Miscellaneous

Because much of the fish is landed in a semi processed form, conversion factors have been developed to convert processed weight back to greenweight. All fish must be reported in greenweight kilograms. For vessels volunteering to carry and pay for an observer, fish may be reported as the quantity caught as verified by the observer. For those not carrying observers, standard conversion factors must be used. These are conservatively set in favor of the resource.

New Zealand has an observer program. Coverage varies, with emphasis being placed on the foreign fishing fleet and the joint venture fleet. Some coverage of large domestic vessels is also undertaken.

APPENDIX D

Table 1 Estimated number of halibut vessel owners (1984-1990) and number of quota share (QS) recipients by vessel class and region of owner residence for each management area.

Table 2 Estimated number of sablefish vessel owners (1984-1990) and number of quota share (QS) recipients by vessel class and region of owner residence for each management area.

Table 3 Estimated distribution of halibut catch off Alaska, (1984-1990) and amount of IFQs, using 1991 TACs, by management area, vessel class and region of owner residence (in thousands pounds net weight).

Table 4 Estimated distribution of sablefish catch of Alaska, (1984-1990), and amount of IFQs, using 1991 TACs, by management area, vessel class and region of owner residence (in thousand pounds round weight).

The tables in this appendix correspond to tables in Chapter 2 as follows:

Table 1 → Table 2.8
Table 2 → Table 2.9
Table 3 → Table 2.14
Table 4 → Table 2.15

The tables in Chapter 2 summarize vessel owners, IFQ recipients, catch, and IFQ amounts over all management areas combined. The tables in this appendix examine the same effects for each management area.

Table 1 - AREA 2C Estimated number of halibut vessel owners (1984-1990) and number of quota share (QS) recipients by vessel class and region of owner residence for each management area.

Number and percentage of halibut vessel owners and QS recipients by region of residence.

Area 2C	YEAR							
	84	85	86	87	88	89	90	QS
Alaska	1,114	1,009	1,140	1,287	1,485	1,413	1,331	2,079
Other states	122	110	160	161	141	139	135	289
Unknown	9	5	1	0	1	1	1	3
All	1,245	1,124	1,301	1,448	1,627	1,553	1,467	2,371
Alaska	89.5%	89.8%	87.6%	88.9%	91.3%	91.0%	90.7%	87.7%
Other states	9.8%	9.8%	12.3%	11.1%	8.7%	9.0%	9.2%	12.2%
Unknown	0.7%	0.4%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%

Number and percentage of halibut vessel owners and QS recipients by vessel class.

Area 2C	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft	780	662	754	819	974	895	810	1,315
36-60 ft	456	456	539	626	653	648	653	1,008
> 60 ft	10	13	13	13	16	18	12	40
Unknown	11	6	5	4	5	4	3	7
FB	0	0	0	0	0	0	0	1
All	1,257	1,137	1,311	1,462	1,648	1,565	1,478	2,371
<= 35 ft	62.1%	58.2%	57.5%	56.0%	59.1%	57.2%	54.8%	55.5%
36-60 ft	36.3%	40.1%	41.1%	42.8%	39.6%	41.4%	44.2%	42.5%
> 60 ft	0.8%	1.1%	1.0%	0.9%	1.0%	1.2%	0.8%	1.7%
Unknown	0.9%	0.5%	0.4%	0.3%	0.3%	0.3%	0.2%	0.3%
FB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 1 continued - AREA 2C

Number of halibut vessel owners and QS recipients by vessel class and region of residence.

Area 2C	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	739	632	703	763	921	840	764	1,228
Other states	41	30	51	56	53	55	46	87
All	780	662	754	819	974	895	810	1,315
36-60 ft								
Alaska	377	379	435	522	571	568	562	821
Other states	79	77	104	104	82	80	91	187
All	456	456	539	626	653	648	653	1,008
> 60 ft								
Alaska	6	9	8	10	11	13	12	26
Other states	4	4	5	3	5	5	0	14
All	10	13	13	13	16	18	12	40
Unknown								
Alaska	1	1	4	3	2	3	2	3
Other states	1	0	0	1	2	0	0	1
Unknown	9	5	1	0	1	1	1	3
All	11	6	5	4	5	4	3	7
FB								
Alaska	0	0	0	0	0	0	0	1
All	0	0	0	0	0	0	0	1

Table 1 continued - AREA 2C

Percentage of halibut vessel owners and QS recipients by vessel class and region of residence.

Area 2C	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	94.7%	95.5%	93.2%	93.2%	94.6%	93.9%	94.3%	93.4%
Other states	5.3%	4.5%	6.8%	6.8%	5.4%	6.1%	5.7%	6.6%
36-60 ft								
Alaska	82.7%	83.1%	80.7%	83.4%	87.4%	87.7%	86.1%	81.4%
Other states	17.3%	16.9%	19.3%	16.6%	12.6%	12.3%	13.9%	18.6%
> 60 ft								
Alaska	60.0%	69.2%	61.5%	76.9%	68.8%	72.2%	100.0%	65.0%
Other states	40.0%	30.8%	38.5%	23.1%	31.3%	27.8%	0.0%	35.0%
Unknown								
Alaska	9.1%	16.7%	80.0%	75.0%	40.0%	75.0%	66.7%	42.9%
Other states	9.1%	0.0%	0.0%	25.0%	40.0%	0.0%	0.0%	14.3%
Unknown	81.8%	83.3%	20.0%	0.0%	20.0%	25.0%	33.3%	42.9%
FB								
Alaska	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Table 1 continued - AREA 3A

Number and percentage of halibut vessel owners and QS recipients by region of residence.

Area 3A	YEAR							
	84	85	86	87	88	89	90	QS
Alaska	1,436	1,079	1,332	1,559	1,679	1,444	1,877	2,761
Other states	169	130	183	232	224	251	342	462
Unknown	40	11	2	5	5	2	0	7
All	1,645	1,220	1,517	1,796	1,908	1,697	2,219	3,230
Alaska	87.3%	88.4%	87.8%	86.8%	88.0%	85.1%	84.6%	85.5%
Other states	10.3%	10.7%	12.1%	12.9%	11.7%	14.8%	15.4%	14.3%
Unknown	2.4%	0.9%	0.1%	0.3%	0.3%	0.1%	0.0%	0.2%

Number and percentage of halibut vessel owners and QS recipients by vessel class.

Area 3A	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft	1,030	652	761	896	991	784	1,013	1,559
36-60 ft	512	482	635	763	793	811	1,070	1,403
> 60 ft	81	89	134	156	146	127	185	253
Unknown	43	13	5	6	6	3	0	8
FB	0	0	0	2	1	4	3	7
All	1,666	1,236	1,535	1,823	1,937	1,729	2,271	3,230
<= 35 ft	61.8%	52.8%	49.6%	49.1%	51.2%	45.3%	44.6%	48.3%
36-60 ft	30.7%	39.0%	41.4%	41.9%	40.9%	46.9%	47.1%	43.4%
> 60 ft	4.9%	7.2%	8.7%	8.6%	7.5%	7.3%	8.1%	7.8%
Unknown	2.6%	1.1%	0.3%	0.3%	0.3%	0.2%	0.0%	0.2%
FB	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.1%	0.2%

Table 1 continued - AREA 3A

Number of halibut vessel owners and QS recipients by vessel class and region of residence.

Area 3A	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	984	630	727	850	941	736	939	1,459
Other states	46	22	34	46	50	48	74	100
All	1,030	652	761	896	991	784	1,013	1,559
36-60 ft								
Alaska	421	404	524	619	658	643	854	1,128
Other states	91	78	111	144	135	168	216	275
All	512	482	635	763	793	811	1,070	1,403
> 60 ft								
Alaska	47	56	94	111	103	90	125	169
Other states	34	33	40	45	43	37	60	84
All	81	89	134	156	146	127	185	253
Unknown								
Alaska	3	2	2	1	0	1	0	1
Other states	0	0	1	0	1	0	0	0
Unknown	40	11	2	5	5	2	0	7
All	43	13	5	6	6	3	0	8
FB								
Alaska	0	0	0	0	0	4	2	4
Other states	0	0	0	2	1	0	1	3
All	0	0	0	2	1	4	3	7

Table 1 continued - AREA 3A

Percentage of halibut vessel owners and QS recipients by vessel class and region of residence.

Area 3A	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	95.5%	96.6%	95.5%	94.9%	95.0%	93.9%	92.7%	93.6%
Other states	4.5%	3.4%	4.5%	5.1%	5.0%	6.1%	7.3%	6.4%
36-60 ft								
Alaska	82.2%	83.8%	82.5%	81.1%	83.0%	79.3%	79.8%	80.4%
Other states	17.8%	16.2%	17.5%	18.9%	17.0%	20.7%	20.2%	19.6%
> 60 ft								
Alaska	58.0%	62.9%	70.1%	71.2%	70.5%	70.9%	67.6%	66.8%
Other states	42.0%	37.1%	29.9%	28.8%	29.5%	29.1%	32.4%	33.2%
Unknown								
Alaska	7.0%	15.4%	40.0%	16.7%	0.0%	33.3%	0.0%	12.5%
Other states	0.0%	0.0%	20.0%	0.0%	16.7%	0.0%	0.0%	0.0%
Unknown	93.0%	84.6%	40.0%	83.3%	83.3%	66.7%	0.0%	87.5%
FB								
Alaska	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	66.7%	57.1%
Other states	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	33.3%	42.9%

Table 1 continued - AREA 3B

Number and percentage of halibut vessel owners and QS recipients by region of residence.

Area 3B	YEAR							
	84	85	86	87	88	89	90	QS
Alaska	258	312	451	451	207	197	288	706
Other states	63	62	96	96	66	67	78	180
Unknown	0	1	0	1	0	0	0	0
All	321	375	547	548	273	264	366	886
Alaska	80.4%	83.2%	82.4%	82.3%	75.8%	74.6%	78.7%	79.7%
Other states	19.6%	16.5%	17.6%	17.5%	24.2%	25.4%	21.3%	20.3%
Unknown	0.0%	0.3%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%

Number and percentage of halibut vessel owners and QS recipients by vessel class.

Area 3B	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft	48	61	126	131	61	64	82	197
36-60 ft	199	234	311	320	157	134	224	509
> 60 ft	76	81	115	106	58	65	64	173
Unknown	2	2	2	2	0	0	0	0
FB	0	0	0	0	2	5	5	7
All	325	378	554	559	278	268	375	886
<= 35 ft	14.8%	16.1%	22.7%	23.4%	21.9%	23.9%	21.9%	22.2%
36-60 ft	61.2%	61.9%	56.1%	57.2%	56.5%	50.0%	59.7%	57.4%
> 60 ft	23.4%	21.4%	20.8%	19.0%	20.9%	24.3%	17.1%	19.5%
Unknown	0.6%	0.5%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%
FB	0.0%	0.0%	0.0%	0.0%	0.7%	1.9%	1.3%	0.8%

Table 1 continued - AREA 3B

Number of halibut vessel owners and QS recipients by vessel class and region of residence.

Area 3B	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	46	59	120	119	51	52	62	164
Other states	2	2	6	12	10	12	20	33
All	48	61	126	131	61	64	82	197
36-60 ft								
Alaska	164	202	263	270	132	109	189	424
Other states	35	32	48	50	25	25	35	85
All	199	234	311	320	157	134	224	509
> 60 ft								
Alaska	49	52	74	71	29	36	43	115
Other states	27	29	41	35	29	29	21	58
All	76	81	115	106	58	65	64	173
Unknown								
Alaska	2	1	1	0	0	0	0	0
Other states	0	0	1	1	0	0	0	0
Unknown	0	1	0	1	0	0	0	0
All	2	2	2	2	0	0	0	0
FB								
Alaska	0	0	0	0	0	4	3	3
Other states	0	0	0	0	2	1	2	4
All	0	0	0	0	2	5	5	7

Table 1 continued - AREA 3B

Percentage of halibut vessel owners and QS recipients by vessel class and region of residence.

Area 3B	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	95.8%	96.7%	95.2%	90.8%	83.6%	81.3%	75.6%	83.2%
Other states	4.2%	3.3%	4.8%	9.2%	16.4%	18.8%	24.4%	16.8%
36-60 ft								
Alaska	82.4%	86.3%	84.6%	84.4%	84.1%	81.3%	84.4%	83.3%
Other states	17.6%	13.7%	15.4%	15.6%	15.9%	18.7%	15.6%	16.7%
> 60 ft								
Alaska	64.5%	64.2%	64.3%	67.0%	50.0%	55.4%	67.2%	66.5%
Other states	35.5%	35.8%	35.7%	33.0%	50.0%	44.6%	32.8%	33.5%
Unknown								
Alaska	100.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other states	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Unknown	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%
FB								
Alaska	0.0%	0.0%	0.0%	0.0%	0.0%	80.0%	60.0%	42.9%
Other states	0.0%	0.0%	0.0%	0.0%	100.0%	20.0%	40.0%	57.1%

Table 1 continued - AREA 4A-4E

Number and percentage of halibut vessel owners and QS recipients by region of residence.

Areas 4A - 4E	YEAR							
	84	85	86	87	88	89	90	QS
Alaska	150	143	183	284	160	148	256	447
Other states	34	30	53	69	55	56	86	138
Unknown	10	13	1	0	0	0	1	1
All	194	186	237	353	215	204	343	586
Alaska	77.3%	76.9%	77.2%	80.5%	74.4%	72.5%	74.6%	76.3%
Other states	17.5%	16.1%	22.4%	19.5%	25.6%	27.5%	25.1%	23.5%
Unknown	5.2%	7.0%	0.4%	0.0%	0.0%	0.0%	0.3%	0.2%

Number and percentage of halibut vessel owners and QS recipients by vessel class.

Areas 4A - 4E	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft	136	110	99	185	105	110	222	301
36-60 ft	21	29	70	90	56	50	70	161
> 60 ft	26	33	66	78	53	40	49	114
Unknown	11	14	3	1	0	0	1	1
FB	0	0	0	1	4	4	3	9
All	194	186	238	355	218	204	345	586
<= 35 ft	70.1%	59.1%	41.6%	52.1%	48.2%	53.9%	64.3%	51.4%
36-60 ft	10.8%	15.6%	29.4%	25.4%	25.7%	24.5%	20.3%	27.5%
> 60 ft	13.4%	17.7%	27.7%	22.0%	24.3%	19.6%	14.2%	19.5%
Unknown	5.7%	7.5%	1.3%	0.3%	0.0%	0.0%	0.3%	0.2%
FB	0.0%	0.0%	0.0%	0.3%	1.8%	2.0%	0.9%	1.5%

Table 1 continued - AREA 4A-4E

Number of halibut vessel owners and QS recipients by vessel class and region of residence.

Areas 4A - 4E	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	130	108	99	175	96	101	198	267
Other states	6	2	0	10	9	9	24	34
All	136	110	99	185	105	110	222	301
36-60 ft								
Alaska	11	18	47	61	34	28	38	110
Other states	10	11	23	29	22	22	32	51
All	21	29	70	90	56	50	70	161
> 60 ft								
Alaska	8	16	37	48	31	15	22	67
Other states	18	17	29	30	22	25	27	47
All	26	33	66	78	53	40	49	114
Unknown								
Alaska	1	1	1	1	0	0	0	0
Other states	0	0	1	0	0	0	0	0
Unknown	10	13	1	0	0	0	1	1
All	11	14	3	1	0	0	1	1
FB								
Alaska	0	0	0	1	1	4	0	3
Other states	0	0	0	0	3	0	3	6
All	0	0	0	1	4	4	3	9

Table 1 continued - AREA 4A-4E

Percentage of halibut vessel owners and QS recipients by vessel class and region of residence.

Areas 4A - 4E	YEAR							
	84	85	86	87	88	89	90	QS
<= 35 ft								
Alaska	95.6%	98.2%	100.0%	94.6%	91.4%	91.8%	89.2%	88.7%
Other states	4.4%	1.8%	0.0%	5.4%	8.6%	8.2%	10.8%	11.3%
36-60 ft								
Alaska	52.4%	62.1%	67.1%	67.8%	60.7%	56.0%	54.3%	68.3%
Other states	47.6%	37.9%	32.9%	32.2%	39.3%	44.0%	45.7%	31.7%
> 60 ft								
Alaska	30.8%	48.5%	56.1%	61.5%	58.5%	37.5%	44.9%	58.8%
Other states	69.2%	51.5%	43.9%	38.5%	41.5%	62.5%	55.1%	41.2%
Unknown								
Alaska	9.1%	7.1%	33.3%	100.0%	0.0%	0.0%	0.0%	0.0%
Other states	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	90.9%	92.9%	33.3%	0.0%	0.0%	0.0%	100.0%	100.0%
FB								
Alaska	0.0%	0.0%	0.0%	100.0%	25.0%	100.0%	0.0%	33.3%
Other states	0.0%	0.0%	0.0%	0.0%	75.0%	0.0%	100.0%	66.7%

Table 2 - ALEUTIAN ISLANDS Estimated number of sablefish vessel owners (1984-1990) and number of quota share (QS) recipients by vessel class and region of owner residence for each management area.

Number and percentage of sablefish vessel owners and QS recipients by region of residence.

Aleutian Islands	YEAR						
	85	86	87	88	89	90	QS
Alaska	5	21	19	26	19	16	57
Other states	5	16	38	39	40	29	80
All	10	37	57	65	59	45	137
Alaska	50.0%	56.8%	33.3%	40.0%	32.2%	35.6%	41.6%
Other states	50.0%	43.2%	66.7%	60.0%	67.8%	64.4%	58.4%

Number and percentage of sablefish vessel owners and QS recipients by vessel class.

Aleutian Islands	YEAR						
	85	86	87	88	89	90	QS
36-60 ft	1	12	18	23	14	17	53
> 60 ft	6	20	27	30	27	21	55
FB	3	5	12	13	18	8	29
All	10	37	57	66	59	46	137
36-60 ft	10.0%	32.4%	31.6%	34.8%	23.7%	37.0%	38.7%
> 60 ft	60.0%	54.1%	47.4%	45.5%	45.8%	45.7%	40.1%
FB	30.0%	13.5%	21.1%	19.7%	30.5%	17.4%	21.2%

Table 2 continued - ALEUTIAN ISLANDS

Number of sablefish vessel owners and QS recipients by vessel class and region of residence.

Aleutian Islands	YEAR						
	85	86	87	88	89	90	QS
36-60 ft							
Alaska	1	9	7	12	6	8	26
Other states	0	3	11	11	8	9	27
All	1	12	18	23	14	17	53
> 60 ft							
Alaska	4	11	10	12	7	7	23
Other states	2	9	17	18	20	14	32
All	6	20	27	30	27	21	55
FB							
Alaska	0	1	2	2	6	1	8
Other states	3	4	10	11	12	7	21
All	3	5	12	13	18	8	29

Table 2 continued - ALEUTIAN ISLANDS

Percentage of sablefish vessel owners and QS recipients by vessel class and region of residence.

Aleutian Islands	YEAR						
	85	86	87	88	89	90	QS
36-60 ft							
Alaska	100.0%	75.0%	38.9%	52.2%	42.9%	47.1%	49.1%
Other states	0.0%	25.0%	61.1%	47.8%	57.1%	52.9%	50.9%
> 60 ft							
Alaska	66.7%	55.0%	37.0%	40.0%	25.9%	33.3%	41.8%
Other states	33.3%	45.0%	63.0%	60.0%	74.1%	66.7%	58.2%
FB							
Alaska	0.0%	20.0%	16.7%	15.4%	33.3%	12.5%	27.6%
Other states	100.0%	80.0%	83.3%	84.6%	66.7%	87.5%	72.4%

Table 2 continued - BERING SEA

Number and percentage of sablefish vessel owners and QS recipients by region of residence..

Bering Sea	YEAR						
	85	86	87	88	89	90	QS
Alaska	26	16	40	28	15	22	78
Other states	20	19	35	23	13	39	75
Unknown	0	0	1	0	0	0	0
All	46	35	76	51	28	61	153
Alaska	56.5%	45.7%	52.6%	54.9%	53.6%	36.1%	51.0%
Other states	43.5%	54.3%	46.1%	45.1%	46.4%	63.9%	49.0%
Unknown	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%

Number and percentage of sablefish vessel owners and QS recipients by vessel class.

Bering Sea	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft	1	0	0	7	2	3	8
36-60 ft	15	5	28	20	4	22	63
> 60 ft	27	26	37	11	6	21	51
Unknown	0	0	1	0	0	0	0
FB	3	4	10	13	16	16	31
All	46	35	76	51	28	62	153
<= 35 ft	2.2%	0.0%	0.0%	13.7%	7.1%	4.8%	5.2%
36-60 ft	32.6%	14.3%	36.8%	39.2%	14.3%	35.5%	41.2%
> 60 ft	58.7%	74.3%	48.7%	21.6%	21.4%	33.9%	33.3%
Unknown	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%
FB	6.5%	11.4%	13.2%	25.5%	57.1%	25.8%	20.3%

Table 2 continued - BERING SEA

Number of sablefish vessel owners and QS recipients by vessel class and region of residence.

Bering Sea	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	1	0	0	6	2	3	7
Other states	0	0	0	1	0	0	1
All	1	0	0	7	2	3	8
36-60 ft							
Alaska	11	4	17	13	3	9	38
Other states	4	1	11	7	1	13	25
All	15	5	28	20	4	22	63
> 60 ft							
Alaska	13	11	20	6	5	7	25
Other states	14	15	17	5	1	14	26
All	27	26	37	11	6	21	51
Unknown CB							
Unknown	0	0	1	0	0	0	0
All	0	0	1	0	0	0	0
FB							
Alaska	1	1	3	3	5	3	8
Other states	2	3	7	10	11	13	23
All	3	4	10	13	16	16	31

Table 2 continued - BERING SEA

Percentage of sablefish vessel owners and QS recipients by vessel class and region of residence.

Bering Sea	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	100.0%	0.0%	0.0%	85.7%	100.0%	100.0%	87.5%
Other states	0.0%	0.0%	0.0%	14.3%	0.0%	0.0%	12.5%
36-60 ft							
Alaska	73.3%	80.0%	60.7%	65.0%	75.0%	40.9%	60.3%
Other states	26.7%	20.0%	39.3%	35.0%	25.0%	59.1%	39.7%
> 60 ft							
Alaska	48.1%	42.3%	54.1%	54.5%	83.3%	33.3%	49.0%
Other states	51.9%	57.7%	45.9%	45.5%	16.7%	66.7%	51.0%
Unknown							
Unknown	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
FB							
Alaska	33.3%	25.0%	30.0%	23.1%	31.3%	18.8%	25.8%
Other states	66.7%	75.0%	70.0%	76.9%	68.8%	81.3%	74.2%

Table 2 continued - CENTRAL GULF

Number and percentage of sablefish vessel owners and QS recipients by region of residence.

Central Gulf	YEAR						
	85	86	87	88	89	90	QS
Alaska	67	144	211	253	196	259	441
Other states	43	75	105	91	104	120	177
Unknown	0	2	4	0	1	4	6
All	110	221	320	344	301	383	624
Alaska	60.9%	65.2%	65.9%	73.5%	65.1%	67.6%	70.7%
Other states	39.1%	33.9%	32.8%	26.5%	34.6%	31.3%	28.4%
Unknown	0.0%	.9%	1.3%	0.0%	.3%	1.0%	1.0%

Number and percentage of sablefish vessel owners and QS recipients by vessel class.

Central Gulf	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft	2	5	13	28	10	29	54
36-60 ft	53	127	196	209	186	243	379
> 60 ft	51	83	104	103	93	99	159
Unknown	0	1	4	0	1	4	6
FB	4	7	5	9	14	14	26
All	110	223	322	349	304	389	624
<= 35 ft	1.8%	2.2%	4.0%	8.0%	3.3%	7.5%	8.7%
36-60 ft	48.2%	57.0%	60.9%	59.9%	61.2%	62.5%	60.7%
> 60 ft	46.4%	37.2%	32.3%	29.5%	30.6%	25.4%	25.5%
Unknown	0.0%	.4%	1.2%	0.0%	.3%	1.0%	1.0%
FB	3.6%	3.1%	1.6%	2.6%	4.6%	3.6%	4.2%

Table 2 continued - CENTRAL GULF

Number of sablefish vessel owners and QS recipients by region of residence.

Central Gulf	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	2	5	12	27	10	26	51
Other states	0	0	1	1	0	3	3
All	2	5	13	28	10	29	54
36-60 ft							
Alaska	32	85	134	158	129	172	279
Other states	21	41	62	51	57	71	100
Unknown	0	1	0	0	0	0	0
All	53	127	196	209	186	243	379
> 60 ft							
Alaska	32	52	64	66	52	60	102
Other states	19	31	40	37	41	39	57
All	51	83	104	103	93	99	159
Unknown							
Unknown	0	1	4	0	1	4	6
All	0	1	4	0	1	4	6
FB							
Alaska	1	3	2	4	7	5	9
Other states	3	4	3	5	7	9	17
All	4	7	5	9	14	14	26

Table 2 continued - CENTRAL GULF

Percentage of sablefish vessel owners and QS recipients by region of residence.

Central Gulf	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	100.0%	100.0%	92.3%	96.4%	100.0%	89.7%	94.4%
Other states	0.0%	0.0%	7.7%	3.6%	0.0%	10.3%	5.6%
36-60 ft							
Alaska	60.4%	66.9%	68.4%	75.6%	69.4%	70.8%	73.6%
Other states	39.6%	32.3%	31.6%	24.4%	30.6%	29.2%	26.4%
Unknown	0.0%	.8%	0.0%	0.0%	0.0%	0.0%	0.0%
> 60 ft							
Alaska	62.7%	62.7%	61.5%	64.1%	55.9%	60.6%	64.2%
Other states	37.3%	37.3%	38.5%	35.9%	44.1%	39.4%	35.8%
Unknown							
Unknown	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%
FB							
Alaska	25.0%	42.9%	40.0%	44.4%	50.0%	35.7%	34.6%
Other states	75.0%	57.1%	60.0%	55.6%	50.0%	64.3%	65.4%

Table 2 continued - EAST YAKUTAT/S.E. OUTSIDE

Number and percentage of sablefish vessel owners and QS recipients by region of residence.

East Yakutat/ S.E. Outside	YEAR						
	85	86	87	88	89	90	QS
Alaska	92	189	273	311	310	273	480
Other states	27	51	68	68	71	60	144
Unknown	0	3	4	4	5	3	11
All	119	243	345	383	386	336	635
Alaska	77.3%	77.8%	79.1%	81.2%	80.3%	81.3%	75.6%
Other states	22.7%	21.0%	19.7%	17.8%	18.4%	17.9%	22.7%
Unknown	0.0%	1.2%	1.2%	1.0%	1.3%	0.9%	1.7%

Number and percentage of sablefish vessel owners and QS recipients by vessel class.

East Yakutat/ S.E. Outside	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft	8	19	28	35	30	39	68
36-60 ft	86	198	286	318	326	278	494
> 60 ft	22	23	28	28	25	16	55
Unknown	0	3	4	4	5	3	11
FB	3	0	1	1	1	1	7
All	119	243	347	386	387	337	635
<= 35 ft	6.7%	7.8%	8.1%	9.1%	7.8%	11.6%	10.7%
36-60 ft	72.3%	81.5%	82.4%	82.4%	84.2%	82.5%	77.8%
> 60 ft	18.5%	9.5%	8.1%	7.3%	6.5%	4.7%	8.7%
Unknown	0.0%	1.2%	1.2%	1.0%	1.3%	0.9%	1.7%
FB	2.5%	0.0%	0.3%	0.3%	0.3%	0.3%	1.1%

Table 2 continued - EAST YAKUTAT/S.E. OUTSIDE

Number of sablefish vessel owners and QS recipients by vessel class and region of residence.

East Yakutat/ S.E. Outside	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	8	17	25	34	28	38	64
Other states	0	2	3	1	2	1	4
All	8	19	28	35	30	39	68
36-60 ft							
Alaska	72	158	229	260	266	225	384
Other states	14	40	57	58	60	53	110
All	86	198	286	318	326	278	494
> 60 ft							
Alaska	12	14	21	19	16	11	29
Other states	10	9	7	9	9	5	26
All	22	23	28	28	25	16	55
Unknown							
Unknown	0	3	4	4	5	3	11
All	0	3	4	4	5	3	11
FB							
Alaska	0	0	0	1	1	0	3
Other states	3	0	1	0	0	1	4
All	3	0	1	1	1	1	7

Table 2 continued - EAST YAKUTAT/S.E. OUTSIDE

Percentage of sablefish vessel owners and QS recipients by vessel class and region of residence.

East Yakutat/ S.E. Outside	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	100.0%	89.5%	89.3%	97.1%	93.3%	97.4%	94.1%
Other states	0.0%	10.5%	10.7%	2.9%	6.7%	2.6%	5.9%
36-60 ft							
Alaska	83.7%	79.8%	80.1%	81.8%	81.6%	80.9%	77.7%
Other states	16.3%	20.2%	19.9%	18.2%	18.4%	19.1%	22.3%
> 60 ft							
Alaska	54.5%	60.9%	75.0%	67.9%	64.0%	68.8%	52.7%
Other states	45.5%	39.1%	25.0%	32.1%	36.0%	31.3%	47.3%
Unknown							
Unknown	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
FB							
Alaska	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	42.9%
Other states	100.0%	0.0%	100.0%	0.0%	0.0%	100.0%	57.1%

Table 2 continued - WESTERN GULF

Number and percentage of sablefish vessel owners and QS recipients by region of residence.

Western Gulf	YEAR						
	85	86	87	88	89	90	QS
Alaska	38	35	43	42	44	17	98
Other states	20	32	30	47	50	26	87
All	58	67	73	89	94	43	185
Alaska	65.5%	52.2%	58.9%	47.2%	46.8%	39.5%	53.0%
Other states	34.5%	47.8%	41.1%	52.8%	53.2%	60.5%	47.0%

Number and percentage of sablefish vessel owners and QS recipients by vessel class.

Western Gulf	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft	2	0	7	3	1	1	5
36-60 ft	26	35	35	41	38	15	90
> 60 ft	26	28	24	31	40	17	61
FB	4	5	8	14	16	10	29
All	58	68	74	89	95	43	185
<= 35 ft	3.4%	0.0%	9.5%	3.4%	1.1%	2.3%	2.7%
36-60 ft	44.8%	51.5%	47.3%	46.1%	40.0%	34.9%	48.6%
> 60 ft	44.8%	41.2%	32.4%	34.8%	42.1%	39.5%	33.0%
FB	6.9%	7.4%	10.8%	15.7%	16.8%	23.3%	15.7%

Table 2 continued - WESTERN GULF

Number of sablefish vessel owners and QS recipients by vessel class and region of residence.

Western Gulf	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	2	0	5	2	1	1	4
Other states	0	0	2	1	0	0	1
All	2	0	7	3	1	1	5
36-60 ft							
Alaska	17	24	27	28	24	9	59
Other states	9	11	8	13	14	6	31
All	26	35	35	41	38	15	90
> 60 ft							
Alaska	18	11	9	10	13	6	28
Other states	8	17	15	21	27	11	33
All	26	28	24	31	40	17	61
FB							
Alaska	1	1	2	2	6	1	7
Other states	3	4	6	12	10	9	22
All	4	5	8	14	16	10	29

Table 2 continued - WESTERN GULF

Percentage of sablefish vessel owners and QS recipients by vessel class and region of residence.

Western Gulf	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	100.0%	0.0%	71.4%	66.7%	100.0%	100.0%	80.0%
Other states	0.0%	0.0%	28.6%	33.3%	0.0%	0.0%	20.0%
36-60 ft							
Alaska	65.4%	68.6%	77.1%	68.3%	63.2%	60.0%	65.6%
Other states	34.6%	31.4%	22.9%	31.7%	36.8%	40.0%	34.4%
> 60 ft							
Alaska	69.2%	39.3%	37.5%	32.3%	32.5%	35.3%	45.9%
Other states	30.8%	60.7%	62.5%	67.7%	67.5%	64.7%	54.1%
FB							
Alaska	25.0%	20.0%	25.0%	14.3%	37.5%	10.0%	24.1%
Other states	75.0%	80.0%	75.0%	85.7%	62.5%	90.0%	75.9%

Table 2 continued - WEST YAKUTAT

Number and percentage of sablefish vessel owners and QS recipients by region of residence.

West Yakutat	YEAR						
	85	86	87	88	89	90	QS
Alaska	45	78	133	96	112	81	271
Other states	34	52	83	63	70	71	130
Unknown	0	0	1	0	1	2	3
All	79	130	217	159	183	154	404
Alaska	57.0%	60.0%	61.3%	60.4%	61.2%	52.6%	67.1%
Other states	43.0%	40.0%	38.2%	39.6%	38.3%	46.1%	32.2%
Unknown	0.0%	0.0%	0.5%	0.0%	0.5%	1.3%	0.7%

Number and percentage of sablefish vessel owners and QS recipients by vessel class.

West Yakutat	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft	1	2	7	8	3	2	13
36-60 ft	53	87	141	94	121	107	276
> 60 ft	24	41	68	57	54	39	101
Unknown	0	0	1	0	1	2	3
FB	1	1	1	2	6	6	11
All	79	131	218	161	185	156	404
<= 35 ft	1.3%	1.5%	3.2%	5.0%	1.6%	1.3%	3.2%
36-60 ft	67.1%	66.4%	64.7%	58.4%	65.4%	68.6%	68.3%
> 60 ft	30.4%	31.3%	31.2%	35.4%	29.2%	25.0%	25.0%
Unknown	0.0%	0.0%	0.5%	0.0%	0.5%	1.3%	0.7%
FB	1.3%	0.8%	0.5%	1.2%	3.2%	3.8%	2.7%

Table 2 continued - WEST YAKUTAT

Number of sablefish vessel owners and QS recipients by vessel class and region of residence.

West Yakutat	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	1	2	7	7	3	2	12
Other states	0	0	0	1	0	0	1
All	1	2	7	8	3	2	13
36-60 ft							
Alaska	34	55	90	61	82	61	194
Other states	19	32	51	33	39	46	82
All	53	87	141	94	121	107	276
> 60 ft							
Alaska	10	20	36	28	24	16	60
Other states	14	21	32	29	30	23	41
All	24	41	68	57	54	39	101
Unknown							
Unknown	0	0	1	0	1	2	3
All	0	0	1	0	1	2	3
FB							
Alaska	0	1	0	1	4	3	5
Other states	1	0	1	1	2	3	6
All	1	1	1	2	6	6	11

Table 2 continued - WEST YAKUTAT

Percentage of sablefish vessel owners and QS recipients by vessel class and region of residence.

West Yakutat	YEAR						
	85	86	87	88	89	90	QS
<= 35 ft							
Alaska	100.0%	100.0%	100.0%	87.5%	100.0%	100.0%	92.3%
Other states	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	7.7%
36-60 ft							
Alaska	64.2%	63.2%	63.8%	64.9%	67.8%	57.0%	70.3%
Other states	35.8%	36.8%	36.2%	35.1%	32.2%	43.0%	29.7%
> 60 ft							
Alaska	41.7%	48.8%	52.9%	49.1%	44.4%	41.0%	59.4%
Other states	58.3%	51.2%	47.1%	50.9%	55.6%	59.0%	40.6%
Unknown							
Unknown	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	100.0%
FB							
Alaska	0.0%	100.0%	0.0%	50.0%	66.7%	50.0%	45.5%
Other states	100.0%	0.0%	100.0%	50.0%	33.3%	50.0%	54.5%

Table 3 - AREA 2C Estimated distribution of halibut catch off Alaska, (1984-1990), and amount of IFQs, using 1991 TACs, by management area, vessel class and region of owner residence (in thousand pounds net weight).

Weight and percentage of halibut catch and IFQs by region of residence.

Area 2C	YEAR							
	84	85	86	87	88	89	90	IFQs
Alaska	4,965	7,981	8,857	9,288	10,459	8,669	8,709	6,661
Other states	829	1,213	1,748	1,391	909	836	986	738
Unknown	5	9	3	0	4	0	0	1
All	5,799	9,202	10,608	10,679	11,372	9,506	9,695	7,400
Alaska	85.6%	86.7%	83.5%	87.0%	92.0%	91.2%	89.8%	90.0%
Other states	14.3%	13.2%	16.5%	13.0%	8.0%	8.8%	10.2%	10.0%
Unknown	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Weight and percentage of halibut catch and IFQs by vessel class.

Area 2C	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft	1,710	2,499	3,042	3,235	3,568	2,639	2,453	1,802
36-60 ft	3,849	6,214	7,151	7,132	7,567	6,660	7,009	5,301
> 60 ft	200	480	329	278	181	178	205	234
Unknown	40	10	86	34	57	29	29	19
FB	0	0	0	0	0	0	0	*
All	5,799	9,202	10,608	10,679	11,372	9,506	9,695	7,400
<= 35 ft	29.5%	27.2%	28.7%	30.3%	31.4%	27.8%	25.3%	24.3%
36-60 ft	66.4%	67.5%	67.4%	66.8%	66.5%	70.1%	72.3%	71.6%
> 60 ft	3.5%	5.2%	3.1%	2.6%	1.6%	1.9%	2.1%	3.2%
Unknown	0.7%	0.1%	0.8%	0.3%	0.5%	0.3%	0.3%	0.3%
FB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	*

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 2C

Weight of halibut catch and IFQs by vessel class and region of residence.

Area 2C	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft								
Alaska	1,589	2,310	2,718	2,984	3,332	2,465	2,297	1,699
Other states	121	189	325	251	236	174	155	103
All	1,710	2,499	3,042	3,235	3,568	2,639	2,453	1,802
36-60 ft								
Alaska	3,257	5,384	5,833	6,030	6,937	6,010	6,178	4,713
Other states	592	830	1,318	1,102	630	650	831	588
All	3,849	6,214	7,151	7,132	7,567	6,660	7,009	5,301
> 60 ft								
Alaska	102	286	224	*	166	166	205	231
Other states	98	193	105	*	15	12	0	47
All	200	480	329	278	181	178	205	278
Unknown								
Alaska	17	1	83	*	24	29	29	19
Other states	18	0	0	*	29	0	0	0
Unknown	5	9	3	0	4	0	0	1
All	40	10	86	34	57	29	29	19
FB								
Alaska	0	0	0	0	0	0	0	*
All	0	0	0	0	0	0	0	*

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 2C

Percentage of halibut catch and IFQs by vessel class and region of residence.

Area 2C	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft								
Alaska	92.9%	92.4%	89.3%	92.2%	93.4%	93.4%	93.7%	94.3%
Other states	7.1%	7.6%	10.7%	7.8%	6.6%	6.6%	6.3%	5.7%
36-60 ft								
Alaska	84.6%	86.6%	81.6%	84.6%	91.7%	90.2%	88.1%	88.9%
Other states	15.4%	13.4%	18.4%	15.4%	8.3%	9.8%	11.9%	11.1%
> 60 ft								
Alaska	50.9%	59.7%	68.1%	*	91.7%	93.2%	100.0%	83.1%
Other states	49.1%	40.3%	31.9%	*	8.3%	6.8%	0.0%	16.9%
Unknown								
Alaska	42.2%	14.5%	96.6%	93.0%	42.6%	99.0%	99.4%	96.6%
Other states	44.7%	0.0%	0.0%	7.0%	50.5%	0.0%	0.0%	0.5%
Unknown	13.1%	85.5%	3.4%	0.0%	6.9%	1.0%	0.6%	2.9%
FB								
Alaska	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	*

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 3A

Weight and percentage of halibut catch and IFQs by region of residence.

Area 3A	YEAR							
	84	85	86	87	88	89	90	IFQs
Alaska	13,050	14,846	24,694	23,556	30,218	24,819	20,888	19,881
Other states	6,567	5,923	8,108	7,311	7,641	8,888	8,166	6,714
Unknown	26	2	0	154	5	28	0	5
All	19,643	20,771	32,802	31,021	37,864	33,735	29,054	26,600
Alaska	66.4%	71.5%	75.3%	75.9%	79.8%	73.6%	71.9%	74.7%
Other states	33.4%	28.5%	24.7%	23.6%	20.2%	26.3%	28.1%	25.2%
Unknown	0.1%	0.0%	0.0%	0.5%	0.0%	0.1%	0.0%	0.0%

Weight and percentage of halibut catch and IFQs by vessel class.

Area 3A	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft	2,459	1,856	2,945	3,965	5,397	3,992	3,289	2,623
36-60 ft	11,065	12,417	18,384	18,573	22,327	20,987	19,175	15,918
> 60 ft	6,073	6,429	11,396	8,327	10,133	8,526	6,589	7,926
Unknown	46	70	77	156	8	41	0	5
FB	0	0	0	*	*	188	*	128
All	19,643	20,771	32,802	31,021	37,864	33,735	29,054	26,600
<= 35 ft	12.5%	8.9%	9.0%	12.8%	14.3%	11.8%	11.3%	9.9%
36-60 ft	56.3%	59.8%	56.0%	59.9%	59.0%	62.2%	66.0%	59.8%
> 60 ft	30.9%	30.9%	34.7%	26.8%	26.8%	25.3%	22.7%	29.8%
Unknown	0.2%	0.3%	0.2%	0.5%	0.0%	0.1%	0.0%	0.0%
FB	0.0%	0.0%	0.0%	*	*	0.6%	*	0.5%

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 3A

Weight of halibut catch and IFQs by vessel class and region of residence.

Area 3A	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft								
Alaska	2,214	1,746	2,729	3,605	4,960	3,514	2,874	*
Other states	245	110	216	360	437	478	415	*
All	2,459	1,856	2,945	3,965	5,397	3,992	3,289	2,623
36-60 ft								
Alaska	7,504	9,029	13,851	14,161	18,054	15,748	13,809	12,137
Other states	3,561	3,388	4,534	4,412	4,273	5,240	5,366	3,781
All	11,065	12,417	18,384	18,573	22,327	20,987	19,175	15,918
> 60 ft								
Alaska	3,312	4,004	8,085	5,788	7,204	5,356	4,205	5,360
Other states	2,761	2,425	3,311	2,540	2,929	3,170	2,384	2,566
All	6,073	6,429	11,396	8,327	10,133	8,526	6,587	7,926
Unknown								
Alaska	20	68	30	3	0	14	0	0
Other states	0	0	47	0	2	0	0	0
Unknown	26	2	0	154	5	28	0	5
All	46	70	77	156	8	41	0	5
FB								
Alaska	0	0	0	*	*	188	*	*
Other states	0	0	0	*	*	0	*	*
All	0	0	0	*	*	188	*	128

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 3A

Percentage of halibut catch and IFQs by vessel class and region of residence.

Area 3A	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft								
Alaska	90.0%	94.1%	92.7%	90.9%	91.9%	88.0%	87.4%	89.4%
Other states	10.0%	5.9%	7.3%	9.1%	8.1%	12.0%	12.6%	10.6%
36-60 ft								
Alaska	67.8%	72.7%	75.3%	76.2%	80.9%	75.0%	72.0%	76.2%
Other states	32.2%	27.3%	24.7%	23.8%	19.1%	25.0%	28.0%	23.8%
> 60 ft								
Alaska	54.5%	62.3%	70.9%	69.5%	71.1%	62.8%	63.8%	67.6%
Other states	45.5%	37.7%	29.1%	30.5%	28.9%	37.2%	36.2%	32.4%
Unknown								
Alaska	44.1%	97.2%	38.3%	1.7%	0.0%	33.3%	0.0%	6.8%
Other states	0.0%	0.0%	61.3%	0.0%	30.7%	0.0%	0.0%	0.0%
Unknown	55.9%	2.8%	0.4%	98.3%	69.3%	66.7%	0.0%	93.2%
FB								
Alaska	0.0%	0.0%	0.0%	*	*	100.0%	*	31.6%
Other states	0.0%	0.0%	0.0%	*	*	0.0%	*	68.4%

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 3B

Weight and percentage of halibut catch and IFQs by region of residence.

Area 3B	YEAR							
	84	85	86	87	88	89	90	IFQs
Alaska	4,022	7,020	5,580	5,387	4,117	4,359	6,160	5,579
Other states	2,412	3,927	3,212	2,295	2,965	3,484	2,592	3,221
Unknown	0	2	0	19	0	0	0	0
All	6,434	10,949	8,792	7,700	7,082	7,843	8,752	8,800
Alaska	62.5%	64.1%	63.5%	70.0%	58.1%	55.6%	70.4%	63.4%
Other states	37.5%	35.9%	36.5%	29.8%	41.9%	44.4%	29.6%	36.6%
Unknown	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%

Weight and percentage of halibut catch and IFQs by vessel class.

Area 3B	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft	168	283	444	648	236	349	634	406
36-60 ft	3,111	5,097	4,356	4,304	3,326	3,358	4,997	4,154
> 60 ft	3,121	5,550	3,905	2,722	3,519	3,917	2,918	4,061
Unknown	34	18	86	26	0	0	0	0
FB	0	0	0	0	*	219	203	179
All	6,434	10,949	8,792	7,700	7,082	7,843	8,752	8,800
<= 35 ft	2.6%	2.6%	5.0%	8.4%	3.3%	4.5%	7.2%	4.6%
36-60 ft	48.3%	46.6%	49.6%	55.9%	47.0%	42.8%	57.1%	47.2%
> 60 ft	48.5%	50.7%	44.4%	35.3%	49.7%	49.9%	33.3%	46.1%
Unknown	0.5%	0.2%	1.0%	0.3%	0.0%	0.0%	0.0%	0.0%
FB	0.0%	0.0%	0.0%	0.0%	*	2.8%	2.3%	2.0%

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 3B

Weight of halibut catch and IFQs by vessel class and region of residence.

Area 3B	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft								
Alaska	*	*	425	582	184	*	*	*
Other states	*	*	19	66	52	*	*	*
All	168	283	444	648	236	349	634	406
36-60 ft								
Alaska	*	*	3,217	3,395	2,272	2,107	3,702	2,980
Other states	*	*	1,139	909	1,055	1,251	1,295	1,174
All	3,111	5,097	4,356	4,304	3,326	3,358	4,997	4,154
> 60 ft								
Alaska	1,728	2,936	1,906	1,410	1,661	1,807	1,917	2,133
Other states	1,393	2,614	1,999	1,312	1,859	2,110	1,001	1,927
All	3,121	5,550	3,905	2,722	3,519	3,917	2,918	4,061
Unknown								
Alaska	34	16	31	0	0	0	0	0
Other states	0	0	55	7	0	0	0	0
Unknown	0	2	0	19	0	0	0	0
All	34	18	86	26	0	0	0	0
FB								
Alaska	0	0	0	0	*	*	*	*
Other states	0	0	0	0	*	*	*	*
All	0	0	0	0	*	219	203	179

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 3B

Percentage of halibut catch and IFQs by vessel class and region of residence.

Area 3B	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft								
Alaska	*	*	95.8%	89.9%	78.0%	74.6%	64.5%	81.0%
Other states	*	*	4.2%	10.1%	22.0%	25.4%	35.5%	19.0%
36-60 ft								
Alaska	67.6%	74.4%	73.8%	78.9%	68.3%	62.7%	74.1%	71.7%
Other states	32.4%	25.6%	26.2%	21.1%	31.7%	37.3%	25.9%	28.3%
> 60 ft								
Alaska	55.4%	52.9%	48.8%	51.8%	47.2%	46.1%	65.7%	52.5%
Other states	44.6%	47.1%	51.2%	48.2%	52.8%	53.9%	34.3%	47.5%
Unknown								
Alaska	100.0%	89.9%	35.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Other states	0.0%	0.0%	64.1%	28.1%	0.0%	0.0%	0.0%	0.0%
Unknown	0.0%	10.1%	0.0%	71.9%	0.0%	0.0%	0.0%	0.0%
FB								
Alaska	0.0%	0.0%	0.0%	0.0%	*	*	*	*
Other states	0.0%	0.0%	0.0%	0.0%	*	*	*	*

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 4A-4E

Weight and percentage of halibut catch and IFQs by region of residence.

Areas 4A - 4E	YEAR							
	84	85	86	87	88	89	90	IFQs
Alaska	1,145	2,020	3,481	4,468	2,565	2,349	2,326	2,458
Other states	2,011	2,223	2,101	2,403	2,128	2,585	3,119	2,242
Unknown	8	15	0	0	0	0	0	0
All	3,164	4,258	5,582	6,871	4,693	4,934	5,445	4,700
Alaska	36.2%	47.4%	62.4%	65.0%	54.7%	47.6%	42.7%	52.3%
Other states	63.6%	52.2%	37.6%	35.0%	45.3%	52.4%	57.3%	47.7%
Unknown	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Weight and percentage of halibut catch and IFQs by vessel class.

Areas 4A - 4E	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft	349	360	206	535	865	589	617	445
36-60 ft	868	1,299	1,992	2,624	1,350	1,918	2,253	1,538
> 60 ft	1,925	2,519	3,315	3,711	2,340	2,282	2,574	2,551
Unknown	22	81	68	1	0	0	0	0
FB	0	0	0	*	137	145	*	166
All	3,164	4,258	5,582	6,871	4,693	4,934	5,445	4,700
<= 35 ft	11.0%	8.4%	3.7%	7.8%	18.4%	11.9%	11.3%	9.5%
36-60 ft	27.4%	30.5%	35.7%	38.2%	28.8%	38.9%	41.4%	32.7%
> 60 ft	60.8%	59.2%	59.4%	54.0%	49.9%	46.2%	47.3%	54.3%
Unknown	0.7%	1.9%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%
FB	0.0%	0.0%	0.0%	*	2.9%	2.9%	*	3.5%

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 4A-4E

Weight of halibut catch and IFQs by vessel class and region of residence.

Areas 4A - 4E	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft								
Alaska	344	*	206	461	*	560	547	420
Other states	5	*	0	74	*	29	70	25
All	349	360	206	535	865	589	617	445
36-60 ft								
Alaska	149	*	1,172	1,598	553	713	909	716
Other states	719	*	821	1,026	797	1,205	1,344	822
All	868	1,299	1,992	2,624	1,350	1,918	2,253	1,538
> 60 ft								
Alaska	638	999	2,073	2,408	1,181	931	869	1,289
Other states	1,287	1,520	1,243	1,303	1,159	1,350	1,705	1,262
All	1,925	2,519	3,315	3,711	2,340	2,282	2,574	2,551
Unknown								
Alaska	14	66	30	1	0	0	0	0
Other states	0	0	38	0	0	0	0	0
Unknown	8	15	0	0	0	0	0	0
All	22	81	68	1	0	0	0	0
FB								
Alaska	0	0	0	*	*	145	*	*
Other states	0	0	0	*	*	0	*	*
All	0	0	0	*	137	145	*	166

*Due to confidentiality restrictions, this information could not be released.

Table 3 continued - AREA 4A-4E

Percentage of halibut catch and IFQs by vessel class and region of residence.

Areas 4A - 4E	YEAR							
	84	85	86	87	88	89	90	IFQs
<= 35 ft								
Alaska	98.5%	*	100.0%	86.1%	95.4%	95.1%	88.6%	94.4%
Other states	1.5%	*	0.0%	13.9%	4.6%	4.9%	11.4%	5.6%
36-60 ft								
Alaska	17.2%	45.9%	58.8%	60.9%	40.9%	37.2%	40.4%	46.6%
Other states	82.8%	54.1%	41.2%	39.1%	59.1%	62.8%	59.6%	53.4%
> 60 ft								
Alaska	33.2%	39.7%	62.5%	64.9%	50.5%	40.8%	33.8%	50.5%
Other states	66.8%	60.3%	37.5%	35.1%	49.5%	59.2%	66.2%	49.5%
Unknown								
Alaska	64.4%	81.3%	43.8%	100.0%	0.0%	0.0%	0.0%	0.0%
Other states	0.0%	0.0%	55.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	35.6%	18.7%	0.4%	0.0%	0.0%	0.0%	100.0%	100.0%
FB								
Alaska	0.0%	0.0%	0.0%	*	*	100.0%	*	*
Other states	0.0%	0.0%	0.0%	*	*	0.0%	*	*

*Due to confidentiality restrictions, this information could not be released.

Table 4 - ALEUTIAN ISLANDS Estimated distribution of sablefish catch off Alaska, (1984-1990), and amount of IFQs, using 1991 TACs, by management area, vessel class and region of owner residence (in thousands pounds round weight).

Weight and percentage of sablefish catch and IFQs by region of residence.

Aleutian Islands	YEAR						
	85	86	87	88	89	90	IFQs
Alaska	144	975	2,107	2,436	1,435	1,281	1,381
Other states	2,710	4,053	5,267	4,445	3,755	2,813	3,910
All	2,854	5,028	7,374	6,881	5,190	4,095	5,291
Alaska	5.0%	19.4%	28.6%	35.4%	27.6%	31.3%	26.1%
Other states	95.0%	80.6%	71.4%	64.6%	72.4%	68.7%	73.9%

Weight and percentage of sablefish catch and IFQs by vessel class.

Aleutian Islands	YEAR						
	85	86	87	88	89	90	IFQs
36-60 ft	*	543	1,539	1,241	429	683	815
> 60 ft	215	1,636	3,035	2,592	1,344	1,232	1,666
FB	*	2,849	2,801	3,048	3,418	2,180	2,810
All	2,854	5,028	7,374	6,881	5,190	4,095	5,291
36-60 ft	*	10.8%	20.9%	18.0%	8.3%	16.7%	15.4%
> 60 ft	7.5%	32.5%	41.2%	37.7%	25.9%	30.1%	31.5%
FB	*	56.7%	38.0%	44.3%	65.8%	53.2%	53.1%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - ALEUTIAN ISLANDS

Weight of sablefish catch and IFQs by vessel class and region of residence.

Aleutian Islands	YEAR						
	85	86	87	88	89	90	IFQs
36-60 ft							
Alaska	*	*	*	*	194	*	245
Other states	*	*	*	*	235	*	569
All	*	543	1,539	1,241	429	683	815
> 60 ft							
Alaska	*	669	1,230	1,214	238	312	561
Other states	*	967	1,805	1,377	1,106	920	1,105
All	215	1,636	3,035	2,592	1,344	1,232	1,666
FB							
Alaska	*	*	*	*	1,003	*	574
Other states	*	*	*	*	2,415	*	2,236
All	*	2,849	2,801	3,048	3,418	2,180	2,810

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - ALEUTIAN ISLANDS

Percentage of sablefish catch and IFQs by vessel class and region of residence.

Aleutian Islands	YEAR						
	85	86	87	88	89	90	IFQs
36-60 ft							
Alaska	*	*	26.7%	48.6%	45.2%	26.0%	30.1%
Other states	*	*	73.3%	51.4%	54.8%	74.0%	69.9%
> 60 ft							
Alaska	*	40.9%	40.5%	46.8%	17.7%	25.3%	33.7%
Other states	*	59.1%	59.5%	53.2%	82.3%	74.7%	66.3%
FB							
Alaska	*	*	*	*	29.3%	*	20.4%
Other states	*	*	*	*	70.7%	*	79.6%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - BERING SEA

Weight and percentage of sablefish catch and IFQs by region of residence.

Bering Sea	YEAR						
	85	86	87	88	89	90	IFQs
Alaska	2,307	1,474	2,362	483	338	931	1,351
Other states	2,131	1,647	2,272	1,908	899	1,847	2,066
Unknown	0	0	2	0	0	0	0
All	4,438	3,121	4,636	2,391	1,236	2,778	3,417
Alaska	52.0%	47.2%	50.9%	20.2%	27.3%	33.5%	39.5%
Other states	48.0%	52.8%	49.0%	79.8%	72.7%	66.5%	60.5%
Unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Weight and percentage of sablefish catch and IFQs by vessel class.

Bering Sea	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft	*	0	0	190	*	*	47
36-60 ft	947	201	1,194	380	*	*	751
> 60 ft	2,335	1,953	2,240	325	178	674	1,303
Unknown	0	0	2	0	0	0	0
FB	*	968	1,200	1,496	1,045	1,269	1,317
All	4,438	3,121	4,636	2,391	1,236	2,778	3,417
<= 35 ft	2.6%	0.0%	0.0%	7.9%	*	*	1.4%
36-60 ft	21.3%	6.4%	25.8%	15.9%	*	*	22.0%
> 60 ft	52.6%	62.6%	48.3%	13.6%	14.4%	24.3%	38.1%
Unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FB	23.4%	31.0%	25.9%	62.6%	84.5%	45.7%	38.5%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - BERING SEA

Weight of sablefish catch and IFQs by vessel class and region of residence.

Bering Sea	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	*	0	0	*	*	*	*
Other states	*	0	0	*	*	*	*
All	*	0	0	190	*	*	47
36-60 ft							
Alaska	671	*	758	125	*	*	*
Other states	275	*	436	256	*	*	*
All	947	201	1,194	380	*	826	751
> 60 ft							
Alaska	914	819	1,156	74	*	154	521
Other states	1,421	1,133	1,084	251	*	520	782
All	2,335	1,953	2,240	325	178	674	1,303
Unknown							
Unknown	0	0	2	0	0	0	0
All	0	0	2	0	0	0	0
FB							
Alaska	*	*	*	*	216	*	427
Other states	*	*	*	*	829	*	889
All	*	968	1,200	1,496	1,045	1,269	1,317

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - BERING SEA

Percentage of sablefish catch and IFQs by vessel class and region of residence.

Bering Sea	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	*	0	0	*	*	*	*
Other states	*	0	0	*	*	*	*
36-60 ft							
Alaska	70.9%	72.9%	63.5%	32.8%	*	37.3%	51.8%
Other states	29.1%	27.1%	36.5%	67.2%	*	62.7%	48.2%
> 60 ft							
Alaska	39.1%	42.0%	51.6%	22.9%	*	22.9%	40.0%
Other states	60.9%	58.0%	48.4%	77.1%	*	77.1%	60.0%
Unknown							
Unknown	0	0	100.0%	0	0	0	0
FB							
Alaska	*	*	*	*	20.7%	*	32.5%
Other states	*	*	*	*	79.3%	*	67.5%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - CENTRAL GULF

Weight and percentage of sablefish catch and IFQs by region of residence.

Central Gulf	YEAR						
	85	86	87	88	89	90	91
Alaska	3,157	6,540	9,845	12,508	10,243	10,916	8,927
Other states	4,220	6,960	9,319	10,790	11,641	12,768	9,706
Unknown	0	107	37	0	20	48	17
All	7,377	13,607	19,201	23,298	21,904	23,731	18,651
Alaska	42.8%	48.1%	51.3%	53.7%	46.8%	46.0%	47.9%
Other states	57.2%	51.2%	48.5%	46.3%	53.1%	53.8%	52.0%
Unknown	0.0%	.8%	.2%	0.0%	.1%	.2%	.1%

Weight and percentage of sablefish catch and IFQs by vessel class.

Central Gulf	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft	*	109	285	96	78	110	86
36-60 ft	2,124	5,175	8,581	10,472	10,168	14,216	9,042
> 60 ft	3,236	6,283	9,437	10,567	9,304	6,414	7,333
Unknown	0	26	37	0	20	48	17
FB	2,017	2,012	861	2,163	2,334	2,944	2,172
All	7,377	13,607	19,201	23,298	21,904	23,731	18,651
<= 35 ft	*	.8%	1.5%	.4%	.4%	.5%	.5%
36-60 ft	28.8%	38.0%	44.7%	44.9%	46.4%	59.9%	48.5%
> 60 ft	43.9%	46.2%	49.1%	45.4%	42.5%	27.0%	39.3%
Unknown	0.0%	.2%	.2%	0.0%	.1%	.2%	.1%
FB	27.3%	14.8%	4.5%	9.3%	10.7%	12.4%	11.6%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - CENTRAL GULF

Weight of sablefish catch and IFQs by vessel class and region of residence.

Central Gulf	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	*	109	245	*	78	*	85
Other states	*	.	41	*	0	*	1
All	*	109	285	*	78	*	86
36-60 ft							
Alaska	943	2,511	4,294	6,132	5,944	7,344	4,741
Other states	1,182	2,584	4,287	4,340	4,224	6,872	4,301
Unknown	0	80	0	0	0	0	0
All	2,124	5,175	8,581	10,472	10,168	14,216	9,042
> 60 ft							
Alaska	1,770	3,332	4,678	5,601	3,624	2,669	3,492
Other states	1,465	2,951	4,758	4,966	5,680	3,745	3,841
All	3,236	6,283	9,437	10,567	9,304	6,414	7,333
Unknown							
Unknown	0	*	*	*	20	*	17
All	0	*	*	*	20	*	17
FB							
Alaska	*	*	*	679	597	798	609
Other states	*	*	*	1,484	1,737	2,146	1,563
All	2,017	2,012	861	2,163	2,334	2,944	2,172

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - CENTRAL GULF

Percentage of sablefish catch and IFQs by vessel class and region of residence.

Central Gulf	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	100.0%	100.0%	85.8%	100.0%	100.0%	95.2%	98.9%
Other states	0.0%	0.0%	14.2%	0.0%	0.0%	4.8%	1.1%
36-60 ft							
Alaska	44.0%	48.5%	50.0%	58.6%	58.5%	51.7%	52.4%
Other states	56.0%	49.9%	50.0%	41.4%	41.5%	48.3%	47.6%
Unknown	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%
> 60 ft							
Alaska	54.7%	53.0%	49.6%	53.0%	38.9%	41.6%	47.6%
Other states	45.3%	47.0%	50.4%	47.0%	61.1%	58.4%	52.4%
Unknown							
Unknown	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%
FB							
Alaska	22.0%	29.2%	72.9%	31.4%	25.6%	27.1%	28.0%
Other states	78.0%	70.8%	27.1%	68.6%	74.4%	72.9%	72.0%

Table 4 continued - EAST YAKUTAT/S.E. OUTSIDE

Weight and percentage of sablefish catch and IFQs by region of residence.

East Yakutat/ S.E. Outside	YEAR						
	85	86	87	88	89	90	IFQs
Alaska	3,121	6,135	10,518	10,856	9,704	10,638	8,298
Other states	1,239	2,165	1,820	2,955	2,339	2,846	2,041
Unknown	0	61	131	94	45	31	29
All	4,360	8,361	12,469	13,904	12,089	13,516	10,368
Alaska	71.6%	73.4%	84.4%	78.1%	80.3%	78.7%	80.0%
Other states	28.4%	25.9%	14.6%	21.3%	19.3%	21.1%	19.7%
Unknown	0.0%	0.7%	1.0%	0.7%	0.4%	0.2%	0.3%

Weight and percentage of sablefish catch and IFQs by vessel class.

East Yakutat/ S.E. Outside	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft	*	151	243	251	252	575	276
36-60 ft	2,593	6,528	10,212	11,432	10,157	11,695	8,314
> 60 ft	1,331	1,621	1,844	2,072	1,614	1,210	1,649
Unknown	0	61	*	*	*	*	29
FB	*	0	*	*	*	*	100
All	4,360	8,361	12,469	13,904	12,089	13,516	10,368
<= 35 ft	*	1.8%	1.9%	1.8%	2.1%	4.3%	2.7%
36-60 ft	59.5%	78.1%	81.9%	82.2%	84.0%	86.5%	80.2%
> 60 ft	30.5%	19.4%	14.8%	14.9%	13.4%	9.0%	15.9%
Unknown	0.0%	0.7%	*	*	*	*	0.3%
FB	*	0.0%	*	*	*	*	1.0%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - EAST YAKUTAT/S.E. OUTSIDE

Weight of sablefish catch and IFQs by vessel class and region of residence.

East Yakutat/ S.E. Outside	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	*	*	*	*	*	*	*
Other states	*	*	*	*	*	*	*
All	*	151	243	251	252	575	276
36-60 ft							
Alaska	2,222	*	8,623	9,069	8,207	9,211	6,701
Other states	370	*	1,590	2,363	1,950	2,484	1,613
All	2,593	6,528	10,212	11,432	10,157	11,695	8,314
> 60 ft							
Alaska	872	1,047	1,662	1,484	1,237	883	1,251
Other states	458	573	182	588	377	327	398
All	1,331	1,621	1,844	2,072	1,614	1,210	1,649
Unknown							
Unknown	0	61	*	*	*	*	29
All	0	61	*	*	*	*	29
FB							
Alaska	*	0	*	*	*	*	*
Other states	*	0	*	*	*	*	*
All	*	0	*	*	*	*	100

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - EAST YAKUTAT/S.E. OUTSIDE

Percentage of sablefish catch and IFQs by vessel class and region of residence.

East Yakutat/ S.E. Outside	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	*	*	*	*	*	*	94.0%
Other states	*	*	*	*	*	*	6.0%
36-60 ft							
Alaska	85.7%	75.9%	84.4%	79.3%	80.8%	78.8%	80.6%
Other states	14.3%	24.1%	15.6%	20.7%	19.2%	21.2%	19.4%
> 60 ft							
Alaska	65.5%	64.6%	90.1%	71.6%	76.6%	73.0%	75.9%
Other states	34.5%	35.4%	9.9%	28.4%	23.4%	27.0%	24.1%
Unknown							
Unknown	0.0%	100.0%	*	*	*	*	100.0%
FB							
Alaska	*	0.0%	*	*	*	*	86.1%
Other states	*	0.0%	*	*	*	*	13.9%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - WESTERN GULF

Weight and percentage of sablefish catch and IFQs by region of residence.

Western Gulf	YEAR						
	85	86	87	88	89	90	IFQs
Alaska	2,134	2,014	2,108	1,458	2,519	862	1,559
Other states	2,309	2,935	4,885	5,077	5,884	2,552	3,600
All	4,444	4,949	6,993	6,534	8,403	3,414	5,159
Alaska	48.0%	40.7%	30.1%	22.3%	30.0%	25.3%	30.2%
Other states	52.0%	59.3%	69.9%	77.7%	70.0%	74.7%	69.8%

Weight and percentage of sablefish catch and IFQs by vessel class.

Western Gulf	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft	*	0	64	*	*	*	2
36-60 ft	1,041	1,759	1,882	1,342	2,156	619	1,413
> 60 ft	1,971	1,938	2,406	2,414	3,670	1,431	1,916
FB	1,432	1,252	2,641	2,778	2,578	1,364	1,828
All	4,444	4,949	6,993	6,534	8,403	3,414	5,159
<= 35 ft	*	0.0%	0.9%	*	*	*	0.0%
36-60 ft	23.4%	35.5%	26.9%	20.5%	25.7%	18.1%	27.4%
> 60 ft	44.4%	39.2%	34.4%	36.9%	43.7%	41.9%	37.1%
FB	32.2%	25.3%	37.8%	42.5%	30.7%	40.0%	35.4%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - WESTERN GULF

Weight of sablefish catch and IFQs by vessel class and region of residence.

Western Gulf	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	*	0	*	*	*	*	*
Other states	*	0	*	*	*	*	*
All	*	0	64	*	*	*	2
36-60 ft							
Alaska	514	1,048	1,131	814	924	183	*
Other states	527	711	751	528	1,232	436	*
All	1,041	1,759	1,882	1,342	2,156	619	1,413
> 60 ft							
Alaska	1,490	*	807	532	1,185	457	755
Other states	481	*	1,599	1,882	2,484	974	1,160
All	1,971	1,938	2,406	2,414	3,670	1,431	1,916
FB							
Alaska	*	*	*	*	411	*	160
Other states	*	*	*	*	2,167	*	1,668
All	1,432	1,252	2,641	2,778	2,578	1,364	1,828

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - WESTERN GULF

Percentage of sablefish catch and IFQs by vessel class and region of residence.

Western Gulf	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	100.0%	0.0%	*	39.5%	100.0%	100.0%	*
Other states	0.0%	0.0%	*	60.5%	0.0%	0.0%	*
36-60 ft							
Alaska	46.7%	59.6%	60.1%	60.7%	42.6%	29.6%	45.4%
Other states	53.3%	40.4%	39.9%	39.3%	57.4%	70.4%	54.6%
> 60 ft							
Alaska	75.6%	45.1%	33.6%	22.0%	32.3%	31.9%	39.4%
Other states	24.4%	54.9%	66.4%	78.0%	67.7%	68.1%	60.6%
FB							
Alaska	*	*	*	*	*	16.3%	*
Other states	*	*	*	*	*	83.7%	*

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - WEST YAKUTAT

Weight and percentage of sablefish catch and IFQs by region of residence.

West Yakutat	YEAR						
	85	86	87	88	89	90	IFQs
Alaska	2,134	3,261	3,988	4,358	5,314	3,180	3,675
Other states	2,880	4,043	4,681	6,151	6,058	5,397	4,795
Unknown	0	0	3	0	26	34	11
All	5,014	7,305	8,672	10,508	11,398	8,612	8,481
Alaska	42.6%	44.6%	46.0%	41.5%	46.6%	36.9%	43.3%
Other states	57.4%	55.4%	54.0%	58.5%	53.1%	62.7%	56.5%
Unknown	0.0%	0.0%	0.0%	0.0%	0.2%	0.4%	0.1%

Weight and percentage of sablefish catch and IFQs by vessel class.

West Yakutat	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft	*	*	45	253	*	*	17
36-60 ft	2,493	3,716	4,358	5,074	5,463	4,588	4,389
> 60 ft	2,521	3,589	4,266	5,416	5,374	3,532	3,773
Unknown	0	0	3	0	26	34	11
FB	*	*	*	*	535	458	292
All	5,014	7,305	8,672	10,508	11,398	8,612	8,481
<= 35 ft	*	*	0.5%	0.2%	*	*	0.2%
36-60 ft	49.7%	50.9%	50.3%	48.3%	47.9%	53.1%	51.7%
> 60 ft	50.3%	49.1%	49.1%	51.5%	47.2%	41.0%	44.5%
Unknown	0.0%	0.0%	0.0%	0.0%	0.2%	0.4%	0.1%
FB	*	*	*	*	4.7%	5.3%	3.4%

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - WEST YAKUTAT

Weight of sablefish catch and IFQs by vessel class and region of residence.

West Yakutat	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	*	*	45	17	*	*	16
Other states	*	*	0	1	*	*	0
All	*	*	45	18	*	*	17
36-60 ft							
Alaska	1,316	2,025	2,376	2,352	3,085	1,870	2,020
Other states	1,178	1,690	1,982	2,722	2,378	2,717	2,369
All	2,493	3,716	4,358	5,074	5,463	4,588	4,389
> 60 ft							
Alaska	818	1,236	1,567	1,988	1,921	1,157	1,478
Other states	1,792	2,353	2,700	3,428	3,453	2,375	2,295
All	2,610	3,589	4,266	5,416	5,374	3,532	3,773
Unknown							
Unknown	0	0	3	0	26	34	11
All	0	0	3	0	26	34	11
FB							
Alaska	*	*	*	*	*	*	161
Other states	*	*	*	*	*	*	131
All	*	*	*	*	535	458	292

*Due to confidentiality restrictions, this information could not be released.

Table 4 continued - WEST YAKUTAT

Percentage of sablefish catch and IFQs by vessel class and region of residence.

West Yakutat	YEAR						
	85	86	87	88	89	90	IFQs
<= 35 ft							
Alaska	*	*	*	94.6%	*	*	98.9%
Other states	*	*	*	5.4%	*	*	1.1%
36-60 ft							
Alaska	52.7%	54.3%	54.5%	46.4%	56.4%	40.7%	46.0%
Other states	47.3%	45.7%	45.5%	53.6%	43.6%	59.3%	54.0%
> 60 ft							
Alaska	31.3%	34.4%	36.7%	36.7%	35.7%	32.8%	39.2%
Other states	68.7%	65.6%	63.3%	63.3%	64.3%	67.2%	60.8%
Unknown							
Unknown	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	100.0%
FB							
Alaska	*	*	*	*	*	*	55.1%
Other states	*	*	*	*	*	*	44.9%

*Due to confidentiality restrictions, this information could not be released.

APPENDIX E

TO THE SUPPLEMENTAL ANALYSIS OF THE INDIVIDUAL FISHING QUOTA MANAGEMENT ALTERNATIVE FOR FIXED GEAR SABLEFISH AND HALIBUT FISHERIES OFF ALASKA

RESPONSE TO COMMENTS RECEIVED DURING NEPA REVIEW

This summarizes response to comments received during the NEPA review from May 15 to June 29, 1992. The documents under review were the Supplemental Environmental Impact Statement (SEIS) and Environmental Impact Statement (EIS) for management of the fixed gear sablefish and halibut fisheries, respectively, off Alaska. The primary document under this review was the Supplemental Analysis dated March 27, 1992, but the entire SEIS/EIS package was available for review and comment as well during this period. In cases where multiple comments were received addressing the same or similar concerns, these were summarized and responded to in a single response below. General comments which do not specifically address the analyses are not responded to but are included in the compendium of comments attached as Addendum II here.

Comment #1: The Supplemental Analysis and previous SEIS for sablefish and EIS for halibut failed to consider all reasonable alternatives. The comment asserts that traditional management tools such as trip limits, area closures, and gear and vessel limitations were never fully considered and analyzed. Response: The original SEIS dated November 1989 analyzed four management alternatives for the fixed gear sablefish fisheries: (1) continued open access, (2) license limitation, (3) Individual fishing quotas, and (4) annual fishing allotments which combined a modified open access and limited entry system. Based on this analysis, the Council determined that license limitation and annual fishing allotments were not feasible alternatives for addressing the problems facing this fishery. They also declared that continued open access was an unacceptable situation and proceeded to conduct a more in-depth analysis of the IFQ alternative. The problems identified in the sablefish fisheries are the same that occur in the halibut fisheries. The sablefish fisheries were rapidly heading towards the same frenzied one or two day seasons as the halibut fisheries. When the Council decided to consider incorporating the halibut fisheries into the IFQ program, they undertook an analysis of open access vs. IFQs. They did not analyze the other alternatives that were analyzed for sablefish because those alternatives were already considered and rejected as unsuitable for either fishery. Open access management of the sablefish fishery, as well as the halibut fishery, consists of the use of traditional management tools to one degree or another. In the case of both fisheries, the primary tool used to date consists of ever tightening fishing seasons. The use of trip limits in the major harvest management areas, for example, has been rejected by the Halibut Conference Board time and time again. This industry advisory panel to the IPHC rejected this option once again in 1992, a time when the IFQ program was looming as a very real possibility. The Council has heard testimony from industry and fisheries management experts that these types of traditional management tools have not worked in the past and will not work in the future. The numerous analysis performed since 1989 have indicated that continued open access, in any form, will not result in the benefits which will be realized under an IFQ program. While various management options touted as traditional management tools, such as gear restrictions, staggered openings, etc., have not been analyzed in the detail of the IFQ alternative, it is because the existing evidence indicated that such measures would likely result in the formation of several smaller derby fisheries which would only exacerbate the management difficulties identified in these fisheries. The Council consciously reduced the alternatives to be subjected to in-depth analysis, for both sablefish and halibut, to those which were considered

to be viable alternatives. Continued open access, modified by additional traditional management tools was not considered to be a viable alternative.

Comment #2: It is beyond the authority of the Council and the Magnuson Act to implement an IFQ program because the Act only authorizes access limitation to achieve optimum yield.
Response: The Magnuson Act clearly authorizes the Councils to establish a limited entry program, in order to achieve optimum yield, providing the Council takes into consideration present and past participation in the fishery, dependence on the fishery, economics of the fishery, capabilities of vessels in the fisheries to engage in other fisheries, and the cultural and social framework relevant to the fishery. In developing the proposed IFQ program, the Council has considered these and other factors surrounding the sablefish and halibut fisheries. The point of the respondent seems to center on the concept of optimum yield. In modern fisheries, the concept of optimum yield is no longer interpreted in the narrow context of biological yield alone; this approach in fact is more appropriately referred to as maximum sustainable yield. The concept of optimum yield encompasses not only the biological yield attainable from a given fishery, but other considerations such as economics of the fishery, safety of the participants, order of the fisheries, and net benefits accruing to United States as a whole from the relevant fishery. It may be worth noting that, under the current open access form of management, the number of times that the TACs for sablefish and halibut have been overrun exceeds the number of times that they have not been overrun.

Comment #3: The potential for increased under reporting of catch and high-grading of catch under the IFQ program were not fully explored. Several comments were received relative to this issue. The contention is that the analysis ignored the possibilities for increased high-grading, underestimated the extent of this high-grading, and failed to assess the potential environmental effects of the potential high-grading. EPA also commented on this issue.
Response: **Under-Reporting:** The IFQ enforcement program envisioned by NMFS was design specifically to discourage under reporting and to enable NMFS to track sablefish and halibut not only at-sea and at the dock, but also by creating a verifiable paper trail whereby virtually any halibut or sablefish shipment in the market can be traced back to the fisherman or processor. Not only will fishing without sufficient IFQs be punishable, purchases of illegal IFQ fish will be as well.

Doubtless, there will be illegal fishing and under reporting, no system is fail proof. But in an IFQ system the fishermen have a much greater degree of control over the fishery and the fish stocks. Operating in a way that maintains the highest stock levels makes good environmental and moral sense, it also potentially brings about healthier/larger stocks, which in the end mean more fish for each and every quota holder. In IFQ systems around the world the IFQ fishermen themselves become the fisheries best enforcement tool.

If under reporting does occur it will most likely be undertaken in small amounts that can be covered up with ease. It is more likely that persons with small amounts of remaining IFQs would cheat than would persons with larger amounts, as the risks to a persons livelihood would be greater, the greater the actual stake in the fishery. NMFS enforcement foresees developing a penalty system which are very severe when it comes to cheating the IFQ system, not only with fines, but even to the extent of denial of fishing permits in the future and in other fisheries. NMFS also expect that under reporting problems to diminish as the fleet consolidates and fewer operators are involved.

Under the current open access system fishing mortality is greatly under reported; much of it never is brought on board by fishermen, because of lost gear. Additionally, out of season halibut catches occur now, and there is no way in the current system to track halibut once it has been landed. The extent of this out of season fishing is unknown, but any fresh halibut during non-halibut seasons on the market which has not come from Canada IVQ programs could be assumed to be illegally caught.

High-grading: High-grading is not expected to be a significant problem under an IFQ system. The Supplemental Analysis of March 27, 1992 on pages 2-14 and 2-15 addresses the issue. Basically the analyst states that more opportunity to high-grade exists, given the potentially slower pace of an IFQ fishery when compared to the race for fish under the derby system. The opportunity to high-grade does not necessarily make it feasible.

In the Canadian experience with IVQs in both sablefish and halibut fisheries, fishermen, processors, and government officials all report that high-grading in a "non-issue". The Canadians cite four main reasons for this: 1) with IVQs the Canadian fishermen realize that they have a personal stake in the health of the resource, and that high-grading is perceived as damaging to that resource and therefore their livelihood; 2) monitoring and enforcement is such that the risks of being caught fishing illegally are greater than the potential payoff of high-grading; 3) the extra time needed to catch the additional fish to fill market orders and quotas jeopardizes any price advantages from larger fish; 4) high-grading is not profitable in an economic sense. For these same reasons it is unlikely that American fishermen in the an IFQ system will find high-grading to their advantage.

Environmental Effects of High-grading. An individual quota system, whether IVQs or IFQs give each quota owner, if not outright ownership of the resource, increased incentives to protect the resource. By ensuring the health of the resource the fishermen under quota systems insure the health of their livelihood. Fishermen generally do not view high-grading as a practice which is good for the resource, however it should be pointed out that, under IPHC regulations, no halibut under 32 inches may be retained, therefore some amount of high-grading is mandated by regulation. The IPHC estimates that the mortality of discarded halibut coupled with the natural mortality on small halibut is low enough that the halibut stock are presumed not to be harmed.

Monitoring and Enforcement. The Canadian monitoring and enforcement program includes port observers which weigh and measure each fish off-loaded. All observed data are entered into a database and tracked. If a fishermen were to sell a load of fish with a size composition significantly different from the norm, it would be noticed by monitoring and enforcement officials, and that vessel would be watched more closely. Additionally, fisherman appear to be an effective monitoring and enforcement system upon themselves. Peer pressure to fish within the bounds of the law and of wise resource utilization are high, and fishermen ignoring these rule are looked upon with disdain, if not reported to the authorities. A similar monitoring and enforcement system is envisioned in the U.S. Importantly, however the U.S. system will not have 100% observer coverage on all off-loaded fish. Levels of observed fish will however be random, and the consequences of delivering a load with suspiciously high numbers of larger fish could be enough to deter fishermen from attempting it.

High-grading and Market Orders. In the Canadian IVQ fishery for both sablefish and halibut fishermen and processors have developed a system of pre-arranged sales of fish, called market orders. The fishermen negotiates with a processor to deliver a certain amount of fish at a certain time for a certain price. In Canada fewer vessels have larger quotas on average than is anticipated in the U.S. IFQ fisheries and market orders are generally less than the fisherman's quota. In the U.S., especially in the halibut fishery where 70% of the 5,484 initial recipients will receive IFQs less than 5,000 lbs., fishermen will be more likely to catch their entire quota in a single trip, and therefore any market order system will likely develop around how many pounds in a fisherman's quota rather than how many pounds he can deliver in a two days time. Regardless, it is assumed that such a system will include substantial penalties for late deliveries, as does the Canadian system. The Canadian fishermen have found that the risks of price penalties resulting from a late delivery incurred by throwing away fish, outweigh the hopes of getting larger fish which would presumably get a slightly higher price per pound.

Economic Profitability of High-grading. The economic profitability of high-grading depends first and foremost on differential pricing for larger fish. For that matter any fish which exhibits a trait which fetches it a higher price relative to fish of the same species which don't exhibit that trait, may be subject to high-grading. Examples of traits other than size which could bring about high-grading are; roe condition, sexual maturity, spawning condition, and color, among others. If there is a price difference then it may in fact be more profitable to high-grade. Whether it is or not depends primarily on the price difference itself. Other factors include; the marginal cost to catch another fish, the ratio of desirable fish to less desirable fish in the catch, and the extra time involved to catch additional fish (the opportunity cost of the skipper, crew, and vessel), and the likelihood and ramifications of getting caught if high-grading is illegal. Other factors may also influence the decision as well but are not considered here. Dr. Jim Norris of Marine Resource Consulting has submitted as a comment (unsolicited) to this proposed amendment an analysis regarding the economic feasibility of high-grading sablefish under an IFQ system. His study, attached to this appendix, indicated little incentive to high-grade given existing catch rates and price structures.

A similar analysis was completed by Council staff for halibut. Tables 1 a-e examine high-grading scenarios from a random sample of 74,514 pounds of halibut conducted by the IPHC during the 1991 commercial fishery in area 3A. The IPHC uses this sample to estimate the biomass in the North Pacific, and is considered to be representative of the halibut population as a whole. Table 1a shows the number and percent of fish in each size category. The no high-grading column shows the actual number of fish landed; 2,537 fish, 976 of which weighed 10-20 lbs, etc. If a fisherman chose to high-grade by discarding all 10-20 lb fish, then he would have to catch more larger fish to end up with the same total pounds. While catching more large fish he would catch even more 10-20s. This scenario is shown in the 2nd column from the right in Table 1a. To land the same number of pounds while discarding all 10-20s, he would have to catch 3,157 fish, an increase in effort of 24.4%. If the fisherman chose to discard all fish less than 40 lbs. (where the current price change occurs), he would have to catch a total of 6,000 fish, an increase of 136%. Table 1b shows the same scenarios, by the weight of the fish rather than in numbers. In order to land 74,514 lbs while discarding all 10-20s then fisherman would have had to discard 18,217 lbs of halibut.

Table 1a. Number of Halibut Needed to Land 74,514 lbs Under 3 High-Grading Scenarios

Size	Percent of Total	No High-Grading	Discard 10-20s	Discard 10-40s
10-20 lbs	38.47%	976	1,215	2,308
20-40 lbs	40.40%	1025	1,276	2,424
40-60 lbs	11.08%	281	350	665
60-80 lbs	6.07%	154	192	364
80-100 lbs	2.36%	60	75	142
100 + lbs	1.62%	41	51	97
Total Catch		2,537	3,157	6,000
Increase in Catch		0.0%	24.4%	136.5%
Number of Discarded Halibut		0	1,215	4,733

Table 1b. Pounds of Halibut Needed to Land 74,514 lbs Under 3 High-Grading Scenarios				
Size	**Percent of Total**	**No High-Grading**	**Discard 10-20s**	**Discard 10-40s**
10-20 lbs	19.65%	14,639	18,217	34,623
20-40 lbs	38.07%	28,370	35,307	67,101
40-60 lbs	14.77%	11,008	13,699	26,036
60-80 lbs	14.31%	10,663	13,271	25,221
80-100 lbs	7.11%	5,295	6,589	12,523
100 + lbs	6.09%	4,538	5,648	10,734
Total Catch		74,514	92,731	176,237
Increase in Catch		0.0%	24.4%	136.5%
Pounds of Discarded Halibut		0	18,217	101,724

Table 1c shows the same scenarios, injecting halibut prices from the June 1992 opening. For that opening there was a $0.35 price differential for halibut less than 40 lbs. If the high-grader chose to discard all 10-20s, his gross revenue would have increased less than $2700, a gain of 3.8% at a cost of 24.4% more effort. If the fisherman chose to discard all low valued fish (all fish less than 40 lbs) he could have increased his gross revenue by $15,000, but in so doing would have discarded $81,378 worth of halibut. In September 1991 the price difference between large and small was $0.70 as shown in Table 1.d. But again the potential gains in gross revenue from high-grading look pretty small compared to the amount of extra effort needed and the amount of dollars thrown overboard.

Prices in an IFQ system are assumed to differ somewhat from price under a derby system. A steady flow of fish would probably enable a year-round fresh market to develop. According to halibut processors 10-20 pound fish are hard to sell even in a fresh market, and therefore the price for these small fish might remain relatively low. Larger fish, from 20-40 pounds, are prime for the fresh market, and will likely command higher prices. Very large fish, greater than 40 pounds will continue to be used in the frozen market, and because very large fish have higher recovery rates (more useable flesh to body weight) they will still command high prices at the dock. Table 1e shows prices which reflect extremes of these assumptions. A very large price differential is shown between 10-20s and 20-40s, and no price differential between other categories. This scenario would be prime for high-grading, however only 14% more revenue could be made given the size structure of the biomass.

Other Potential Causes For High-grading. If a fisherman sets more gear than is necessary to fill his quota or market order than the potential for high-grading is heightened. This is more likely to occur in the early years of the IFQ system than later, as fishermen learn how to accurately judge how much gear to set for a given amount of fish; under the derby system the fisherman judges how much gear he can possibly set and retrieve in a given time period. The situation can be explained best by example. Say, a fisherman has a 5,000 pound quota. He goes fishing and sets ten skates each with 100 hooks. Upon retrieving his first skate he finds that he is averaging 10 lbs per hook. At this rate his 10 skates will possibly have caught 10,000 lbs. He decides to

discard all fish smaller than 20 pounds from his remaining skates; on the first skate small fish made up 25% of his catch. After five more skates are retrieved he finds he is only 250 lbs short of his quota. He knows he is allowed to bring back 5% (250 lbs) more fish than his quota (his overage allowance, so after bringing in 2/3 of his 7th skates he stops retaining any fish large or small. At this point he has illegally discarded over 1,000 lbs of small halibut. He retrieves the rest of his gear shaking hooks and cutting gangions to release the remaining fish at a diminimus mortality rate. Discarding the halibut on the remaining skates once his quota is met is mandatory. Discarding fish before his quota was filled, high-grading, was illegal. To the fisherman either type of discard represents lost earnings and higher costs. As the IFQ system matures, fishermen will probably try to set only enough gear to catch their quota.

Table 1c. Revenues From 74,514 lbs of Landed Halibut Under 3 Highgrading Scenarios with June '92 Prices.

Size	June '92 Prices	No High-Grading	Discard 10-20s	Discard 10-40s
10-20 lbs	$0.80	$11,710.86	$0.00	$0.00
20-40 lbs	$0.80	$22,696.39	$28,245.32	$0.00
40-60 lbs	$1.15	$12,659.31	$15,754.32	$29,941.40
60-80 lbs	$1.15	$12,262.98	$15,261.10	$29,004.01
80-100 lbs	$1.15	$6,088.98	$7,577.65	$14,401.47
100 + lbs	$1.15	$5,219.00	$6,494.97	$12,343.81
Total Revenue		$70,637.52	$73,333.36	$85,690.69
Increase Revenue		100.0%	3.8%	21.3%
Potential Revenue of Discards		$0.00	$14,573.99	$81,378.94

Table 1d. Revenues From 74,514 lbs of Landed Halibut Under 3 Highgrading Scenarios with September '91 Prices.

Size	Sept. '91 Prices	No High-Grading	Discard 10-20s	Discard 10-40s
10-20 lbs	$1.65	$24,153.64	$0.00	$0.00
20-40 lbs	$1.65	$46,811.31	$58,255.98	$0.00
40-60 lbs	$2.35	$25,869.02	$32,193.62	$61,184.59
60-80 lbs	$2.35	$25,059.13	$31,185.72	$59,269.06
80-100 lbs	$2.35	$12,442.71	$15,484.77	$29,429.10
100 + lbs	$2.35	$10,664.91	$13,272.33	$25,224.31
Total Revenue		$145,000.72	$150,392.41	$175,107.07
Increase in Revenue		0.0%	3.7%	20.8%
Potential Revenue of Discards		$0.00	$30,058.85	$167,844.05

Table 1e. Revenues From 74,514 lbs Landed Halibut Under Highgrading Scenarios with Possible Prices Under IFQs.				
Size	**Possible Prices**	**No High-Grading**	**Discard 10-20s**	**Discard 10-40s**
10-20 lbs	$0.80	$11,710.86	$0.00	$0.00
20-40 lbs	$2.35	$66,670.65	$82,970.64	$0.00
40-60 lbs	$2.35	$25,869.02	$32,193.62	$61,184.59
60-80 lbs	$2.35	$25,059.13	$31,185.72	$59,269.06
80-100 lbs	$2.35	$12,442.71	$15,484.77	$29,429.10
100 + lbs	$2.35	$10,664.91	$13,272.33	$25,224.31
Total Revenue		$152,417.28	$175,107.07	$175,107.07
Increase in Revenue		0.0%	14.9%	14.9%
Potential Revenue of Discards		$0.00	$14,573.99	$185,385.46

Comment #4: The proposed IFQ program represents a major rule under the authority of Executive Order 12291, therefore a Regulatory Impact Analysis is required. The comments address two primary reasons for this assertion: (1) the total value of all of the QS/IFQ created by this program will greatly exceed $100 million, and (2) the resulting losses in employment by crew members will have an additional effect of greater than $100 million.

Response: In response to point number 1 of the comment, it is true that if the value of the IFQs approach the $8 per pound that is projected in the comment, then the overall value of the total IFQs in existence would be in the neighborhood of $800 million (based on current catch quotas of approximately 100 million pounds of sablefish and halibut combined). It is certainly probable that the overall value of all IFQs will exceed $100 million. However, it is necessary to note that the per pound value of these QS/IFQ, when and if sold, represent the entire future value of that QS/IFQ amortized over time (i.e., incorporates all future returns expected from that IFQ) and is an inaccurate measure of the annual value. In terms of leased QS/IFQ, which does represent an annual value for each year that it is leased, the price per pound is likely to be much lower, theoretically less than the market value per pound or it would be impossible to realize a profit from leasing QS/IFQ. Furthermore, the economic value of a given pound of IFQ is correctly valued in terms of its marginal value to the buyer. According to cost models contained in the draft EIS/SEIS, this marginal value of a pound of halibut is about $.39 (39 cents), the expected profit to be realized from this pound of fish. Therefore, the total economic exchange that is possible in a given year is $39 million (assuming a similar margin for sablefish), and this is only possible assuming every single pound of IFQ were traded in a given year. Executive Order 12291 requires a Regulatory Impact Analysis (RIA) to be performed in the event a proposed action is deemed a 'major rule', based on whether it would result in an annual impact on the U.S. economy of $100 million or more. It is estimated that the proposed IFQ program would not constitute a 'major rule' in this case. However, an integral part of such an RIA would be a cost/benefit analysis of the proposed action. Though titled a Regulatory Impact Review (RIR) in the analysis documents, such a cost/benefit analysis has been performed on the IFQ program and indeed such an analysis is interwoven throughout all of the analysis documents which have lead to the Council's decision to implement an IFQ program for these fisheries.

Regarding point #2 in this comment, which references lost income resulting from the reduction in numbers of crew members due to the IFQ system. Currently, crew members are paid based on a percent of revenue. Under an IFQ system, revenue is expected to increase, and unless there are changes in the percent paid to crew, then total wages to crew members could increase/rather than decrease as per the comment. It is probable that the number of crew members involved in the IFQ fisheries will decrease, however, it is also probable that each remaining crew member will work more days and receive greater incomes. This shift from relatively more workers over a short period to relatively fewer workers over a longer period represents a redistribution of income rather than a loss of income.

Comment #5: The analysis did not adequately address the possible impacts of suspending the longline halibut PSC cap for the first two years of the IFQ program.
Response: The PSC cap is a Council imposed cap on the groundfish fleet to protect the directed halibut fisheries. For the Gulf of Alaska, this amount is determined every year and could range from zero to some amount beyond its current 2,750 mt level (trawl gear cap of 2,000 mt and longline cap of 750 mt). A longline cap for the Bering Sea/Aleutian Islands is something that has been put in place for the first time in 1992. The Council is recommending the lifting of the longline cap, with the endorsement of the IPHC, for the first two years of the program in order to prevent a race for the PSC caps. This was done upon advice of the IFQ implementation workgroup consisting of various agency personnel and industry representatives. Staff provided the Council with estimates of potential bycatch under the IFQ program, given current gear share percentages, bycatch rates for each fishery, and taking into account some bycatch savings resulting from the mechanisms of the IFQ program (many halibut that were previously discarded in the sablefish and Pacific cod fisheries will now be retained). The Council was informed that the worst case scenario, for the Gulf of Alaska, under the IFQ program was estimated to be a bycatch mortality in the longline fisheries of about 1,100 mt, an amount approaching the total realized in both 1990 and 1991. The longline cap in both years was 750 mt, but was exceeded, primarily due to high bycatch rates in the sablefish fisheries. Moreover, it was noted that such a worst case scenario was highly unlikely and that a conservative estimate was that the halibut bycatch mortality would actually be reduced from its current levels by as much as one half. Halibut bycatch in all fisheries will still be closely monitored to assure that it is not approaching levels deemed to be unacceptable.

Comment #6: The analyses were deficient in their assessment of the potential social impacts of the proposed IFQ program. Several comments were submitted iterating this concern and call for a fully developed Social Impact Analysis (SIA) to be completed. Comments noted that the analysis did not adequately assess the potential social devastation that may result from resource drain from rural coastal communities.
Response: The original SEIS, dated November 1989, which analyzed various management alternatives for the fixed gear sablefish fisheries, including IFQs, contains an entire chapter devoted to 'Description of the Economic and Social Environment of the Fishery' (pp. 27-48). This chapter describes the commercial fishing activities as they relate to the harvesting sector, the processing sector, and the marketing sector. Additionally, social and cultural characteristics of the fishery are described in terms of the harvesting sector, the processing sector, and maritime communities. Included in this chapter are detailed descriptions of fleet structure, participants in the fishery, population and employment in the coastal communities, and nature of the processing sector. Economics of the fishery are addressed in this chapter as well as throughout the document. Referenced in the document are detailed descriptions of western Alaska communities with regard to their history, demographics, and culture (MMS and USFWS documents).

Chapter 5 of this same document goes on to describe the likely effects of the alternative management strategies (including open access and IFQs) on these segments of the industry. Chapter 6 assesses the ability of each alternative to solve the 10 major problems in the fishery as identified by the Council and industry; this includes economic stability in the fishery and communities and rural coastal development of a small boat fishery. In this chapter the document specifically addresses 10 additional social concerns associated with limited entry which were identified by industry during the scoping process (pp. 153-160).

A Supplement to this SEIS, (dated May 14, 1991), did not contain the detailed social descriptions of the original document but goes farther in addressing the likely employment impacts resulting from an IFQ system. This specifically compares various IFQ alternatives to the current open access system.

The EIS developed for the proposed halibut IFQ program, dated July 19, 1991, contains a detailed description of the economic and social environment of the halibut fisheries including the harvesting sector, processing sector, marketing sector, maritime communities, recreational, and subsistence fisheries (Chapter 3). Chapter 4 of the document contains a comparison of IFQs versus open access with regard to 28 parameters of the halibut fishery, including economic stability in affected coastal communities, employment in coastal communities, and anticipated effects on individual fishermen's operations. Chapter 4 also contains analysis of the specific provisions of the IFQ alternatives which includes distributions of IFQs by residency and vessel category, an aspect of the IFQ program identified by the Council and industry as critical in regards to the potential socioeconomic effects on Alaskan communities. Chapter 5 of the document (55 pages long) was prepared by NMFS lead social anthropologist and contains a very detailed description of the social environment surrounding the halibut fisheries. This was prepared in response to industry requests and contains very detailed descriptions of present participation in the halibut fisheries in all coastal areas under Council jurisdiction, historical fishing practices and dependence on the fishery by coastal communities, as well as details of Native and subsistence fisheries. Specific demographic profiles of affected coastal communities are provided which address the relative economic importance of the halibut fisheries to each community and the size, compositions, and stability of the resident work force as it relates to the fisheries. The chapter concludes with an assessment that "...under an IFQ program...social and cultural benefits can be maximized."

After the Council made the decision to approve the IFQ management alternative for both the sablefish and halibut fisheries,on December 8, 1991, they requested that the amendment not be forwarded for Secretarial review until yet another analysis was completed which made a more in-depth attempt to evaluate the combined sablefish/halibut IFQ program, with particular regards to the potential impacts to coastal communities in Alaska. This Supplemental analysis, dated March 27, 1992, contains an analysis of the Council's preferred alternative which encompasses both the sablefish and halibut fisheries. As with past analyses, this document describes the distribution of QS/IFQs by vessel categories and by residency for each management area. It then goes on to describe this distribution for each coastal community affected by the proposed IFQ plan. It also describes the distribution of historical landings of these species relative to the distribution resulting from the IFQ plan and the relative importance of these landings to each community taking into account other fisheries value to a particular community. This information is contained in detail in Chapter 3 of this document titled 'Potential Coastal Community Impacts'. This chapter then goes on to assess the potential movement of QS/IFQ away from coastal communities, a fear which is often stated as a primary negative impact of IFQs. Research into the migration of salmon limited entry permits was used as part of the basis in this assessment.

The assessment concludes that, although some net QS transfer is likely to occur, the IFQ program is expected to provide net benefits to rural coastal residents and communities, as well as to Alaskans as a whole and to the nation as a whole.

In summary, the respondent is correct in that there has never been a document prepared with the specific title of 'Social Impact Analysis' (SIA); however, the Council has been provided with and considered a plethora of information on the potential social impacts of an IFQ program as well as the potential impacts of continued open access. This information has come from analysis documents and from thousands of written and oral comments from industry and public. The Council has determined that the proposed IFQ program will provide the greatest net benefit to the nation while at the same time protecting the social fabric of the fisheries. The program has been designed with that goal at the forefront of the planning process. An independent review of the program, performed by the State of Alaska's Commercial Fisheries Entry Commission (CFEC) at the request of the governor of Alaska, concluded that most of the fears of social destruction under the IFQ program are unfounded. In fact, the study notes, it is likely that the program will work to the benefit of rural coastal Alaskan communities which include all of the major fishing communities in Alaska.

Comment #7: The estimated costs of implementation, administration, and enforcement were not properly estimated. The main point of the comments on this issue were that the costs of administering and enforcing the program will be much higher than estimated by the agencies. Additionally, it was submitted that the costs of implementing the program should have included all opportunity costs associated with potential displacement of labor.
Response: The costs of implementing and enforcing the IFQ program were estimated by the agencies involved in implementing, administering, and enforcing the program. It is assumed that the lead personnel within these agencies (including NMFS and the IPHC) are the most knowledgeable source available to predict the costs of the program to their own agencies. The Implementation Plan (Chapter 5 of the March 27, 1992 Supplemental Analysis) contains considerable detail on the specific costs involved including both equipment and manpower. These cost estimates will support an enforcement program that has been deemed as acceptable by the NMFS, the IPHC, and the IFQ Implementation Workgroup. This enforcement program has been judged as adequate to provide assurance that the program will function without detriment to the resource, a top concern of all management and industry groups. Claims by the respondent that these costs are underestimated are unsubstantiated. The Implementation Workgroup, which reviewed these cost estimates prior to the Council's decision to approve IFQs, contained industry representation (including the respondent) and the group concluded that these were reasonable cost estimates. The estimates are proportionally in line with those costs observed in the Canadian IVQ program.

Opportunity costs, whether associated with displaced labor or some other factor, are not considered part of the costs of implementation, administration, and enforcement. They are taken into account, however, in the Regulatory Impact Review which assesses the potential costs and benefits to the nation of any proposed management alternative. The analyses estimate that the net benefit to the nation of the IFQ program will range from $32 to $67 million annually.

Comment #8: The analysis does not contain an adequate or fully developed Cost/Benefit analysis of the proposed action.
Response: The Supplemental Analysis dated March 27, 1992 states that the anticipated benefits to the nation resulting from implementation of the IFQ program are estimated to range from $32 to $67 million annually (page 6-2 of the Supplemental Analysis). This takes into account

cost savings to operations as well as increased revenues from the fisheries. The quantifiable costs of the program are estimated at about $4 million annually resulting in a considerable net benefit to the nation.

The particular analyses which made these assessments were included in earlier iterations of the SEIS for sablefish IFQs of May 13, 1991 and the EIS for Halibut IFQs of July 19, 1991, and were included in the Supplemental Analysis by way of reference.

Comment #9: The provision in the IFQ plan for mandatory retention of Pacific cod and rockfish by IFQ fisheries was not adequately addressed. The gist of the comments on this issue are that there are potential conservation and overfishing concerns associated with such a provision. Comments assumed that such retention would be required even when the TACs were reached for these species.
Response: The IFQ plan does indeed contain a provision calling for mandatory retention of designated bycatch species in the IFQ fisheries. Initial bycatch species have been identified as Pacific cod and rockfish, though other species may be added to the list later. This was an attempt by the Council to take advantage of the slower paced fisheries fostered by an IFQ program by reducing waste of species that are normally discarded in the current derby style fisheries because of their lower value. Such retention will be required only to the extent that the TACs for this species are still available for harvest and landing. The implementing regulations will not allow for these species to be retained if they have achieved PSC status. This is no different than current in-season fisheries management. Acceptable Biological Catch levels (ABCs) will be monitored on an in-season basis.

Comment #10: The provision for clearance requirements for vessels transporting IFQ caught fish out of the state of Alaska is illegal and violates the U.S. Constitution, Article I, Section 9, Paragraph 6.
Response: The port preference clause states that "No preference shall be given by any regulation of commerce or revenue to the ports of one state over those of another; nor shall vessels bound to, or from, one state, be obliged to enter, clear, or pay duties in another." The port preference clause affects two types of government actions: regulation of commerce and regulation of revenue. No action of the federal government has ever been set aside under this clause, because the clause requires explicit discrimination in favor of a particular state. If the requirement to clear vessels in Alaska before they proceed to other U.S. ports has a legitimate rationale and benefits an industry sector rather than the state of Alaska, it should not offend the Port Preference Clause.

Comment #11: There are no provisions in the IFQ plan which would prevent the fishermen themselves (crew members) from bearing the long-term social and economic costs of this program.
Response: Under the IFQ program, it is likely that there will be a decrease in the numbers of crew members participating in these fisheries. Those that remain will likely have a longer season, more steady employment as a crew member, and, overall, a more stable job environment. There are very few if any crew members who rely solely on the halibut (or sablefish) fisheries for their livelihood. Those who exit these fisheries will probably have to increase their participation in other fisheries or find other employment to make up for lost employment in the sablefish/halibut fisheries. There may well be some costs accruing to these persons to the extent that they are forced to find other employment and to the extent that they were dependent on the IFQ fisheries for their income. There are costs associated with this program. Those costs are expected, overall, to be greatly outweighed by the benefits.

Comment #12: The IFQ plan discriminates against crew members by not allocating QS to these fishery participants in the initial allocation.
Response: The Council made the decision that the appropriate recipients of the limited entry fishing privileges created by this program were the vessel owners or leaseholders of vessels who undertook the financial investment and risk in these fisheries. Skippers and crewmen were paid for their work, and will be given preferential access to the acquisition of QS/IFQs in the future.

Comment #13: Cost models used in the analyses for halibut contained inaccurate estimates of costs of operations of the small boat fleet.
Response: The cost model used in the EIS for Halibut IFQs was based on information gathered directly from gear suppliers, and on research prepared by Sheila Fagnan of the Canadian Department of Fisheries and Oceans in 1990, and on the NPFMC model used to assess the effects of IFQs in Sablefish. These studies represent the best information available. Until such time as U.S. fishermen provide timely and accurate economic information for use in the economic assessment of management proposals, then secondary information such as the Fagnan analysis will necessarily be the best available.

Comment #14: The SEIS does not contain the details of the IFQ program; rather, the details would be spelled out in the implementing regulations. Therefore, the specific impacts are impossible to judge.
Response: All major provisions of the IFQ plan were designed by the Council and included in the Supplemental Analysis dated March 27, 1992. This includes the Implementation Plan for the program which outlines the application, appeals, administration, and enforcement provisions. Some of the details of the enforcement aspects of the program were not spelled out in the IFQ plan in detail. These minute details are included in the Proposed Rule.

Comment #15: The process and substance of the notice to comment on the Draft SEIS was flawed. The respondent contends that NEPA review period for the Draft SEIS was not properly noticed to the public, both from a procedural and timing aspect. Additionally, the respondent contends that the Council failed to inform the public that the halibut IFQ program would require amendment of the regulations implementing the Halibut Act.
Response: The original SEIS for sablefish management alternatives, dated from November of 1989 was published for EPA review. Supplements to this analysis dated April of 1990 and May of 1991 were also given public review prior to Council action on the issue which did not occur until December 8, 1991. The Draft EIS for the proposed IFQ program for halibut, dated July 19, 1991 also underwent NEPA review prior to Council action. This document clearly described the process for potential implementation by amendment of the regulations implementing the Halibut Act (pp. 8-1 through 8-7). Regarding the most recent Supplemental Analysis, dated March 27, 1992 which examined the Council's preferred alternative for a combined sablefish/halibut IFQ program, this document was released to public and industry review prior to the Council's April 1992 meeting at the request of the Council. The public had approximately three weeks to review the document and provide input to the Council prior to the Council's revisitation of the issue in April. A public hearing was held during the April 1992 Council meeting to solicit additional public comment on the proposed preferred alternative. Following the failure of a motion to rescind, the Supplemental Analysis was submitted and filed for an additional 45 day public comment period under NEPA authority which ended on June 29, 1992. At that time the notice stated that the entire SEIS/EIS package was available for public review as well. As called for under procedural requirements of the EPA, these comments will be addressed and assimilated for the final SEIS/EIS package to be submitted for Secretarial review, during which an additional public comment period will be held.

Comment #16: The decision made by the Council on December 8, 1992 was made prior to the Council having developed sufficient analyses upon which to base the decision.
Response: The previous decision documents noted under Comment #15 above analyzed both the sablefish and halibut IFQ programs. The Council based their decision upon information contained in these documents as well as input from the fishing industry with full knowledge that the program would encompass both fisheries. After making the decision, the Council requested that an additional analysis be conducted to further investigate the potential socioeconomic, as well as any other, effects of their preferred alternative, and that the package not be submitted for Secretarial review until they and the public had another opportunity to review the analysis. Following review of the additional analysis and an additional public hearing, the Council held firm to its original decision of December 8, 1992. A motion to rescind the earlier action was defeated.

Comment #17: The IFQ plan does not accurately assess the potential impacts to Marine Mammals, particularly to killer whales. The gist of this comment is that under an IFQ program pods of killer whales will be much more apt to and able to follow individual fishing vessels in the sablefish fisheries because the fishery will be much more spread out over time and space. Killer whales will be able to spend much more time with the individual vessels eating their catch and reducing profitability to the point that fishermen will be shooting and killing many more of these whales than they currently do.
Response: The incidence of killer whale interaction with the longline fisheries has not been quantified, though there have been such observations and anecdotal reports. No concerted research efforts have confirmed the extent of this interaction. The shooting of killer whales is primarily evidenced by anecdotal information and, of course, remains a violation of the Marine Mammal Protection Act.

Comment #18: The IFQ plan will promote the use of non-selective gear types, which may increase waste of non-target species, and is contrary to the UNCED agreement signed by the President on June 14, 1992.
Response: The IFQ plan does not amend regulations which specify legal gear types in these fisheries. Allowable gear types for halibut are defined by the IPHC, an international governing body. For sablefish, gear type allocations are defined in the fishery management plans. These gear apportionments are fixed and exist independently of the proposed IFQ program. IFQs are merely the management system under which these gear types will be used, and it is expected that this management system will decrease the incidences of bycatch of non-target species. The respondent seems to be supporting the use of pot gear for harvesting these species. This is allowed for sablefish in the Bering Sea/Aleutian Islands management area. It is considered an impractical method for harvesting halibut.

Comment #19: The analysis does not contain quantitative analysis of the impacts on those persons not granted initial allocations of QS due to not meeting the eligibility requirements established by the Council.
Response: The eligibility requirements established by the Council, that a person must have made legal landings of sablefish or halibut off Alaska in either 1988, 1989, or 1990, are intended to allocate initial QS to active participants in the fishery. If a person does not qualify, it is because that person is not an active participant in these fisheries. It could be argued therefore, that there are no impacts on these persons other than the costs of entering these fisheries by purchasing QS. This impact would be the same for every person in the United States who did not receive an initial allocation of QS. It is not incumbent upon the Council to attempt a quantitative assessment of potential impacts upon these persons. NEPA requirements do require

that the proposed management alternative be assessed in terms of its impacts on the quality of the human environment.

Comment #20: The draft SEIS/EIS package did not contain a tally of the public comments received during the decision process in terms of whether they were for or against the program.
Response: In the course of discussions and deliberations of this issue over the past three years the Council has received hundreds, indeed thousands, of comments from public and industry both orally and in written form. Copies of all written comments are provided to Council members and they are fully aware of the distribution, in terms of 'for' or 'against', of these as well as the oral comments. Both written and oral comments are a matter of public record. In making its decisions about this management proposal, as well as any other fisheries management issue, the Council considers this public comment as well as in-depth analyses provided by staff and any other relevant information available to them. The majority of the oral comments received were opposed to the IFQ plan while the written comments were more evenly divided. However, the process established by the Magnuson Act does not call for a popular vote to establish fisheries policy.

Comment #21: The requirement to be a 'bona fide' crew member, as defined by the Council, in order to purchase QS after the initial allocation creates a privileged class and is illegal.
Response: In making this restriction on the transferability of QS, the intent of the Council was to keep the qs in the hands of fishermen themselves, not in the hand of potential absentee owners. Other restrictions on the program were designed with this intent in mind as well. The Council felt that, although crew members were not the legitimate recipients of initially allocated QS, they did have an interest in and dependence on the fisheries involved.

Comment #22: The analysis is deficient in assessing the additional burden on small operations of the reporting requirements for dockside sales of IFQ fish.
Response: The IFQ program will contain reporting requirements for all person harvesting/selling IFQ fish, whether they be large operations selling to a processor or small operators selling dockside. This is no different than the current situation. Dockside sellers are currently required (under state law) to maintain fish ticket records of their sales. Under the IFQ program they will now be required to be registered as licensed buyers. The paperwork requirements will be similar to those now in place. The penalties for non-compliance with these requirements may indeed be more severe under the IFQ program. Public and industry will have the additional opportunity to comment on these paperwork requirements when the Paperwork Reduction Act Package is submitted to the Secretary in conjunction with the proposed regulations to implement this program.

Comment #23: The magnitude of illegal landings from past sablefish and halibut openings, which may be included in the landings histories used to calculate QS, are not fully quantified in the analysis. Some operators may be receiving credit for these illegal landings. The respondent also reference the need to address the social implications of rewarding this alleged miscreant behavior.
Response: The incidence of illegal landings under the open access management system is impossible to determine for past years. Unless the perpetrator was caught in the act, he got away with it and likely landed the fish and likely recorded the landings on the fish ticket. It is likely that some illegal landings will be included in the calculations of QS. However, the cost of these illegal landings to the other participants in the fishery accrued during the year in which they occurred. The respondent asserts that perhaps as much as 30% of halibut landings in the past eight years have been illegal, occurring either before or after the designated openings. If

this is indeed the case, then this certainly points up the need to abandon the current form of 'traditional' management in this fishery.

Comment #24: The IFQ program as designed is unfair in that it does not assign initial allocation to crew members.
Response: The Council discussed both the fairness issue involved in initial allocation of QS privileges as well as the difficulties associated with trying to assign appropriate amounts of QS to what would amount to many thousands of crew members. Records are not kept on crew member participation by fishery. Notwithstanding the difficulties associated with inclusion of crew members in the allocation process, the Council determined that such inclusion would greatly dilute the QS allocation to vessel owners whom they deemed to be the rightful recipients of the QS privileges. The vessel owners undertook the investment and financial risk in these fisheries and the crew members were paid a fair share for their services. Once the decision was made that vessel owners or leaseholders were the rightful recipients of initial QS, then the program makes no more discrimination against crew members than to any other member of society. (Also see Comment #12)

Comment #25: The IFQ program will result in an increase in government employment at the expense of a decrease in private employment by crew members. Such a shift has not been taken into account in the analysis.
Response: The analyses provide estimates of the potential decrease in crew member employment, in these particular fisheries, and to the numbers of additional agency personnel necessary to implement, administer, and enforce the program. The latter is specifically addressed in Chapter 5 of the Supplemental Analysis dated March 27, 1992. Again, the program is expected to result in a net benefit to the nation.

Comment #26: The SEIS/EIS package lacks an analysis of the impacts of the Community Development Quota (CDQ) program in terms of the social impacts of a continuing 'giveaway' philosophy.
Response: The possible impacts on the social conscience of America of the CDQ portion of this program have indeed not been quantified nor has there been any attempt to do so. Such an assessment is likely impossible to perform and is beyond the scope of the analyses conducted on the proposed IFQ program.

Comment #27: Data in Tables 4.2, 4.3, 4.8, 4.9, 4.10, 4.11, 4.12, and 4.13 presented to the Council in December 1991, which extended the Tables from the July 19, 1991 draft EIS for halibut have not been corrected to reflect errors in the numbers. Only the tables reflecting the Council's preferred alternative were corrected for data errors. The public has the right to know the exact numbers for the other rejected alternatives which include a broader range of qualification years.
Response: When the Supplemental Analysis, dated March 27, 1992, was compiled (and in December of 1991), the preparers included QS/IFQ distribution tables only for the preferred alternative that was approved by the Council on December 8, 1991. Any errors from corresponding tables in previous analyses were corrected in this Supplemental Analysis. Previous analysis documents did contain distribution tables for a broader range of alternative qualification years; the information in these tables aided the Council in their decision as to which qualification alternative to use. Including these tables in the latest Supplemental Analysis would have been a superfluous exercise; the decision had already been made. Though there were some errors in the data depicted in the original tables, from the July 19, 1991 halibut EIS, the directional tendencies of each alternative, in terms of the distributions of QS, remain the same. Therefore,

the basis for the Council's decision remains unchanged, despite any particular errors in the data in the previous document. The final analysis (the March 27, 1992 version) contained the correct information for the preferred alternative. This was the analysis the Council requested be performed prior to submittal of the package for Secretarial review.

Comment #28: The SEIS/EIS did not analyze the effects of the IFQ program on inshore, State-managed sablefish fisheries either in regards to resource access or to increased participation in these fisheries.
Response: The proposed IFQ program applies only to federally managed fisheries for sablefish and halibut. Inshore, state-managed sablefish fisheries are just that - managed by the State of Alaska and are under their own limited entry system. They are independent of the IFQ program proposed by the Council. The March 27, 1992 Supplemental Analysis addresses the issue of the IFQ program's effects on other fisheries (pp. 4-1 through 4-12). The analysis notes that the IFQ program may prompt increased participation in other fisheries due to speculation on IFQs being implemented in other fisheries and because those who chose not to fish their QS in the QS fisheries may look to other fisheries. Potential new entrants into the IFQ fisheries may look to other fisheries instead. The analysis concludes that, due to the nature of the fisheries under the IFQ program, this increase in participation in other fisheries is not likely to be significant.

The Commentor in this case refers specifically to State-managed sablefish fisheries. As noted above, these fisheries are already under limited access by the State. To the extent that the commentor is concerned about inshore (inside 3 miles) landings of sablefish outside of these state managed fisheries (and assumed by the commentor to be outside of federal management jurisdiction) this should not be a problem. The State of Alaska has indicated that they will initiate the necessary regulations to ensure that sablefish cannot be harvested without IFQs, even inside the 3-mile boundary.

Comment #29: The Analyses offer no contingency plan for these fisheries in the event of failure of the IFQ program. With so much capital being created, possibly as much as $1 billion, there is no way that the IFQ program could be cancelled after QS has been transferred and wealth invested by QS buyers. The plan should address some type of contingency plan for these fisheries.
Response: Despite the creation of wealth which may occur under the IFQ program, the Council retains the authority to alter or cancel the program at any time and replace it with some other form of management program. This program does not explicitly or implicitly preclude any other management program in the future. This is the case with all fisheries under the Council's jurisdiction. Management of all fisheries is characterized by an ongoing evolutionary process as contingencies arise. It is expected that the IFQ program will be altered and streamlined in the future to conform to the necessities of the fisheries.

Comment # 30: The analysis does not address the ability of small vessel operators to be able to buy QS. The assertion in this comment is that only large vessels owners will be able to purchase QS.
Response: The IFQs created by this program are segregated by vessel class; this is specifically designed to prevent large vessel owners from purchasing QS from smaller vessel categories, or vice-versa. Potential buyers of small vessel QS will be competing against one another for QS in a given category and the price of these QS will be determined by market demands for these shares.

Other: Some materials received consisted of discussions on economic theory and examined the issues of open access vs IFQ management, in a very broad and theoretical context, but failed to offer specific comment on the analyses. These comments were not directly addressed in these responses. The analyses performed on the proposed IFQ program have examined the economic theory behind the IFQ program in considerable detail. Based on these analyses the Council, as well as its scientific advisory group, has decided that the program makes sense from an economic perspective. Also, many letters were submitted which simply stated support or opposition to the IFQ program. These are included in the package of comments but were not addressed by the analysts.

APPENDIX F

Comments received during NEPA review.

COPY

November, 1991

Dear Secretary Franklin

I am a member of the Alaska fishing industry and a participant in the longline fisheries. I am writing to express my support for sablefish and halibut Individual Fishing Quotas (IFQ). IFQs are a solution to the waste, bycatch, and safety problems now prevalent in the longline fisheries. Open access is destroying the resource; IFQs will encourage stewardship and wise resource use. The North Pacific Fishery Management Council and concerned members of the fishing industry have spent years carefully reviewing management alternatives and the associated implications. After these years of review, IFQs have been identified as the best management alternative, and a plan that takes into account both ecological and socioeconomic impacts has been developed. It is a system we can live with, one that will protect the resource and restore sanity to the longline fisheries. The time for change is now; IFQs are the change we need.

Thank you for your time and attention. Sincerely, Ken Krause

F/V Legacy

November, 1991

Dear Dr. Fox

I am a member of the Alaska fishing industry and a participant in the longline fisheries. I am writing to express my support for sablefish and halibut Individual Fishing Quotas (IFQ). IFQs are a solution to the waste, bycatch, and safety problems now prevalent in the longline fisheries. Open access is destroying the resource; IFQs will encourage stewardship and wise resource use. The North Pacific Fishery Management Council and concerned members of the fishing industry have spent years carefully reviewing management alternatives and the associated implications. After these years of review, IFQs have been identified as the best management alternative, and a plan that takes into account both ecological and socioeconomic impacts has been developed. It is a system we can live with, one that will protect the resource and restore sanity to the longline fisheries. The time for change is now; IFQs are the change we need.

Thank you for your time and attention. Sincerely, Ken Krause

F/V LEGACY

COPY

BIO ECONOMIC RESEARCH AND ANALYSIS

NORMAN STADEM
ECONOMIST

1826 E. 26th Ave.
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March 11, 1992

Mr. Richard Lauber, Chairman
North Pacific Fisheries Management Council
P.O. Box 103136
Anchorage, AK 99510

Dear Chairman Lauber:

Attached are two papers critiquing the proposed IFQ management program for halibut and sablefish.

The ostensible benefits to be gained from individual fishing quota (IFQ) management of Alaska's ocean fisheries are dubious at best. These forecasted benefits are based on theoretical bio-economic models. These models have had very little empirical testing. Furthermore, the limited empirical data is incomplete and the results are inconclusive.

One of the most important failings of the proposed IFQ program is that it does not privatize the fishery. It merely imposes an artificial, non-market rationing mechanism on the fishery. IFQs meter access to the resource but does not impose incentives for individuals to manage the resource in a responsible way.

Proponents argue that since the value of a quota share (QS) depends on the profitablity of the fishery, fishers will have a vested interest and an incentive to manage the fishery in a responsible way. The problem, however, is that while responsible management will benefit the overall fishery, the individual who makes the effort will not be able to capture the full value of her/his investment. This is because the fishery is still an open access resource. The nemesis of open access, the "rule of capture," still determines behavior. In this case, the rush will not be merely for fish, but for the best fish. High grading will maximize the value of the quota and consequently the market value of ones QS. Thus, the incentive under IFQ will be to maximize personal gain with little concern

for the resource.

Non-market rationing schemes are generally fraught with perverse incentives. The most important of which is the incentive to cheat. "Quota busting" and "high grading" are two of the most common forms of cheating. Smuggling and black markets are generally associated with non-market rationing. Monitoring and enforcement costs are high.

Another failure of the various concepts proposed to privatize marine fisheries, is that techniques used to privatize resources on land -- rights to location -- do not translate well on to the ocean. One reason is that enforcement costs are prohibitive. An exception, of course, are oil and gas platforms. But with oil and gas the rights are associated with location -- a reservoir.

Under the IFQ program, fishers are still left to range anywhere on the ocean and interfer with one another. Congestion on good fishing grounds will still occur. Clearly, there will be closures in the fisheries during the year, for whatever reason. The "rule of capture" will still result in a "rush for fish" as boats race for the good fishing grounds -- especially on opening day.

Comparing individual fishing quota management of ocean fisheries to closure of the open range lands is essentially comparing apples to oranges. Both fishing and ranching involve two distinct operations -- raising the harvestable stocks and production of a marketable product.

In the first instance, there is an essential and crucial difference between ocean fishing and ranching. The range land used to raise cattle has a positive opportunity cost. Positive opportunity cost implies that there are alternative economic uses for the land. The ocean used to raise fish has a zero opportunity cost. Zero opportunity cost implies that there are no alternative economic uses for ocean food stocks. (One does not see many entrepreneurs working in 200 fathoms of water, 100 miles off shore.) Because there is positive opportunity cost to range land, people will

use "too much" of it unless it is rationed. The market price is the best rationer of scarce resources. But, the right to use range land is not given to an individual in perpetuity. Zero opportunity cost, on the other hand, implies that the price to use the resource should be zero.

The fisher is responsible for producing fish protein and the rancher for producing beef protein for society. Both the fisher and the rancher invests in machinery to do this. If a rancher makes a bad business decision s/he will suffer the consequences. In our society, we say this is part of competitive free enterprise. Competitive free enterprise is one of the forces that drove America to the pinnacle of industrial might. Fishers also make bad business decisions. But now the North Pacific Fishery Management Council (NPFMC) blames its open access management program for these bad decisions. NPFMC managers are convinced that they can ameliorate the conditions that lead to fishers making bad business decisions by imposing a new management program. But if the management program is the causa sine qoa non for fishers to make good business decisions, why do ranchers, airlines, and other entrepreneurs also make bad business decisions?

Open access is a benefit to most rural Alaskan fishers. People in rural communities do not have the same access to capital markets as those who live in urban centers where market oriented opportunities are more pervasive. Therefore, the fact that many Alaskans are close to the fish stocks and can access these stocks with minimum capital is an important advantage. The IFQ program will increase capital costs, perhaps prohibitively for many young folks aspiring to the fisheries. Purchase of quota shares increase capital costs without increasing the productivity of capital.

There is no reason to impose the IFQ management program. These onerous changes to access rights to the resources are not necessary to accomplish management objectives. The objectives of reducing overcapitalization, eliminating the race for fish, reducing congestion, creating incentives to improve quality, increasing profitability, and encouraging safer operations are not dependent on the IFQ program.

For example, fresh halibut, sablefish or crab could be harvested year round under the present open access system using a very simple expedient (magnetized control cards) readily available to managers. Using the same management tool, the safety problem could be resolved. Conservation of the resource is accomplished by managing the resources on a sustainable yield basis -- harvest is limited by the allowable biological catch (ABC). Requiring the retention of by catch and prohibited species would create economic incentives for fishers to develop cleaner fishing techniques.

The IFQ management program has no place in Alaska's ocean fisheries. What is needed is a more imaginative and effective use of existing management tools and options. It is time for the North Pacific Management Council to move away from tinkering with economics of the harvesting sector and focus on public sector management. Free enterprise is alive and well.

Sincerely yours,

Norm Stadem
Economist

Enclosure

BIO
ECONOMIC
RESEARCH AND ANALYSIS

NORMAN STADEM
ECONOMIST

1826 E. 26th Ave.
Anchorage, Alaska 99508
(907) 272-0908

February 7, 1992

Re.: Sablefish and Halibut IFQ Management Program.

Dear Madam or Sir:

The IFQ management plan for sablefish and halibut approved by the North Pacific Fishery Management Council in December leaves many unanswered questions. Obviously, from testimony given at public hearings, the search for answers to these questions weighs heavily on the minds of many fishers and community leaders.

There are basically two categories of questions.

First, will the IFQ management program actually deliver the net social benefits that the theoretical model claims? Or will the problems resolved by IFQ only be replaced in different form resulting in zero or negative net social benefit?

Second, how will the IFQ program impact the lives of present and future participants, including the economic health of coastal communities?

The two papers included here focus on issues relevant to these questions.

The NPFMC takes an advocacy position in its Draft SEIS/RIR/IRFA Report. My first paper offers counter point to several of the assumptions made by the Council. This is not an attempt to criticize or discredit the Council's analyses, but to provide counter point to round out the arguments.

The second paper questions whether the North Pacific Fishery Management Council has authority, under the Magnuson Act, to impose an access control scheme.

This is an important debate that has gone on for years. The momentum to do something to change management (to fix it) of ground fisheries has reached

a peak. However, making drastic changes may not be the answer. Imaginative modification and fine tuning of the existing system may be the best option available.

Sincerely,

Norman Stadem

Enclosures

IMPLICATION OF INDIVIDUAL FISHING QUOTAS

Counter Point to Assumptions Advocating

IFQ Management

by the

North Pacific Fishery Management Council

by
Norman Stadem
Economist

Bio Economic
Research & Analysis

1826 E. 26th Ave.
Anchorage, Alaska 99508

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February 6, 1992

IMPLICATIONS OF INDIVIDUAL FISHING QUOTAS

Introduction

The IFQ concept of management has a certain appeal. It appeals to the perennial hope that a simple, operationally effective solution to a complex problem, or set of problems, can be devised.

Following the seminal work by H. Scott Gordon in 1954, fishery managers have focused on "rationalizing" open access fisheries by imposing some sort of access control. Several experiments, each one designed to be the perfect system, have been tried around the world with mixed results. In general, it seems that access control management systems do not provide any significant net improvement. As other nations carry out their experiments with individual fishing quota (IFQ) or individual transferable quota (ITQ) management, there is less optimism that the theoretical models will lead to cure-all solutions for fishery management woes.

The North Pacific Fishery Management Council (NPFMC) is about to figuratively take an ax to sablefish and halibut management. It will sever the old system and replace it with a totally new system of ownership rights.

Before the ax comes down, the Council (Federal Government) must at least assure those American citizens whom it intends to cull from the system that this program is in fact going to perform as advertised. It is likely that this assurance cannot be given. In fact, the draft SEIS/RIR/IRFA (page 5-4) backs away from giving such assurance. "The net benefit to the nation, ... to be ... potentially greater than under the present system." Clearly, there is a world of difference between "potentially greater" and "greater."

This is a social experiment that will radically change property rights in the fisheries.

Harvest Record Is Not Present Participation

Using past harvest record as the criteria for determining initial QS allocation is not in compliance with Sec. 303(b)(6)(A) of the Magnuson Act. Sec. 303(b) requires that "-- Any fishery management plan ..., may --- (b) establish a system for limiting access to the fishery in order to achieve optimum yield if, in developing such system, the Council and Secretary take into account -- (A) present participation in the fishery, (B) historical fishing practices in, and dependence on, the fishery, ... (E) cultural and social framework relevant to the fishery, and ...."

Note that this section outlines specific requirements with respect to individuals and communities. With respect to individuals, the plan must take account of (1) present participation (2) historical fishing practices, and (3) dependence. With respect to communities, it must take account of (1) cultural and social framework.

One's past harvest record is not a measure of present, or even past, participation in the fishery. It is simply the result of past participation. It is the score of the game, not the game itself. Obviously, if a person has a score s/he had to participate. But the Act specifically requires that present participation be taken into account, not past.

Capital investment in the fishery as well as years participating as a crewman are other, very real, indicators of participation. It goes without saying that a crewman would show no harvest record even though s/he participated for many years and was dependent on the fishery.

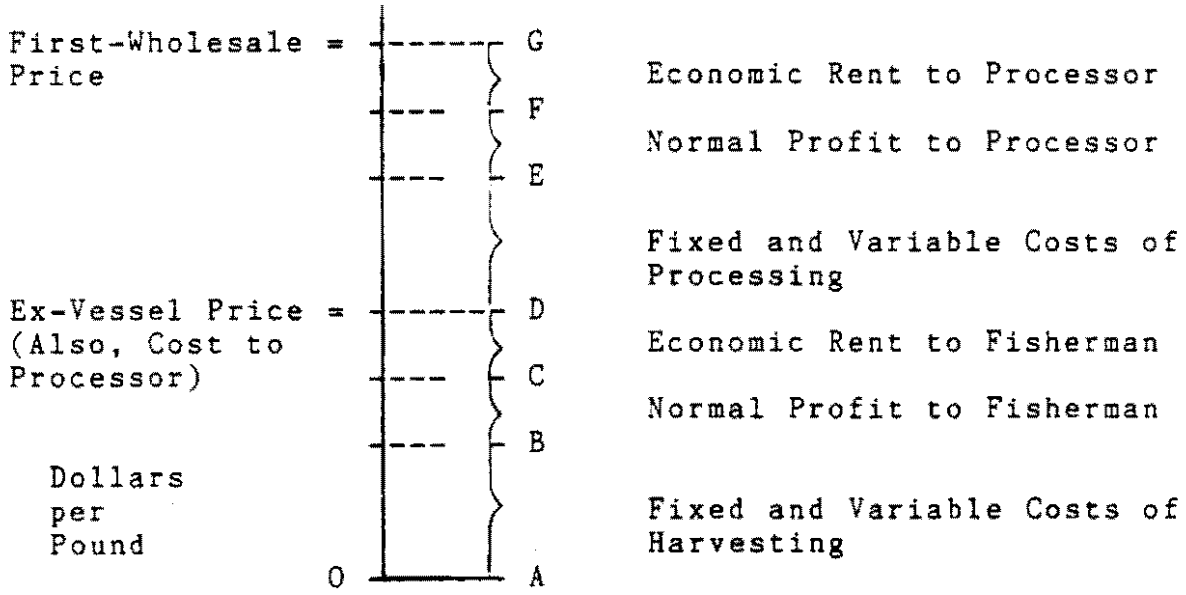
Open access is a "memoryless" system. This means that success or failure in a given year (or years) does not guarantee future success or failure. People who participate in open access fisheries do so with full knowledge of this. Given the "memoryless" feature of open access, it does not follow that past harvest record should be the determinant of initial QS allocation.

If a new management system is to be imposed, then the initial QS allocation must be consistent with the rationale of the old system as well as the new system.

By Catch Fisheries Will Set QS Prices

The following figure illustrates (1) the ex-vessel price and its components and (2) the first-wholesale (processor's price) and its components.

Figure 1



Explanation of Figure 1

The vertical distance (AD) illustrates the unit "ex-vessel price" of fish. The vertical distance (AG) illustrates the unit "first wholesale price" received by the processor. (DG) is the value added by the processor. Obviously, (AD) also is the cost of raw material to the independent processor.

The vertical distance (AB) represents fixed and variable harvesting costs. (BC) is normal profit to the fisherman (boat owner) and (CD) is excess profit or economic rent that an efficient, high line fisherman earns.

The vertically integrated, large scale operator does not directly pay harvesting costs (AD). It is, however, implicit as part of his overall processing costs. Fixed and variable processing costs are represented by (DE). Normal profits to the processor is (EF) and economic rent to efficient processors is the vertical distance (FG).

The typical independent fisherman sells her/his catch to a processor at the unit ex-vessel price (AD). From this revenue s/he pays fixed and variable harvesting costs (AB), earns a "normal" economic profit (BC) and perhaps earns some economic rent (CD). Economic rent is profit that is more than the "normal profit" for the industry. Highliners will generally earn a lot of economic rent whereas the person just getting by earns no economic rent.

Normally in this case, the competitive market price for a quota share will be equal to the capitalized value of all future expected economic rent that a QS is expected to earn. This economic rent (CD) is the maximum that an independent fisherman can pay and still make a normal profit. If s/he pays more, normal profit (BC) will be reduced and the fisherman could do better if s/he got out of the fishery.

While the independent catcher boat fisherman can only bid (CD) for her/his QS (if s/he wants to make a living in the fishery), the vertically integrated, large scale operator (VILSO) is able to bid as much as the full ex-vessel price (AD) for its QS. At this price the VILSO will be merely "buying" its raw material at the same ex-vessel price that an independent processor would. Secondly, its cost recovery (DF) and normal profit (EF) will come from first-wholesale price of the by-catch species (AG) as well as the profit from additional target species.

Of course, this assumes that the legal arrangements necessary for the VILSO to hold catcher QSs is in place.

Since by-catch is harvested in conjunction with the target species, the VILSO will be able to bid the QS prices up to the level where its profit on sablefish and halibut equals its profit on its main target species. This is because any sablefish or halibut quota will allow it to fish "dirty" and also retain the by-catch as marketable product along with their target species, rather then discard it. Furthermore, it is appropriate to assume that the normal processor's profit (EF) is much greater for sablefish and halibut

than it is for the high-volume, low-value target species.

Joint harvesting of by-catch and target species may add some to harvesting cost but this will be offset by cost the VILSO would otherwise bear in handling and discarding prohibited by-catch species. Furthermore, the minor increase in harvesting costs will be more than made up for from the higher profit earned from selling by-catch species.

As an example, assume that the expected ex-vessel price of halibut is $2.40 a pound and the accepted interest rate (discount rate) is 8% per year. Then the capitalized value of the individual fishing quota (IFQ), which is the price of the QS, could be as high as $30.00 a pound.

Clearly, the price of QS will be dictated by VILSO that will want to hold QSs in order to retain otherwise prohibited by-catch species and be able to fish "dirty" with impunity.

Obviously, the market price of QSs at (AD) will be prohibitive for an independent fisherman who can afford to pay only as much as (CD).

Stock Depletion

Stock depletion arguments are couched in the Schaefer model. This model assumes that an equilibrium sustained yield is possible at two stock population levels. One above and one below maximum sustainable yield (MSY). An increase in effort yields an immediate but short run increase in harvest from drawing down the reproductive stock. But as stock is depleted, sustainable harvest falls back to sustainable yield from a lower population level. As a result, new entry will occur until sustainable harvest is taken from a stock below MSY. A redundant amount of labor and capital will be used and harvesting costs will be higher than with a stock population above MSY.

However, since NPFMC establishes a TAC that is designed

to maintain stock population in excess of MSY, biological harm to the stock cannot occur.

With TAC in place, investment will occur only if it makes economic sense. In the long run, overcapitalization will not occur because there is no immediate stock effect to encourage investment. Stock population cannot be reduced below the sustainable yield level specified by the TAC.

Of course, normal entry and exit will occur at the margin as it does in any dynamic system.

Dissipation of Economic Rent

The standard objection to open access fishery management is that economic rent (CD) is dissipated in the fishery because "too much" labor and capital is used to "chase fish." That is, the same amount of fish can be harvested with much less input of labor and capital.

From the prior discussion, we see that with an IFQ system, the sale price of QSs is equal to economic rent (CD). More specifically, it equals the capitalized value of all future economic rent that a QS is expected to earn (assuming that people have perfect foresight). To simplify the discussion, assume that the VILSO will not compete and drive QS prices above economic rent (CD). Since it appears that economic rent is dissipated under open access and under IFQ management systems what, if any, difference is there between the two outcomes?

Under open access, fishermen spend an excess amount on crew, on capital, and on other inputs in order to get ahead of the competition in the "race for fish." The problem is not so much that rent is dissipated, but that the extra labor, capital and other resources could be used more productively some place else in the economy. This is the world of theory, and it requires some very restrictive assumptions on economic efficiency and the level of employment in the labor and capital markets. Once we get past theory, however, we

find high levels of unemployment and economic inefficiencies to be pervasive.

Thus, it is difficult to say whether or not any excessive (redundant) labor or capital released from the fishery will in fact produce an increase in economic output to the nation.

Obviously, to the extent that the boatowner (entrepreneur) pays for redundant labor or capital, economic rent will be transferred from the entrepreneur to labor or capital. In these instances, however, economic rent remains in the fishing industry as crewshares and profits.

Under the IFQ system, the initial recepients of quota shares receive a windfall amounting to the capitalized value of economic rent from a QS.

They have choices as to what to do with this windfall. They can continue to pay crewshares, modernize their boats and continue to fish as they always have. They can cut back on crew expenses, cut other expenses and reduce capital outlay. A third option is to sell out and invest the windfall some place else. The appeal of IFQ is that windfall recepients are protected from competitive entry to the fishery. Clearly then, windfall recepients have control of their component of economic rent (CD). Obviously, the incentive will be to maximize economic rent. This can now be done without fear of outside competition -- that is, new entry, which would normally occur under free enterprise.

One way to do this is to reduce costs -- reduce crew size, cut crew shares, reduce capital outlay. Another way is to increase ex-vessel price -- play the market, increase product value.

On the other side of the coin, a person wanting to enter the fishery or expand her/his operation must buy QSs. The price of a QS drives the fixed harvesting cost up. QS buyers will have higher capital costs, since the opportunity cost of the QS must now be added to total capital costs. However, the additional capital cost does nothing to improve harvesting capability.

Essentially, the windfall to initial recepients of QSs becomes a millstone to buyers of QSs.

To the extent that markets can accurately forecast all future conditions, economic rent will be removed from the fishery when the initial recipients sell out and leave the fishery. The fishing industry is stripped of this economic rent (excess profit) -- it makes no difference whether it went to entrepreneurs (boat owners), labor or capital. The critical point is that no economic rent remains in the fishing industry.

The fishing industry is such a small part of the overall U.S. economy that any labor, capital and other resources released from the fishery will have little, if any, impact on national economic productivity. This is especially true in an economy operating with a high level of unemployed resources.

In summary, under open access economic rent need not be dissipated -- the smart fisherman will figure a way to keep costs down. However, under an IFQ system all economic rent will be dissipated in market price of QSs.

Forces Contributing to Overcapitalization

Managers have argued that the groundfisheries are unmanageable under the present "open access" form of ownership rights. This is because the fishery is overcapitalized as a result of the "rush for fish" due to open access. It is quite possible that open access bears some part of the blame for overcapitalization, but other factors cloud the picture.

A study done by the Northwest and Alaska Fisheries Center at University of Washington, Seattle, showed that 80% of sablefish is harvested by 10% of the registered boats. This implies that 90% of capital (boats) is not very effective. In other words, some 70 to 100 boats harvest just about all the fish. The other 600 boats do very little. Why are they in the fishery?

An important conclusion follows. If only 10% of the boats are so efficient, then it is these few boats that determine the length of the fishing seasons, not the other 80%. Thus, what seems to be excessive amount of capital has very little impact on the fact that seasons have been shortened. It is the efficiency of the high liners that has led to the shortened seasons.

There are at least six interrelated forces at work which contribute to overcapitalization. (1) Open access effect which motivates fishermen to invest excessively in captial and labor in order to compete in the "rush for fish." (2) Tax incentives (depreciation & operating costs) given to owners regardless of how much fishing is done. (3) Government subsidies and loan guarantees which lower the cost of capital and allows what would otherwise be an uneconomic investment to be profitable. (4) Anticipation that the NPFMC would impose some sort of access controls motivates some to get in line for a free QS. (5) A desire to have the latest technological equipment and machinery and the nicest boat afloat. Yacht owners, airplane owners, and automobile owners face the same syndrome. (6) Foreign investors who want to keep some control in the fishery and who also expect to gain a free QS. For example, the new Marco catcher-processor, F/V Frontier Explorer, flies both the American and the Japanese flags. It is noteworthy that all those nations which have imposed an LE/ITQ system also have ship building subsidy programs. This means that the nation's taxpayers are forced to subsidize the economic rent going to the initial QS owners.

In conclusion, obviously, we cannot point to open access as the single, certain cause of overinvestment. There are many others.

It appears that the NPFMC has a solution waiting in the wings, but has not fully articulated the problem for which the solution is designed.

Increasing Unemployment In A Recession

The United States is presently in the midst of a

serious recession with long term structural implications. Unemployment is near 10% and perhaps higher if a complete accounting were made. The proposed IFQ program threatens to dump labor and capital (small boat owners and crewmen) on to an economy that is far from operating efficiently. Bankruptcies of large and small corporations, massive layoffs of labor, increases in unemployment and welfare roles suggest that labor and capital released from the fishery may not find more productive use elsewhere in the economy.

Fishing is a "primary" industry. As such, income from fishery generates "secondary" support industries (hardware stores, ship chandleries, grocery stores, construction, etc.). If the fishing industry is destroyed in small coastal communities it threatens to take a lot of "secondary' businsses down with it as well.

The theoretical model on which IFQ management is based forecasts that resources (labor and capital) that leaves the fishery will be more productively employed elsewhere in the national economy. However, given the economic situation presently facing the nation, it is difficult to accept the underlying efficiency assumptions as being appropriate in judging the outcome of the IFQ experiment.

Institutionalizing Inefficiencies

Arguments against traditional management tools such as time and area closures and gear restrictions is that these impose inefficiencies. But the IFQ program imposes its own inefficiencies on the fishery.

For example, sablefish QS ownership is limited to 1% and halibut to 0.5%, except for initial recipients who may own more. What happens if economies of scale show that a much larger QS is more efficient?

Furthermore, the restrictive categories of catcher boat QS and freezer longline QS imposes potential inefficiency. The trend in freezing technology

suggests that small scale operations will one day be profitable. Under the IFQ program catcher boat QS owners will not be allowed to move into processing.

Another obvious inefficiency is the limit of 6,000 pounds of halibut quota for boats 28 feet or smaller.

The gear-specific nature of QSs impose further inefficiencies. The fisherman should be left to decide what type of gear is most efficient. For example, some fishermen may want to use pots rather than longline.

Implementation Costs

The estimated cost to implement the program does not begin to tell the story. In its Draft Implementation Plan of November 1991, NPFMC staff estimates increased staffing requirements of some $4 to $5 million.

The true cost of implementing the program is far greater than merely the increased staffing costs. Any responsible estimate of cost of the program must include the opportunity costs associated with displaced small-boat operators, displaced crews, displaced shoreside opportunities, loss of income to small coastal communities, and other social costs. This will be dumped on an economy that presently is in the midst of the highest unemployment since the 1930s depression.

It could be that a displaced crewman will go to work as a brain surgeon earning many times more than in fishing. Then there is a definite economic improvement to society. But what if the crewman ends up on unemployment, foodstamps, or welfare? Then is there an increase in economic output?

There is a world of difference between opportunity cost in a full employment economy and opportunity cost in an economy with high unemployment. For example, assume that a fisherman earns the equivalent of $6 an hour fishing; in a full employment economy s/he could earn $10 an hour ashore; but in a high unemployment economy s/he could earn $4 an hour. If s/he continues to fish

in the full employment economy there is a net social loss of $4 an hour. But in a high unemployment economy there is a net social gain of $2 an hour from fishing.

These are the important real costs associated with the program that must be estimated. The cost of a few additional staff members is an insignificant part of the true social costs.

Arbitrage

An argument in support of IFQ is that under a quota system fishing will go on year round. The fresh fish market price supposedly will be higher than it is now and this will signal fishermen when to go fishing.

However, there will be closures in the fishery -- for whatever reason. Prices will probably be highest when the new season opens. Not only that but fishing will probably be best at that time. Thus we will more than likely see the same rush for fish on opening day as is seen now.

The Canadian experiment with IFQ halibut and sablefish has been somewhat successful in supplying the fresh market. Even though their quota is only a small part of the total harvest, 10% of Canadian production was frozen in 1991.

There is no reason to suppose that these same prices will prevail once the market is flooded with "fresh" fish. On the contrary, there will be an equalization in price between fresh and frozen. This is because traders will arbitrage between the fresh and the frozen markets. If price is highest in the frozen market fish will go there, and if it is higher in the "fresh" it will go there. Prices will equalize.

The fresh fish market could just as well be supplied under open access. For example, by using plastic magnetized cards to control fishing. Similar to that proposed for the IFQ program. Each licensee would be issued a magnetized control card which would control her/his 24-hour (noon to noon) fishing time any time

during the year.

This flexibility would also go a long way to help resolve the safety issue. Sec. 303(a)(1) of the Magnuson Act provides that "... any fishery management plan ..., shall consider and provide for temporary adjustments, ..., regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fishery;..."

The Big Picture

The ostensible problems associated with open access management is embedded in the much larger picture of increasing population and increasing competition for all economic resources. All sectors of the economy are faced with this increased competition. Should fisheries be imune to this reality? Should there be regulations or policy to limit competition elsewhere in the economy? For example, for the beleagured airline industry.

The irony is that only one group of fishermen will benefit from the IFQ program. The initial recepients. Those fishermen who manage to buy QSs will be no better off than they are under open access. In fact, with the added deadwood of QS debt, they will probably be worse off. More regulations and larger bureaucracies will be needed to manage the fishery.

Market Motivation

The Council's job, as public sector manager, is to protect the resource from over exploitation. It effectively does this by assigning total allowable catch (TAC) for each species. Once TAC is defined this allows harvesting of the given surplus (TAC) and keeps the biomass at a level above maximum sustainable yield (MSY) so that stocks remain strong and harvesting costs are minimized with a given fleet size, and technology.

There is concern that presently the fishery is not market driven. Implicitly, all fisheries are market driven, otherwise the fishery would not have evolved and people would not make a profit in them. Granted that alternative product forms have not been exhausted, but this is not a function of open access or the IFQ system. Product form evolves within a matrix of signals such as consumer wants, production costs, competition, market risks, market uncertainties, and a host of others.

Why Access Control Schemes Fail

In theory, access control schemes look like they can provide the solution to the open access dilemma. This dilemma derives from the "rule of capture" which creates the perverse incentives that lead the so called "rush for fish."

The problem in the first instance, however, is that the assumptions necessary for the access control models to work are far from being met in the real world. For example, the assumptions of economic efficiency and full employment are far from reality.

Second, property rights embodied in access control schemes, including transferrable quotas, do not fully privatize harvesting rights like they do on land. The "rule of capture" still prevails. There is still the rush for the "hot spots" and to capture the best. The system does not encourage husbandry.

Third, property rights to these ocean resources cannot be fully specified. Nor are they fully specified on land. But monitoring and enforcement costs on the ocean are prohibitive. Spillover effects create perverse incentives which in turn lead to behavior such as highgrading and quota busting.

Fourth, the programs are fraught with inconsistencies. These include institutionalized inefficiencies such as limitation on quota share per licensee.

Fifth, the programs impose additional, non-productive financial burden on new entrants.

Conclusion

The full implication of the IFQ management program has not been completely or clearly articulated. The Magnuson Act requires that the Exclusive Economic Zone (EEZ) fisheries be managed on an optimum yield (OY) basis.

This requires a congruency of goals and objectives, covert and overt, between North Pacific Fishery Management Council and all parties involved in the OY equation. To do otherwise could result in seriously suboptimal outcomes.

In short, public sector management of biological ocean resources is necessary because of market failures. Biologically, the total allowable catch (TAC) safeguards the stocks. However, well established market forces control the harvest, processing and marketing components of the fishing industry. Government involvement on the economic side, other than normal oversight and enforcement of commercial conduct, is not necessary. The natural dynamics of market forces will determine optimum outcome. And this outcome is a stochastic variable, not a static point.

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November 15, 1991

Mr. Richard Lauber, Chairman
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Dear Mr. Lauber:

I have done an independent review of the Magnuson Fishery Conservation and Management Act, As Amended Through November 28, 1990.

My conclusion is that the Council does not have the authority to implement an Individual Fishing Quota system of ownership rights and management. As I see it, this is so because the Act is specific in authorizing access limitation only "in order to achieve optimum yield (OY)."

OY, in the first instance, is virtually impossible to specify and compute. Secondly, if TAC is used as a proxy-OY, harvesting of the TAC is accomplished under the open access system of ownership rights and management.

Thus, the Council has no reason to, and is without authority to impose the IFQ program.

I thank the Council for this opportunity to comment.

Sincerely yours,

Norman Stadem
Economist

Enclosure

MAGNUSON ACT AND INDIVIDUAL FISHING QUOTAS

An Analysis of the Authority to Impose IFQ Management by the North Pacific Fishery Management Council

by
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MAGNUSON ACT AND INDIVIDUAL FISHING QUOTAS

Abstract

The North Pacific Fisheries Management Council derives its authority from the MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT, Public Law 94-265, As Amended Through November 28, 1990.

Section 303(b)(6) of the act provides that a Council, in its fishery management plan, "...may establish a system for limiting access to the fishery in order to achieve optimum yield (OY). ..." However, in Sec. 303(a)(5) we see that "...no measure shall have economic allocation as its sole purpose."

This paper argues that the Council does not have authority to establish a system for limiting access in the sablefish and halibut fisheries for three reasons. First, since OY is, for all practical purposes, technically impossible to determine, a proxy-OY must be used. Proxy-OY is not an objective criterion in establishing a system for limiting access.

Second, Total Allowable Catch (TAC) is the level of harvest allowed by the Council. Implicitly from Sec. 301(a)(1), it is the proxy-OY. Since TAC is harvested under the present open access management system, there is no need to make a drastic change in ownership rights in order to achieve OY.

Furthermore, the law does not authorize establishing a system for limiting access in order to achieve reduction of fleet, to insure profitability, to facilitate management, to reduce political pressure on the Council, to increase economic efficiency, or for any other reason than that which is specified.

Finally, the IFQ program is flawed because it has economic allocation as its sole purpose. This follows directly since the harvest of TAC, proxy OY, is accomplished without the need to change ownership rights in the fisheries.

DISCUSSION

Authority to Conserve and Manage Fisheries

The North Pacific Fishery Management Council derives its authority from Sec. 302(a)(7) of the Magnuson Fishery Conservation and Management Act, Public Law 94-265, As Amended Through November 28, 1990.

Among the stated policies of the act is Sec. 2(c)(6) "to foster and maintain the diversity of fisheries in the United States."

In Sec. 3(2) we see "The term 'conservation and management' refers to all of the rules, regulations, conditions, methods, and other measures (A) which are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring, or maintaining, any fishery resource and the marine environment; and (B) which are designed to assure that-- ... (iii) there will be a multiplicity of options available with respect to future uses of these resources."

Clearly, the overriding test of the validity of action by the Council is that the action be required. The second, and included in the more restrictive required, part of "conservation and management" is that the action be useful. Obviously, the IFQ management program does not meet the restrictive test of being required. It may be useful, but that is not enough.

Secondly, the IFQ program does not "foster and maintain the diversity of fisheries." And finally, it restricts the "multiplicity of options available with respect to future uses of these resources." For example, if technology were to permit small catcher boats to process, this option would not be available without selling out and buying a catcher processor IFQ. This would be a prohibitive commitment for most small operators with catcher IFQs.

Optimum Yield:

Obviously, "... in order to achieve optimum yield (OY)" is the pivotal criterion governing the authorization to establish and impose a limited access management scheme of any sort.

Unlike other specifications of yield from a fishery, optimum yield (OY) is not biologically determined. Maximum sustainable yield (MSY) is strictly a biological function resulting from the interaction of the fish stock with its environment. OY, however, is a complex of biological factors, economic factors, ecological factors, and social factors constrained by the net growth function of the fishery, generally some specification of MSY. Computing OY requires knowledge about the intertemporal social and private discount rates, it requires knowledge of the opportunity costs of productive factors, it requires knowledge of substitute goods and complement goods, it requires knowledge of the product mix demanded by consumers and the price-quantity of each, it requires knowledge of disposable income of affected individuals, it requires that alternative factor opportunities be specified, it requires that all those affected by the fishery be identified. This is but a partial list of the universe of inputs necessary to determine OY.

But this is not the end of it. Not only is it necessary to identify the variables and parameters, but it is also necessary to specify measurement criteria and to specify a computational paradigm to compute the OY. This will very likely consist of some sort of optimization problem. For example, maximize net present value from the fishery. Anything less than a full specification of OY is a "partial OY". The Magnuson Act does not provide for a "partial OY" in authorizing a system for limiting access.

If determining OY is such a formidable task, how does the Council go about determining it? There is no practical way of computing OY in the real world, given the budgetary constraints on the Council. Assumptions, and approximations can be made, of course, but these are all guesses and, again, the Magnuson Act does not specify a "guessed OY" as a relevant criterion.

In practice, harvesting decisions are based on the Total Allowable Catch (TAC) which in turn is determined from the Acceptable Biological Catch (ABC). The question is, is there any acknowledgement or estimation of OY on the part of the Council? Implicitly, from Sec. 301(a)(1), it could be assumed that the Council equates TAC to OY. That is, TAC is implicitly a proxy for OY (proxy-OY).

But, if the TAC, synonymously proxy-OY, is established based on the ABC which may or may not be determined at the Maximum Sustainable Yield (MSY), then there can be no basis to invoke the limited access authority of the Magnuson Act. The effectiveness of the nine other management tools specified in Secs. 303(b)(1) through 303(b)(10) to constrain the harvest at TAC, proxy-OY, is absolute and immutable. Since proxy-OY is harvested under open access management, there is no further reason nor is there authority, under the Magnuson Act, to establish a system for limiting access in order to harvest the proxy-OY. If the proxy-OY can be achieved in other ways as prescribed by the Magnuson Act, then it is not necessary to establish a system for limiting access to the fishery in order to achieve that proxy-OY. Simply because proxy-OY is now being achieved under the open access management system.

Furthermore, we are still left with the dilemma that if we cannot compute the actual OY, the authority to establish a system for limiting access in order to achieve OY is meaningless.

Authority to Specify OY, Not Enforce OY Specifications

There is an important distinction between specification of OY and creating the conditions necessary to achieve OY. If, in fact, the Council could determine an actual OY it still would not be charged with the responsibility of creating, or implementing, or enforcing the conditions specified in the OY function. That is, the Council is not required to establish conditions in society, including the fisheries, that will achieve the total welfare or the "greatest overall

benefit to the nation" specified in the OY computational paradigm. In other words, if the computation of OY included a specification that everyone should have fresh halibut once a week, the Magnuson Act is silent as to how society will go about providing for this. And it does not give the Councils the authority to solve this economic problem. Nor does it give the Councils the authority to restructure access rights in order to do so, or to reduce congestion, or to reduce capital stock, or to facilitate management, or for any other reason than to achieve OY. Nor does it provide that a proxy-OY can be substituted for OY. And this is where the authority of the Council ends.

Economic Allocation

Sec. 301(a)(5) gives one of the seven consistency requirements for the "National Standards For Fishery Conservation And Management." It states that "Conservation and management measures shall, where practicable, promote efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose." Reassigning property rights in access to fisheries amounts to "economic allocation", given the fact that the purpose for imposing it in the first place (in order to achieve OY) is, in its proxy form, being achieved.

Senators' Concern About Limited Access

The discussion following introduction of Amendment 1159, Sec. 304(c)(3) of the Act, speaks for itself.

Amendment 1159 restricts the scope of the Secretary of Commerce to unilaterally promulgate management regulations establishing a limited access system under 303(b)(1). This is significant in that it very pointedly restricts him from unilaterally using only this particular management tool, among the ten specified in Secs. 303(b)(1) through 303(b)(10), unless

it is first approved by the appropriate Council. This specific restriction on the Secretary's authority is significant and pointed.

To quote the words of Senator Stevens on page 492 of the Commerce Committee Report: "Mr. President, this amendment was much sought after by Alaska fishermen. It has been discussed with members of our committee from other States. I originally had put in an amendment which would remove from the Secretary the authority to promulgate regulations establishing a Federal limited entry program. It was pointed out to me that some management councils in some areas of the country do, in fact, want a limited entry concept and that this original amendment would have taken away from the Secretary the right to promulgate regulations in the areas where it might be desired by the majority of the councils involved. So the new substitute for amendment 1159 provides that the Secretary has no authority to promulgate this limited access system under this section unless the regulations have been first approved by a majority of the council involved." [Sec. 304(c)(3)]

Safety

The issue of safety in fisheries is an emotional one. An appealing claim is that the IFQ program would reduce weather related accidents. However, Sec. 303(a)(1) provides that "... any fishery management plan ..., shall consider and provide for temporary adjustments,..., regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fishery;..."

It is probably true that this provision has never been implemented to test whether it would be effective in reducing weather related accidents.

CONCLUSIONS

Computation of OY is a monstrous task. That is, one first of all identifies the group (subset of the world's population) that includes all of the people affected by the fishery. Then one collects the relevant data which identifies the concerns of the various elements of the group (elements of the subset). Then one computes the harvest level which maximizes the intertemporal welfare of the group (i.e., maximizes the utility of the subset over its elements over time). Once this level of harvest is determined it, by definition, is the optimum yield. OY, once determined (if it were possible to do so), is strictly a quantity of fish to be harvested. Having defined the OY, the only task left is to harvest it. Magnuson Act is silent as to who should harvest the OY and how it should be harvested. Magnuson Act only authorizes a system of limited access in order to achieve optimum yield. As noted, TAC could be considered a proxy-OY. But since TAC is already being harvested under present open access management, there is no authority to impose limited access.

So long as proxy-OY (TAC) can be harvested using nine of the ten management tools specified in 303(b)(1) through 303(b)(10), there is no authority to impose 303(b)(6). Achievement of proxy-OY is not an authorized objective to invoke 303(b)(6).

(Note: all underlining is by author for emphasis.)

FROM : K-N-S MARINE PHONE NO. : 907 235 6242 P01

#3

Fax Transmittal Memo 7672

To Steven Pennoyer, Director AK NMFS
Company
Location
Fax # 586 7249
Telephone #
Comments

No. of Pages 1 Today's Date 3/25/96 Time
From PAUL K. SEATON
Company K-N-S MARINE
Location HC-67 BOX 1253 ANCHOR POINT AK 99556
Fax #
Telephone # (907) 2356342
Original Disposition ☐ Destroy ☐ Return ☐ Call for pickup

Please phone me at 235-6342 to confirm receipt of fax confirmation to (907) 235 6342 Spages with 12 NEPA comments Thank you Paul Seaton

Steven Pennoyer, Alaska Director
National Marine Fisheries Service
Juneau, Alaska, fax(907) 586-7249

Paul K. Seaton
HC-67 Box 1253
Anchor Point, AK 99556

NEPA COMMENTS FOR THE HALIBUT AND SABLEFISH INDIVIDUAL FISHING QUOTAS GROUNDFISH MANAGEMENT PLAN AMENDMENT AND THE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT OF THAT PLAN.

Comment number 1.

The ITQ Plan includes a provision to require the mandatory retention of Pacific Cod while fishing for halibut. The SEIS contains no annalysis of the deleterious effect of this provision on the P. Cod resource. This is a particularly egregious omission since this provision was specifically designed to allow overfishing of the P. cod resource. As was personally explained to me by council member Clem Tillion, the provision will allow ITQ halibut fishermen to continue to take almost unlimited quantities of P. cod after the TAC for P. cod is obtained. The council agreed to eliminate the P. cod bycatch retention rate and established no bycatch cap for P.cod while fishing with the ITQs for halibut. Mr. Tillion explained I had a large enough vessel to take advantage of this provision of the Plan and the wording was such that I only had to deliver "some" halibut with my delivery after the P. cod TAC is taken.

Comment 2.

The system of allowing P. cod fishing after the cod TAC is taken also gives large halibut share quota holders a huge competitive economic advantage in the other fisheries. They can continue their harvest after other fishermen are forced from the stocks by the taking of the TAC and this specific economic advantage was not analyzed in the SEIS.

Comment 3.

The system of mandatory retention and delivery of P. cod was designed to economically force all vessels to local Alaskan ports since the P. cod have a much shorter shelf life than halibut. No analysis was done on probable success or failure of this system. No analysis was performed on the economic impact of the system on the fishing patterns by vessels of various sizes and types and whether this will give competitive advantage to a particular size or type verses the system without such a system.

Comment 4.

The SEIS does not analyze the impact of mandatory P. cod retention on the buyers and processors of the halibut resource. Most small to

FM - Approaction Thanks Dave 4.30

FILE	ACT	INFO	ROUTE TO
			Reg. Director
			Deputy Director
			Admin. Serv.
			Plans. Ctr.
			Information Rm.
		L	Fish Mgmt.
			Enforcement
			Trade & Ind. Ser
			PPMD
			Oil Spill Otc.
			AMI
			Gen. Coun.

medium sized buyers do not have the processing or handling capabilities for P. cod nor do they have meal plants to handle the bycatch if delivered from longer trips in a less than top quality condition. Individual fishermen wishing to sell their own catch to the public would also be at a disadvantage since the processing abilities and facilities for P. cod are generally beyond the scope of the individuals. Also local markets are unavailable for the P. cod in non processed form while markets are available for unprocessed halibut. Since most large processors will not be willing to buy the P. cod without leveraging the delivery of halibut, the unanalyzed effect of this may be to force out all small buyers and force fishermen to sell to large processors and especially those with meal plants.

Comment 5.

The Statement that the IFQ Plan for Sablefish will have no adverse impact on Marine Mammal mortality, specifically Orcas - killer whales- is not reasonable nor agreed to by the fishing community. The SEIS does not analyze fishing patterns and the cause of mortality by intentional shooting by some sablefish longliners.

Orcas are opportunistic feeders and a pod will follow a sablefish longliner as the "gravy train" sets are retrieved from the deep. Feeding pods are well known to follow fishing vessels for long periods taking prime fish off the line in such quantity as to make fishing unprofitable. Under the current system numerous vessels are out in the same area at the same time and the pods switch among many vessels which can economically survive the predation on their catch for short periods. Under IFQ fishing the intent is to spread the fleet over time putting only a few vessels on the grounds at one time, reducing gear conflicts etc. However, you must now anticipate the fact that the predators, Orcas, will then spend much more time with the individual vessels, reducing or eliminating profitability and will result in many more shootings of the predators. Any other assessment without factual quantitative documentation is just wishful thinking and should not be considered adequate analysis of probable mortality on marine mammals.

Comment 6

The cursory socioeconomic statements in the SEIS and public comments by analysts who worked on the original EIS recognize that resource ownership will tend to leave Alaskan coastal communities. The SEIS does not attempt to quantify this resource loss and resulting social and economic loss to the communities. The Council was the requested by resolution of over 25 local communities, the Alaska Municipal League, the Ak. State Chamber of Commerce, Southwestern Municipal Conference, several Borough governments and Native Associations to analyze this

impact. The cursory and non quantified manner of the SEIS comments on this subject do not satisfy the requests of the numerous local governments nor meet the requirements set forth by the Commerce dept. in the recent onshore - offshore Plan amendment.

Comment 7.

The Socioeconomic prescription in the SEIS for communities to attempt to retain halibut quota share in their communities by using public money to bankroll individual fishermen in the highly speculative and volatile share quota ownership transfers is ridiculous, especially considering the nation's recent experiences of the Saving and Loan scandal. This prescription is also proposing using public funds in ways that are illegal for municipalities in the state for which they are proposed. The SEIS is therefore inadaquate in addressing this identified problem.

Comment 8.

The Socioeconomic presumption that communities have learned the economic consequence of the sale of limited entry permits out of local communities and therefore individual will not do such transfers is false. The very design of the Plan is to reduce the number of participants to the "economically efficient fishery" by having the fleet consolidated to less than 10 % of its current size as stated and quantified in the SEIS. ITQ ownership is based with the individual and not the community. Sales are made for valid personal and business financial considerations. It is the cumulative effect of the numerous sales that will devastate communities. Many midwestern towns degenerated and in fact ceased to exist because of a similar program called wheat allocations, yet the federal government has obviously not learned and such socioeconomic platitudes and wishful thinking without any analysis to support such wishes makes this SEIS inadequate in the extreme.

Comment 9.

The SEIS identifies this Plan as not a major rule change and states that it's impact will be less than 100 million dollars per year. That is not accurate by measures of the industry.

The value of the share quotas for halibut alone greatly exceeds this value: 60 million 1992 harvestable pounds at a value of $8.50 per pound (as Mr. Bruce Turis of Canada DFO testified at the Jan. 1992 council meeting) equals 510 million dollars. Another current market value of halibut share quota in Canada is available via an add for sale of a discardable wooden 36ft vessel with 17,000 pounds of unharvested share quota pounds in the June issue of West Coast Fisherman for $229,000 =$13.47 per pound. Thus the value of the halibut share quotas would be

60 million pounds x $13.47 per pound – $808,200,000.

NMFS estimated for the Councils industry implementation team that they expected 80% of the share quotas to be transferred in the first year alone. Thus the first year economic impact from halibut share quota sale alone could be $408 million to $646 million. One can similarly calculate well over the $100 million single year value for sablefish. Added together even applying the most conservative numbers there is no doubt that this plan mandates treatment as a major rule change under Executive order number 12291.

Comment 10.

The SEIS does not address the specific and direct violation of the US Constitution Article I, Section 9, paragraph 6: "No preference shall be given by any regulation of commerce or revenue to the ports of one state over those of another: nor shall vessels bound to, or from, one state, be obliged to enter, clear, or pay duties in another."

The plan specifically calls for the use of Alaska only Primary Ports. The specific use of these only Alaskan ports is to force all vessels to enter and clear in Alaska before proceeding to the port of any other State. The plan and Council discussion use the terms "enter" and "clear" that are specifically outlawed in Art. I Sec. 9 P. 6.

The Director of NMFS has stated publicly that NOAA Counsel assures him that this violation of the US Constitution is legal because it is done for conservation reasons. However, he sites nothing other than a verbal impression, not even a written opinion from counsel.

The SEIS establishes no validity that the illegal Primary port concept is the only "conservation technique" available to save the resource. In fact testimony before the Council centered on the fact that this technique is used to reduce the expense of enforcement. There is no substantiation in the SEIS that legal, though more costly, enforcement regimes would necessarily be less effective or so less effective that the alternatives would be biologically destructive to the resource.

Comment 11.

The SEIS is inadequate because it does not provide sufficient, in fact no, justification for the violation of the policies just agreed to by the President of the United States signed June 14 1992 at UNCED in Agenda 21. Specifically 17.46 (c) "Promote the development and use of selective gear and practices that minimize waste of catch of target species and minimizes bycatch of non-target species."

The proposed ITQ Plan will institutionalize a non-selective gear type for the harvest of sablefish in the Gulf of Alaska. There is at least 750 metric tons of reported halibut mortality in this sablefish fishery which is unnecessary because the resource could be effectively, efficiently, and

safely harvested using pots which would effectively reduce this waste to zero. The mortality on other non target species such as skate, arrowtooth, rockfish, and greycod are similarly high. Pots would eliminate almost all this bycatch. However the council has specifically eliminated any credit for ITQ poundages for the GOA for sablefish caught with pots as selective gear even for years when they legal. The council would have severe legal problems if after giving the resource to one gear type user it would later attempt to have that harvest switch to they very selective gear that it would not accept poundage credit for distribution of ITQs. The effect is to institutionalize non selective longline gear in defiance of the protocols recently adopted by the United States : 17.45, 17.46c, 17.72, 17.75 d, 17.79 c. An original intent of the IFQs was to solve the wastage problems but those intents were not finalized into the Plan that was passed by the Council. In fact the plan allows greater wastage by removal of the Prohibited Species Cap of 750 mt. for halibut in the GOA. Thus the nonselective longline fisheries, that have been shut down for several years by their attainment of the wastage cap, will be free to waste unlimited amounts of the halibut resource in pursuit of sablefish IFQs. The plan requires retention of legal halibut if one has halibut ITQs available but also allows all fishermen to unlimited discards after using their ITQs. Thus the Plan violates the " minimize bycatch of non-target species"goal of Agenda 21.

Comment 12.

UNCED agenda 21 also is violated in that the SEIS and all experiences with IFQs around the world demonstrate that wastage of the target species by highgrading for the most valuable sizes is a severe and inherent problem. Sec 17.46 c,17.76 d, et al commit the United States to develop and utilize "...practices that minimize waste of catch of target species...." The SEIS is inadequate in not addressing this conflict between this inherent detrimental effect of the Plan in contradiction to the intent and word of the United States agreed to by the President of the United States this very year.

Paul K Seaton

6/29/92 via Fax

COPY

BIO ECONOMIC RESEARCH AND ANALYSIS

NORMAN STADEM
ECONOMIST

1826 E. 26th Ave.
Anchorage, AK 99508
(907) 272-0908

April 16, 1992

Honorable Walter J. Hickel, Governor
Office of the Governor
State of Alaska
Third Floor, State Capitol
P.O. Box 110001
Juneau, AK 99811-0001

Dear Governor Hickel:

IFQs -- AN UNNECESSARY ENCROACHMENT ON FREE ENTERPRISE

The Individual Fishing Quota (IFQ) management of sablefish and halibut is a shortsighted solution to extremely complex fishery management problems.

The key to "rationalizing" open access resources is to assign property rights and responsibilities to them. In the first instance, IFQ management program fails to completely "privatize" the fishery; secondly, it is redundant because other major issues can be resolved within the open access framework. These include weather related safety problems and year round supply of "fresh" fish.

Supporters claim that IFQs will deliver benefits similar to those achieved from privatizing farmland, timberland, oil wells, etc. But comparing the property rights vested in IFQs to those vested in land ownership is like comparing apples to oranges. In the first instance, IFQs will not privatize the fishery -- the fisheries will still remain "open access." IFQs will only privatize the right to leave the dock, to go on to the ocean and to harvest a given quota of fish. This is no different than licensing an airplane or a truck to haul freight -- the government issues annual licenses to haul freight. Once on the ocean, the "race for fish" will still dictate behavior.

The analogy of a "chain saw massacre" in the Chugach National Forest, used by Mr. Dean Adams in the April

5th issue of the Anchorage Times, is excellent. Paraphrased, the open access logging season opens and each logger is compelled to race to cut as many trees as possible (rule of capture) during the short season. This "race to cut trees" problem is easily eliminated in the forest by selling stumpage rights to parcels of timber. Each logger can then husband her/his own parcel and manage the harvest of her/his trees. If there are better trees on the neighbors' parcels, s/he can't just go and cut and take them. Property rights are clearly defined and readily enforceable -- each logger knows which trees belong to her/him and where her/his boundaries are.

If the IFQ concept were applied, however, each logger would be given a stumpage quota. Those who qualified for a quota could cut trees anywhere in the forest. Clearly, the incentive would be to race in and cut the best trees before other loggers get them (rule of capture is still operating). In this way the logger maximizes the market value of her/his limited quota.

Property rights to parcels of land work quite well because it gives the individual certain rights to use, and to enforce these rights to use, a specific location (location rights). IFQs do not give usage rights to location. Thus, we see that the attempt to privatize ocean fisheries, using a reasonably successful land-based model, fails. The IFQs do nothing to encourage husbandry of the resource. They will not eliminate the "rush for fish" that is associated with "open access." In fact IFQs encourage "high grading" in order to maximize value of ones quota.

So, we are left with a contrived and experimental application of property rights, the impact of which are unknown. We can show how private ownership of land has benefited society, but how will this hybrid work?

Two of the most often quoted reasons for imposing IFQ management is to improve safety and to make fresh halibut and sablefish available to consumers year round.

But the open access system can be structured to achieve these two objectives. A magnetized plastic "credit

card" accounting system (proposed for the IFQ program) would allow total flexibility under open access. The North Pacific Fishery Management Council (NPFMC) or the International Pacific Halibut Commission (IPHC) would define the seasons in terms of two parameters. First, the individual fishers would be given a period and/or a quota. Then the time period in which the individual would be required to fish her/his period/quota is specified. For example, let's say a 24 hour halibut period could be fished any time from April 1 to June 30. The individual could then fish when the weather and the market conditions were deemed suitable. Check-in and check-out procedures would have to be specified.

The fish stocks are protected and managed by the NPFMC and the IPHC using the best scientific information available. Therefore, IFQs are not necessary for conservation purposes.

The safety issue is resolved because fishers will not feel compelled to fish in hazardous weather. "Fresh" fish will be more prevalent on the market year round. In addition, small boats will be able to achieve parity with the larger boats. Such an open access plan would avoid all the inequities of initial allocations which bias the IFQ plan against small boats; especially those that have suffered weather related set backs during the critical qualifying years.

The legacy of IFQ management will be to have given away Alaska's birthright to these ocean resources. Most Alaskans will not be able to buy quota shares (QS). (Please refer to page 3 of my February 6, 1992, paper for more detail.) Only operators with large initial QSs will be able to buy them by averaging the cost. The Division of Investment, Section A, permit loan is limited to 80% of the lesser of appraised value, or cost, up to a maximum of $300,000. At $10 a pound of QS, this will buy around 37,500 round weight pounds of quota. Just the down payment will be $75,000, hardly pocket change to most coastal villagers. The debt service on $300,000 at 10% over 15 years is $39,500, annually. At $1.60 per pound dressed weight, assuming 75% recovery, the total revenue from a 37,500 pound quota is $45,000. This leaves the fisher with $5,600 to pay all her/his other expenses including 30% crew

shares of $13,500. Clearly, negative profit is an impossible situation.

We all would like to be handed a retirement package such as this. Many "high liners" will receive quota shares worth millions of dollars. This is what folks dream of when they go to Las Vegas. But, it is unconscionable that the State of Alaska should be a party to such a program, especially when it stands to deprive future Alaskans of economic opportunities.

Unless the Alaskan members of the North Pacific Fishery Management Council vote to rescind their December 1991 action, next week, Alaskans will be preempted from this "backyard" resource. Please urge them to do so.

The existing management program must be upgraded, but the IFQ program is not the answer for Alaska.

Sincerely yours,

Norman Stadem
Economist

Copy to:
Senator
Adams
Collins
Cotten
Duncan
Eliason
Fischer
Frank
Halford
Hoffman
Jones
Kerttula
Menard
Pearce
Pourchot
Rodey
Shultz
Sturgulewski

Uehling
Zharoff

Representative

Baker
Barnes
Brown
Bruckman
Carney
Choquette
Davidson
Davis
Davis
Donley
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Hanley
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Jacko
Kubina
Larson
Mackie
Martin
Navarre
Parnell
Phillips
Phillips
Taylor
Ulmer
Zawacki

C2054/4 2c 5

Jack Keane
2152 Dawson Street
Anchorage, Alaska
99503

Barbara Franklin
Secretary of Commerce
15th & Constitution Avenue NW
Washington, D.C. 20230

May 15, 1992

Re: IFQ Proposal

Dear Secretary Franklin:

It seems my duty to write once again in opposition to the IFQ proposal which is steamrolling through the process over the vociferous opposition of the citizens of Alaska. The few exceptions are those who will line their pockets.

But as I considered sitting down to write, I wondered why I should bother. After sitting through yet another several days of testimony, excellent, clearly organized and specific testimony. Testimony not only of fishers affected, but State Senators, a gubernatorial candidate whith experience on the Council but no personal interest, and many others who represent carefully thought out positions as spokespersons for town and regional reps as well as those who represent fishing and processing interests.

All of testimony fell on the ears of those who are made deaf by either direct, massive, conflict of interest or an overwhelming ego involvement in this flawed plan. We are fools to waste our time in hopes that objectivity might have a chance in the face of the naked greed and direct conflict of interest which affects far too many members of the Council on this issue. The honest chairman quit in disgust last fall, making room for yet another special interest member. One Alaskan member represents only those in far Western rural Alaska and appears to be going along for the crumbs of Community Development Quotas which can be parsed out in that generally economically depressed area of Alaska. A bit of bacon for his small regional consitutency, and something to buy another vote.

Next in the process is the likely move of having the Council recommendations signed off in your office, and some press release issued regarding the careful consideration this got from the Council ----- thus representing the best for the resource, the people etc. This even though a cursory sample of the testimony would show the problems and flaws not solved, and the new problems soon to come.

But perhaps I'm too cynical, even wrong. Just perhaps the

agency which created the Council process will see that the process itself is endangered by a breakdown such this one. While nothing works perfectly, the Council process has generally served us well in Alaska. With a bit of tuning, particularly in the area of implementing the same safeguards against voting oneself a pocketful of money that even the most careless of small town city councils would have, the process would likely serve us well for many more years. I can't think of many political processes where the recipients of a million bucks worth of public benefit are allowed to vote on the issue directly. Can you?

Is this all worthwhile in a time when we need a functioning body such as the Council to consider the many issues which are developing in Alaska's rapidly changing fisheries? On the one hand there is following through to implement a flawed plan, nearly dead prior to the appointment of Tillion by a Governor elected by only 39% of the people in a flawed election, and supported, even designed, for and by those who plan on benefitting themselves.

Thanks for listening if you have. The ball is in your court, and it is time for me to park this typewriter and go fishing.

Yours truly,

Jack Keane

OPINION

A GOOD SUMMARY!

A declaration of war

Dear Editor:

April 22, 1992, is a day which should long be remembered by all Alaskans. On that morning, the North Pacific Fishery Management Council, an industry special interest panel composed of unelected political appointees, took the public fish resources which belong to the people of Alaska.

The council voted to implement a quota system which will give away all future commercial rights to halibut and black cod off the Alaska coast.

The NPFMC is a federal government panel. In passing the measure they disregarded the wishes of the duly elected representatives of the Alaska people, including Gov. Hickel, the state House of Representatives, and the government of virtually every coastal community in the state. (The Anchorage Assembly had no problem overriding the customary veto of our own mayor, hizzonner Tom Fink, to pass our own resolution.)

Several chambers of commerce, the Alaska Municipal League and others, expressed opposition. The well-founded objections of many conscientious individual Native Alaskans and Native organizations, including Sealaska Corporation, were cast aside without any consideration.

Ted Stevens, to his credit, opposed this measure. Tony Knowles personally testified against it. Attorney General Charles Cole expressed his belief that it is unconstitutional. Don Young and Frank Murkowski preferred to let the council have its say before expressing a position. We must hope that they will have sufficient influence with President Bush's Department of Commerce to see that this despicable quota plan is dumped in the trash.

It is time for the people to unite against this kind of crap.

Any politician who fails to stand up for the people of Alaska must go — by election or recall. We have stood aside for too long, letting extremists run our lives and getting the shaft in return for our cooperation.

These people aren't content to chip away at our freedom, they want to grab it all. I don't know how in the world to win this struggle, but I promise to make life a living hell for the tyrants who are trying to steal the birthright of our children.

Pete Farris
Anchorage

COPY

Lynne Blake
P.C. Box 54
Kasilof, Alaska 99610

The Honorable Franklin, Secretary
United States Department of Commerce
15th & Constitution Avenue, NW
Washington DC 20230

May 17 1993

Dear Secretary Franklin

My husband is an Alaskan commercial fisherman. He was born and raised in Alaska. He has been fishing for salmon and halibut for the past 18 years since he was 12 years old.

My husband has worked hard to provide a wonderful life for our two children and myself. In the spring and fall he fishes halibut and in the summer he fishes salmon. Now it appears it will all change.

In 1989 which was also the year of the Exxon Valdez oil spill we purchased a boat which in our opinion would be the perfect boat to long-line halibut and also to fish salmon. We did not get to fish salmon in 1989 because of the oil spill. We were fortunate we could, at least, earn some money from halibut.

We are a small boat fishery like the majority of Alaskan fishermen. Glen Allen who wants these IFQ's does not represent Alaska. I am so astounded that the North Pacific Fisheries Management Council actually voted in favor of IFQs. Particularly since there was an overwhelming majority of testimony against IFQ's at the April NPFMC meeting. The only people who will benefit from them are a few wealthy boat owners and the large Seattle based companies. They have no ties to Alaska like the small boat fisherman.

There needs to be some sort of management but not IFQs. Lets listen to the other alternatives which according to the chairman of the NPFMC were never even analyzed.

The economic impact of IFQs will be hard on the fishing communities IFQs will make it impossible for any new people to enter the fishery

Please let our children keep their future Don't take Alaskas fisheries away from Alaskans.

My husband Bill would have loved to write a letter but due to critical timing I had to. Bill is out black cod fishing.

Thanks for your time in reading this.

Sincerely,

Lynda Blake

COPY

William Fox
MFS Asst. Administrator
1335- East West Highway
Silver Springs, Maryland 20910
Room 9334

May 22, 1992

Dear William Fox,

I have sent this letter to Barbara Franklin in the Commerce Department and I urge you to give this matter all the support you can.

Dear Secretary of Commerce Franklin,

This is in regards to the North Pacific Fishing Management Council's approved plan for individual fishing quota's for sable fish and halibut. I strongly urge you to quickly sign this IFQ Plan. For far too long we have put up with the present situation which risks lives, wastes fish and lowers the quality of our product.

Especially with the one day openings for halibut it is either fish, regardless of the weather, or lose the season. Some of the boats are setting more gear than they can possibly pull, just leaving fish to rot. Countless gear is lost due to boat congestion producing the same loss.

Handling large amounts of fish in a short time means less care is taken in handling on the boats which produces a poorer product. Long waiting periods to unload also lead to deterioration in quality at the dock.

There is probably no plan that everyone likes. The principle objections I hear come from people who are relatively new to these fisheries, but who would be in favor if they had the qualifying time that many of us have who have depended on these fisheries for many years.

What we have now is clearly not working. The IFQ Plan is the best solution to the problem. Please sign this Plan as soon as possible.

Sincerely,

Robert Phillips

Robert Phillips
P. O. Box 2670
Sitka, Alaska 99835

Barbara Franklin
Secretary of Commerce
14 Street and Constitution Ave. N.E.
WAshington D.C. 20230

May 22,1992

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Sincerely,

Robert Phillips
P. O. Box 2670
Sitka, Alaska 99835

C205791

Albert & Deborah Utter
PO Box 3049
Kodiak, AK 99615

The Honorable Barbara Franklin
Department of Commerce
15th and Constitution
Washington, D.C. 20230

May 26, 1992

Dear Ms. Franklin,

Once again I feel compelled to write in regards to the Individual Fishing Quotas recently submitted to you for your approval.

I can't stress enough the disappointment I felt when I read that the IFQ's were passed by the North Pacific Management Council. Was I surprised? Not really, considering the fact several of the gentlemen on the council have much to gain by this passing. Even my husband made it possible for one of its members boat to gain a share.

My husband is a hired skipper so he's made it possible for a couple of boat owners to receive a share. Unfortunatly if this share quota goes through as written my husband will receive nothing for his years of hard work and dedication to the fishing industry.

Not only will my husband and our family suffer, so will other hired skippers, cannery workers, crew members and small boat owners.

I believe something needs to be done to protect our fishing industry, but why a program where a few will benefit? The North Pacific Management Council seemed to close their ears to suggestions of a traditional management method. They seemed unwilling to listen to any idea other than the one that Clem Tillion is adamant about.

I feel the IFQ proposal has too many loose ends and too many unanswered questions, as you to will find. Send this proposal back to the North Pacific Management Council, where they can work on something that will not exclude so many from the only livlihood they know.

Thank you for you time.

Sincerely,

Deborah Utter
Deborah Utter

cc: Stevens
Young
Fox
Murkowski

COPY

F10

27MAY,1993
KODIAK,AK.

Dear, Barbra Franklin, SEC. OF COMMERCE

I've wrote your office twice and not received a reply, Once about on-shore, off-shore ; And again about the appointment of Clem Tillion to the North Pacific Fisheries Mangement COUNCIL: LET ME SAY , That I not be in favor of his APPT.:
Madame Secretary, WE are embattled here on this ROCK. With Once upon -A-Time Proponents of the I.F.Q./I.T.Q.s DO not have to scramble for Credibility; Because even-though I will Benefit by the proposition... I am steadfast in MY opposition. And I Oppose said measure for the following Reasons. #1. The I.F.Q.s benefit only the Big Boat owners. #2. Seattle Quota-shares are worth more than Alaskan-Quota shares. #3. I oppose almost anything with CLEM'S Handywork on it;Save his Resignation.....
#4.Small boat owners as myself will get less than our fair Share, Because If can't fish an opening due bad weather; WE lose points and a percentage of our optimum share.
And survivial for a Small Vessel is as Important as Catching FISH!
#5. I fish a 28-ft. ST. Pierre Dory ;much as my Grandfather Did. And safety is a primary concern; NOT just for myself, But for others who go down to the SEA in small Vessels as MINE. #6.THIS measure eliminates growth in the Fishery. IF the price of the CANADIAN shares are any indication at $6.00 per L/B. People as myself could not afford to Buy More-OR someone entering the fisherywould be hard put to buy -in; ONLY the Large Consortiums& BIG BOATs will be able buy more shares....#7. The minority is Triumphing over the wishes of the majority on this ISSUE. ALL OVER ALASKA people oppose this I.F.Q./I.T.Q. ave in two places HOMER,and SOUTHEAST- Alaska.. I don't pretend to speak for anyone, But myself..... IF YOU CAN GET EVEN TWO fishermen to agree, On any ISSUE. Ya,done GOOD!

COPY

May 29, 1992

F/V Eclipse, Inc.
Kelly Brennan
P.O. Box 50
Homer, AK 99603

To: The Honorable Barbara Franklin

As owner of an eleven year Alaskan Corporation based out of Halibut Cove and having been born and raised in a fishing community, I have a fair accounting of events concerning the commercial fishing industry.

My expertise is in Halibut, since 1965, and black cod, since 1978. This is including the grounds of the West Coast and all of the Alaskan Gulf, the Bering Sea along with the Aleutian Chain.

The off shore fishery has always been dangerous and in years past consisted of large vessels and men with high seas experience.

In recent years developments have forced boats and men of all classes far offshore, making an already proven dangerous situation very tragic indeed. Coast Guard statistics will show that.

I plead to your better judgement when I ask for your support in creating a halt to this madness. It is taking an increasing number of lives every year and leaving millions of pounds of quality fish on the dock or in small boats that carry little of no ice. It is imperative that action be taken before regulation is impossible and one of the oldest fisheries is completely lost in chaos.

My boat was built in 1927 and has fished halibut and black cod in Alaska every year since. I hope it can continue to do so.

I am very concerned. And for the sake of my family here in Halibut Cove, we pray for your full support on the IFQ issue.

Respectfully yours,

Kelly Brennan

Kelly Brennan
Owner & Captain of the F/V Eclipse

KB: kf

VERE T. MURRAY, Ph.D.
P.O. Box 237, Seldovia, Alaska 99663-0237
(907) 234-7646
May 29, 1992

Clarence G. Pautzke, Executive Director
North Pacific Fishery Management Council
Box 103136
Anchorage AK 99510

Dear Mr. Pautzke:

This letter is in response to your May 6, 1992 request for comments on a proposed moratorium on entry into all fisheries under council jurisdiction.

It is not clear to this reviewer that the Council has identified the disease. You have listed a number of symptoms and proposed palliative treatment, but nowhere have you determined the causative agent. Therefore, you are unlikely to achieve a cure.

The problem you have described is caused, at least in part, by your own actions and the actions of other related bureaucratic and legislative entities. The council's plans for limiting access into fisheries, the Fishing Vessel Obligation Guarantee and Capital Construction Fund programs and any similar government programs which meddle with the natural economic capabilities and choices of the productive sector are the diseases (problems).

The Draft EA/RIR/RFA document is severely deficient as it does not consider alternative actions directed at the disease described above rather than the band aid treatment chosen. It does not even attempt to assess the magnitude of the contribution of these causative agents. It does not consider the impact upon the nation of nurturing the pregnancy of the bureaucracy in the manner proposed. It ignores the fact that the "solution" you have proposed ultimately decreases employment in the productive sector while it increases employment in the non-productive sector. This can only have a negative impact on our floundering economy.

Tightening of the death grip the bureaucracy has on the nation's productive capacity in the guise of "rationalization" of fisheries has little chance for real success. The product of continued supercharging of the productive engine will not be cured by using larger brakes. Cut off the fuel supply!! Expansion of the bureaucracy at the expense of productive capacity in the name of promoting economic efficiency is the ultimate hypocrisy.

Planned economies did not work in the rest of the world - they will not work here either.

Let me just make one final comment - save yourselves a lot of hassle and make the set of boats allowed in via this moratorium as large as possible! Choose :

Option [illegible]
Option [illegible]
Option [illegible]
Option [illegible] But change Jan 1, 1992 to date of adoption.
Option 8. [illegible]
Option 12 Exempt all halibut and sablefish operators.

Your hope to "rationalize" the fisheries via privatization and free market

allocation may eventually take care of overcapitalization, if there is any, but it is an essentially irrevocable action which cannot be easily corrected if it fails. It represents a draconian symptomatic treatment of a disease still left untreated.

Sincerely,

Jere Murray

Jere T. Murray

CC: Each Council member

COPY

[illegible] NE Lincoln Road East
Poulsbo WA 98370
May 30 1992

[illegible]

Dear [illegible]

My husband has been fishing [illegible] [illegible] years in the boat his father built in 1945. His father is retired now after a long fishing career beginning in [illegible] and continuing until [illegible]. My grandfather was a halibut fisher [illegible] of his life too. My son is 14 and he [illegible] looking at [illegible] permission for himself. For my three children we are looking toward the Bristol Bay salmon fishing to provide jobs that will pay for college education. [illegible] "Why salmon?" The big reason is that it is a limited entry program. We know the [illegible] [illegible] are stable and the number of fishermen who [illegible] the salmon.

Halibut is not a career fishery any more. We cannot make a living from 5 days of fishing. Black cod has been a good means of supporting our family since 1979. Unfortunately, [illegible] many other boats are in competition [illegible]

C205945 14

ALAN OTNESS (907) 772-3458

F/V COMMANDER BOX 317 · PETERSBURG, ALASKA 99833

June 1, 1992

Barbara Franklin
Secretary of Commerce
14th St. and Constitution Ave. NW
Washington, DC 20230

1992 JUN -8 P 3:15

Re: Support of Individual Fishing Quotas

Dear Secretary Franklin;

I am writing to support the implementation of Individual Fishing Quotas for the halibut and black cod fisheries off Alaska. Even though I have some concerns about specific aspects of the proposed program, there just does not seem to be any other acceptable solution to the problem of too many boats, too much waste, and too little time to conduct an orderly fishery. The opponents of this plan have not been able to show me a viable alternative. They complain we have not been studying this long enough, but many of us started working toward a solution 15 years ago when the magnitude of the problems began to steadily increase.

I have been long-lining for 30 years. In my opinion the current status of the halibut and black cod long-line fisheries with short seasons and too many boats is appalling. We are wasting too much fish and we are not able to maximize the value of the resource under the current system.

The IFQ program makes a lot of sense to me and will provide us with a logical, orderly fishery that will have more value to fishermen and local communities. The program will also provide consumers with products of higher quality, and they will be available fresh for much longer periods of time than under the current "system".

Let's get on with the IFQ program.

Sincerely,

Alan D. Otness

COPY

Sharol Otness
Box 317
Petersburg, AK 99833
June 1, 1992

Barbara Franklin
Secretary of Commerce
14th St. and Constitution Ave. NW
Washington, DC 20230

Re: Support of Individual Fishing Quotas

Dear Secretary Franklin;

I write to support Individual Fishing Quotas for black cod and halibut off Alaskan shores. Many have written to you from different points of view, and I have been involved with this industry all of my life so I can discuss most of the aspects of this issue in varying ways. The main thing I want to say in this letter is that there is a good deal of terror felt by those on shore when the boats go out long-lining under the current management system.

Our husbands, fathers, friends and relatives go fishing when they are scheduled to do so. The folks who set this schedule sit in town in their warm offices while the fishermen take their chances with what the weather deals them. There are no second chances, no time to say "this is not worth it, we'll try when the weather comes down". With so few days (hours) to participate in these fisheries they all go and try, even when it is not safe. Look at the vessel and life loss during these fisheries when you consider maintaining the present system. Every fisherman has boat payments, insurance payments, gear expenses, and just general living expenses. Fishermen are not being given an opportunity to meet these obligations in anything resembling a sane manner. These people go out in something akin to the stagecoach land-rush days, and many people and vessels do not return.

We live in terror until we hear from the boats at the end of the opening. We are first concerned about the men, and if anyone was injured. Then we worry about the vessel and its equipment because of the special stresses these wild fisheries place on them. Then we wonder if they got all the gear back or if we have to purchase more before the next opening. THEN we ask if they caught any fish..... It is a crazy method to make a living. If things had been like this when we purchased a boat, we would not have purchased it. Things have deteriorated so much over the years that an industry that used to carry a moderate risk factor has become an incredibly high risk way to make a living. All the new Coast Guard regulations in the world will not have as much positive effect on safety in the long-line fisheries as will passage of the IFQ system.

Sincerely,

Sharol Otness

COPY

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C206012

TONKA SEAFOODS
P. O. BOX 1420 • PETERSBURG, ALASKA 99833 • (907) 772-3458

June 1 1992 P 2:32

Barbara Franklin
Secretary of Commerce
14th St. and Constitution Ave NW
Washington, DC 20230

Re: Support of Individual Fishing Quotas

Dear Secretary Franklin:

I am writing in support of implementation of Individual Fishing Quotas for the halibut and black cod fisheries off Alaska. The way these fisheries are presently "managed" would be unacceptable in any other industry in the world. When all the product for an entire year shows up to be processed in two approximately 3 day periods, the following things are sacrificed:

- point-of-catch quality: impossible to clean and chill mass poundage of product while still fishing under maximum # of hours limit
- dock-side product quality: impossible to adequately process such a mass of fresh product in a timely manner
- point-of-purchase quality: variable at best, and much product processed in a hurry is shoddy. Most product available only in frozen state for 95% of the year
- Safety: crew member safety is completely disregarded by this system: boats must fish according to the calendar, not the weather. Crews stay up the entire opening to maximize catch.
- Dock workers work long, long hours over few days, and then have no work at all.
- Freight companies are stressed to the maximum trying to move all fresh product for the year at once, instead of over time.
- Waste of resources created by not being able to keep more than one species of fish, being in a hurry and killing the by-catch species, and the lost gear left on the grounds which continues to fish.

Even though I have some concerns about specific aspects of the proposed program, there just does not seem to be any other acceptable solution to the problem of too many boats, too much waste, and too little time to conduct an orderly fishery. The opponents of this plan only complain and have not provided a viable alternative. Something must be done now before there is no fishery left.

Sincerely,

Wendel E. Gilbert

Wendel E. Gilbert

375

COPY

STEVEN K. STREITZ
301 South 6th Street
Mount Vernon, WA 98273

6-2-92

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" St. N. W.
Washington. D.C. 20230

Dear Secretary of Commerce Barbara Franklin.

I am writing urge you to approve the Individual Fishermens Quota program as presented by the North Pacific Fisheries Management Council.

Halibut and Sablefish bycatches could be eliminated due to simultaneous harvest of both species. Danger due to the necessity of participation in short fishing periods in bad weather could be reduced. Seldom does a one day halibut opening (two or three per year) go by that there is not loss of life or property. Intelligent decisions cannot be made concerning weather. We simply "do it".

I am a fishing vessel owner and have been a commercial fisherman since 1968. A resident of the state of Alaska for twelve of those years. I participate in other fisheries that have gone the way of limitation and licensing and am thankful for it even though I have had to purchase all of the licenses I now use to fish. The earnings to purchase these licenses or permits have come from commercial fishing. Hard work and committment have allowed myself and many of my crewmen to participate in commercial fishing in this manner.

The Canadian IFQ program has allowed their fishermen to deliver quality fish in a timely manner and the market absorbs the fresh fish at approximately $2.75 U. S. per pound. We harvest and deliver tens of millions of pounds of halibut, caught in one day by thousands of boats. The markets are flooded with fresh fish. The majority of the fish is then frozen an a quality frozen fish is not nearly as desireable nor marketable as a good fresh fish. U. S. fishermen received about $.80 U. S. per pound on the last halibut fishing period.

I stated to the North Pacific Fisheries Management Council during their deliberation on this program that they have an opportunity to do something right in this chaos of fisheries and marketing management. I now say the same thing to you. Offshore fishermen in the North Pacific have been fishing with this ruling in limbo for six years.

The IFQ program would eliminate discarding of several fish species, gear conflicts due to less boats on the fishing grounds at one time, life and property lost due to working in bad weather. It would improve our marketing and allow us to save our fish resources. Please approve the IFQ.

Sincerely.

Steven K. Streitz
F/V PATRIOT

18

C205978

1911 8th St
Anacortes, Wash 98221
6-3-92

Honorable Barbara Franklin
Secretary of Commerce
Dept of Commerce
Constitution Ave & 'E' St. NW.
Wash, DC. 20230

Honorable Barbara Franklin

I believe the current proposed Sablefish/halibut IFQ program for the Gulf of Alaska and Bering Sea to satisfactorily address the most important aspects of these fisheries i.e.:

1) Quality product to consumer.
2) Disadvantaged communities
3) Fisherman and future IFQ holders
   a) Can plan operations in a business like fashion
   b) Can operate in a safer manner.
4) Environmental & conservation aspects improved:
   a) Reduced gear loss; b) reduced discards of bycatch.

Originally I would have preferred open access as in the past, but the problems of bycatch & increased effort from displaced fisheries and new fishermen will devastate the 100+ year old halibut fishery & more recent sablefish fishery.

Sincerely

COPY

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19

BIO ECONOMIC RESEARCH AND ANALYSIS

NORMAN STADEM
ECONOMIST

1826 E. 26th Ave.
Anchorage, AK 99508
(907) 272-0908

June 3, 1992

Honorable Walter J. Hickel, Governor
Office of the Governor
State of Alaska
Third Floor, State Capitol
P.O. Box 110001
Juneau, Alaska 99811-0001

Dear Governor Hickel:

Your answer to a question regarding IFQ for sablefish and halibut from a questioner on the APRN call-in of May 27th, leaves one with the impression that you have been mis-advised on a very important point. In your reply to the question, you gave the impression that you have been advised that one of the positive results of the IFQ program will be to eliminate or reduce by-catch waste. The IFQ program, as presently written, will do nothing to reduce by-catch waste or prohibited species discards. There is one minor exception to this. If a longliner holds both sablefish and halibut IFQ, both species can be retained so long as one holds quota for both. But the serious by-catch by the trawl fishing fleet will not be affected. In fact, the trawl fleet is not allowed to hold these IFQs, so any halibut or sablefish that they catch will be treated as by-catch, just as it is now.

Apparantly someone on your staff has misinformed you on this point.

The model underlying the IFQ program depends on several simplifying theoretical assumptions. These include continuous investment and associated cost curves. Furthermore, risks and uncertainties associated with fisheries are assumed away. Financial risks and associated opportunity cost of capital are ignored. The model is elegant in its simplicity, but it leaves some very significant issues on the sidelines.

Reality is that capital is "lumpy" -- it comes in units of thousands or millions of dollars. Serious risks and uncertainties must be considered. There is also

opportunity costs associated with capital. Taken together, these factors argue in favor of under capitalization rather than over capitalization.

Why then, do we see what appears to be overcapitalization? Primarily because government programs distort the relevant markets. Loan guarantee programs reduce private financial risks. Subsidy programs reduce the private cost of capital. The expectation that IFQs were coming has stimulated investment in the hopes of receiving a free quota. Society is forced to bear these risks and underwright capital cost. Thus, private investors are responding rationally to private risks and costs. But, investment exceeds the socially optimum level because these government programs distort the markets.

Even after the IFQ program creates its windfall millionaires, tax payers will continue to provide the subsidies. This is a double insult to taxpayers, many of whom are much worse off than the windfall recipients. This is especially true for those long time hired skippers and crewmen who will be disenfranchised by this egregious welfare program.

The conventional capital markets do not serve rural communities of Alaska very well. This is because most villages have little in the way of marketable capital that can serve as collateral. This will put rural residents at a disadvantage when competing for funds to buy quota shares. As a result, as most coastal city administrators have testified, there will be a net outflow of IFQs from small villages over time. The result could be devastating to the economies of these coastal communities.

The purchase of IFQs adds to the cost of capital but does nothing to improve the efficiency of capital. In my previous letter of April 16, 1992, (excerpted below) I gave an example of someone who does not receive initial QS but subsequently tries to purchase QSs on the market. As I demonstrate, there is little chance that this can be done by someone starting out in the fisheries.

"The legacy of IFQ management will be to have given

away Alaska's birthright to these ocean resources. Most Alaskans will not be able to buy quota shares (QS). (Please refer to page 3 of my February 6, 1992, paper for more detail.) Only operators with large initial QSs will be able to buy them by averaging the cost. The Division of Investment, Section A, permit loan is limited to 80% of the lesser of appraised value, or cost, up to a maximum of $300,000. At $10 a pound of QS, this will buy around 37,500 round weight pounds of quota. Just the down payment will be $75,000, hardly pocket change to most coastal villagers. The debt service on $300,000 at 10% over 15 years is $39,500, annually. At $1.60 per pound dressed weight, assuming 75% recovery, the total revenue from a 37,500 pound quota is $45,000. This leaves the fisher with $5,600 to pay all her/his other expenses including 30% crew shares of $13,500. Clearly, negative profit is an impossible situation."

Over the past decade or two, there has been a movement in the center of gravity of the fishing industry to Alaska. This trend will continue as infrastructure is developed in Alaska. Proximity to the resource gives Alaskans a very big advantage when combined with supporting infrastructure and service facilities. The control that the Pacific Northwest has enjoyed over Alaskan fishery stocks has diminished as more and more infrastructure is developed in Alaska. Proximity to major markets in the Orient and associated shipping routes are important contributors in this shift northward. One important result of IFQ will be to stop or slow this shift of the center of gravity northward. It will essentially work to keep control of the fisheries in the Pacific Northwest (primarily Seattle area).

The management alternatives are not limited to the IFQ program or the status quo. Just about anyone one talks to realizes that the "status quo" program will no longer work. But the North Pacific Management Council has done little to make open access work. There are many untried alternatives under the open access program. The arguments against these alternatives is that most impose inefficiencies on the fisheries. But when the inefficiencies imposed by the IFQ program are examined, it is unclear which program will impose the

most egregious inefficiencies.

The drastic changes in property rights to the fisheries will disenfranchised many with a few benefitting handsomely from this windfall. In fact many will become instant millionaires. Not as a result of their efforts, but as a gift from the public at large, i.e., from the federal government. This amounts to a grandiose welfare program for a few and disenfranchisement of many. Those who benefit the most have probably drawn their investment out of their boats over the years in order to minimize income taxes. Thus, the new comers or the hired crews have as much at risk as the so called boat owners who get the windfall.

There are many Alaskans who feel that it was unfortunate that Mr. Carl Rosier, Commissioner of Alaska Department of Fish and Game, was not given his rightful seat on the North Pacific Fishery Management Council.

We hope that at this late date you will assert your considerable influence in Washington D.C. and work to have the Honorable Barbara Franklin, Secretary of Commerce, reject the IFQ program for a more humane and equally effective management program. These will be forthcoming.

Sincerely yours,

Norman Stadem
Economist

Copy to:
Alliance Against IFQs
Senator Zharoff
Representative Jacko

IMPACT ASSESSMENT, INC.

2160 AVENIDA DE LA PLAYA, SUITE A • LA JOLLA, CALIFORNIA 92037

TELEPHONE (619) 459-0142 • FACSIMILE (619) 459-9461 • MODEM/BBS (619) 459-9469

June 5, 1992

The Honorable Barbara H. Franklin
Secretary of Commerce
14th and Constitution Ave. N.W.
Washington, D.C., 20230

Dear Secretary Franklin:

Several months ago (in November, 1991) I was contacted by the Deep Sea Fishermen's Union of the Pacific and asked to provide a preliminary review the potential impact to the Union members of the proposed sablefish and halibut IFQ system.

While the report is only a preliminary review of the issues, it does provide a succinct summary of: (1) the organization and history of the union; (2) the characteristics of its fishermen; (3) its historical and contractual relationship to the FVOA; and (4) the character of the potential effects of the proposed IFQ on the economic welfare of the fishermen, the social fabric of the associated fishing community, and the viability of their union. I hope the information contained in the report will prove useful and timely.

If, after reviewing the report, you have any questions I would be pleased to respond.

Sincerely,

John S. Petterson, Ph.D.
President

PRELIMINARY SOCIOECONOMIC IMPACT REVIEW

of the

North Pacific Fishery Management Council
Sablefish and Halibut Fixed Gear Fisheries
Individual Fishery Quota System

Draft Implementation Plan

Prepared for the

Deep Sea Fishermen's Union

Prepared by

IMPACT ASSESSMENT, INC.
2160 Avenida de la Playa, Suite A
La Jolla, California 92037

December 2, 1991

The objective of this report is to provide the North Pacific Fishery Management Council and the National Marine Fisheries Service with: (1) a brief overview of the history of the Deep Sea Fishermen's Union (DSFU); (2) a discussion of its fishermen's dependence on the halibut/sablefish fishery for its continued social and economic viability; and (3) to raise concerns regarding the potential loss of livelihood in the event allocated IFQ's are subsequently transferred to new ownership or control.

1. Historical Overview to the Deep Sea Fishermen's Union

History: The Deep Sea Fishermen's Union (DSFU), was founded on November 1, 1912, and remains the oldest organization of crewmen and skippers in the North Pacific. The formal and informal social relationships, values, and economic relationships that have evolved over these eight decades provide a model of how stable fishing traditions are formed and endure.

The Halibut and Sablefish Fisheries: The halibut and black cod fisheries in which these fishermen participate are carried out primarily in the waters of the Bering Sea and Gulf of Alaska on vessels that conduct 7-8 trips per year. In excess of 80% of the halibut and 90% of harvested sablefish are delivered to small Alaskan fishing ports, resulting in acknowledged economic benefit to local Alaskan communities (fuel, bait, lodging, food, supplies, repairs, etc.) and contributing to the local community development objectives of the North Pacific Fishery Management Council and U.S. Department of Commerce, NMFS. Given the extended period over which relationships have been built in these communities, it is not surprising that DSFU members are easily recognized, welcome, and respected visitors to these communities.

Membership: The union currently represents 304 longliners (262 active, 42 lifetime, as well as many retired members) that fish on 40 longlining vessels of the Fishing Vessels Owners' Association in the Gulf of Alaska and Bering Sea. Members of this union are committed long-term fishermen. The average fisherman in the DSFU has been a

member for over two decades -- many have been members for three and four decades. Only a very small percentage of its members have been fishing for less than five years, and none could be considered "casual" fishermen.

Role of the DSFU: The DSFU has evolved to meet a wide range of fisherman needs that would otherwise have gone unmet. The Union, for example, provides the primary job referral service on which both its members and its principal participants -- the Fishing Vessel Owners Association (FVOA) -- depend for a successful fishing enterprise. The Union also provides a number of "value added" services which sustain an efficient fishing operation. These services include aid to stranded members including airfare and other assistance in the event members are without resources to return home or to rejoin their crew. The Union also underwrites, with the assistance of a grant from Seattle Fishermen's Memorial, a thorough, well-designed safety program intended to ensure the highest operating standards in the industry. The Union also represents a vast array of pooled resources and experience which has been brought to bear on many key organizational, institutional, and legal contexts to ensure equitable resolution of potential problems. The DSFU also provides its members with their only effective voice in regulatory, administrative, and other decision-making processes (i.e., IPHC, NPFMC, PFMC, etc.). The Union also provides a death benefit program and is one of the few fisherman organizations in the nation to sponsor a retirement program. Finally, as a non-affiliated local union, it is able to precisely represent the interests of its members without tailoring its response to the needs of any parent organization.

The Union provides a critical service to the vessel owner's association. Through its agreement with the DSFU, owners are guaranteed direct access to a pool of highly experienced crewmen, with clearly defined expectations and crew requirements and, therefore, a highly efficient crew complement. As a result of the experience and training of DSFU membership, owners are also assured that the highest safety standards are

achieved, and that potential injury and loss of life, in an inherently risky venture, are kept to a minimum. The DSFU, through negotiated increases in "boat share," have also shared the increased cost burden of insurance coverage for lost cargo and sinkings. The FVOA and DSFU also share a strong conservation ethic, membership on common boards, participation in a wide range of conferences. Both organizations have established a fixed grievance procedure for unresolved disputes between crews and vessels -- to be arbitrated by a committee of union members. This is one of the strongest guarantees of fair treatment for crewmembers in the fishing industry.

The Set Line Agreement: The DSFU has developed a formal agreement with the Fishing Vessel Owners' Association (FVOA) which defines the distribution of costs and benefits of participation in the halibut and black cod fisheries between vessel owners and fishermen. This agreement, according to Bob Alverson, the FVOA manager, is "the only high-seas working agreement in the North Pacific" and provides a standard against which potential future change can be measured.

This distribution is set forth under stipulation #4 of the Set Line Agreement:

> GROSS STOCK shall consist of all income from every kind from fishing operations and shall be distributed by deducting from it the following items in the order given: (a) GROSS STOCK EXPENSE; (b) BOAT SHARE; (c) CREW EXPENSE. The amount remaining after these deductions have been made shall be equally divided, . . . among all members of the crew including the master;. . .

Stipulation #6 states that: BOAT SHARE FROM ADJUSTED GROSS STOCK ON LONGLINING TRIPS for all Association vessels shall be as follows:

Vessels 1991 ..... 31.0%
Vessels 1992 and thereafter 31.5%

Thus, for the 1991 season, the crew and master would be entitled to equal shares of 69% of the after expense returns from the season's effort, for 1992 and thereafter, they would be entitled to 68.5% of the after expense return. *It is this formula that will be put "at risk" as the value of IFQs increase and as new investors come to replace the existing cadre of owners.*

2. Economic and Social Dependence on this Fishery

As noted above, the fishermen of the DSFU form the historical backbone of the north Pacific halibut and sablefish fishery. This fishery, in turn, is the very lifeblood of the halibut fisherman, his family, and his community. A number of specific points illustrating the stability and duration of this relationship are provided below:

1. DSFU members have fished these resources since the early 1900's, forming an enduring social and cultural heritage.
2. Halibut longlining is a highly specialized skill requiring from two to three years of experience in order to be considered "qualified."
3. Many DSFU members are second and third generation halibut fishermen with broad and complex family traditions in this fishery.
4. Most of the membership knows no other trade – having spent their entire lives in the halibut fishery – and are fully committed to the values and lifestyle associated with their chosen careers.
5. Many would be incapable of switching professions at this point in their careers and would have to remain in the fishery, perhaps assuming lower paid positions, if excluded from their traditional employment.
6. They are virtually all home owners and established long-term community members centered in the Ballard area.
7. They have established close and enduring social ties and relationships among themselves and between themselves and their communities.
8. The vast majority are married with school-aged children.
9. The average age of the membership is 38-40 years -- which makes the DSFU among the "oldest" fishermen's unions in the nation.
10. Average membership in the DSFU is greater than 20 years with some active members maintaining 40 and 50 years of continous membership.
11. The DSFU serves an important social and cultural role for active fishermen and remains the center of interaction for many of older and retired union members.

Clearly, the Deep Sea Fishermen's Union serves many of the functions of traditional unions as well as many functions that are unique and critical to this industry.

3. Second Generation Ownership

The Deep Sea Fishermen's Union is on record in support of the proposed halibut and sablefish IFQ system. The membership appears little concerned with the potential of the proposed system to result in immediate change in the relationships and agreements that have evolved over the last 80 years with the Fishing Vessel Owners Association. It is expected, in fact, that the proposed IFQ system will result in a more efficient and effective fishery. The DSFU concern is not with the initial distribution of IFQs but with the risk of future overcapitalization and its implications for the halibut fisherman. That is, the principal concern of the DSFU is that, as a result of the proposed NPFMC IFQ action under consideration, future "boat shares" will increase and the returns to the traditional crewman/fisherman will necessarily decline over time. At the risk of oversimplifying a complex process, the following example will at least serve to outline the potential problem:

1. IFQs are issued in 1992 based on the formula developed by the NPFMC.
2. This allocation results in the owner of the vessel "Tidewater" (a pseudonym) receiving approximately 300,000 lbs. of the total quota.
3. This vessel fishes its quota for two years with no change in its traditional relationship with the DSFU.
4. The vessel is sold in 1995 for $250,000 with the buyer purchasing its IFQ for an additional $1,200,000.
5. The buyer, in order finance the purchase, borrows the $1.2 million from a bank at 10% interest, resulting in payments of approximately $120,000 per year.
6. The buyer, in order to make these additional payments, must extract a higher percentage of the returns from the fishery, significantly reducing the percentage allocated to the fishermen (or to safety equipment or other necessary crew expenses).
7. The buyer, because he must increase the "boat share" to cover his payments, must withdraw from the DSFU contract and seek inexperienced or less qualified fishermen willing to fish for substandard wages or under substandard conditions.
8. The ultimate outcome: (a) the vessel is withdrawn from coverage under the DSFU contract; (b) the wages to its crewmen are reduced; (c) less qualified and experienced crewmen are hired to displace union members; and (d) the 80-year effort to achieve an equitable balance of the interests of the vessel owners and fishermen is negated.

It is not difficult to see the logic of these concerns. As the current generation of vessel owners reach retirement age, or for any number of reasons decides to sell their interest in the enterprise, they will seek to maximize the value of their equity by selling at the highest price. The value of the IFQ, much like a limited entry permit, will have become an established element of the sales price equation. We have all observed how the rising cost of the limited entry permits is consistently mirrored by a decline in crew share in all limited fisheries -- and one can certainly anticipate a similar trend in the event IFQs are ultimately issued. Clearly, it would not take many such transactions to have an enduring negative impact on DSFU membership and viability.

4. Conclusions

The DSFU does not oppose the proposed IFQ allocative process -- the vessel owners, in their opinion, have earned what is, in essence, the permanent appropriation of a fixed percentage of the halibut and sablefish resource base. Their concern is that the costs of financing the sale of this entitlement to subsequent generations of owners or investors will be borne not by the investor but by the "crew share" (food, safety, or other operating expenses) -- i.e., by the fisherman. *A declining crew share would, in turn, threaten the economic welfare of the fishermen, the social fabric of the fishing community, the health and safety of future fishermen, and the very viability of their union.*

Based on our review of the proposed Draft Implementation Plan for the Sablefish and Halibut Fixed Gear Fisheries Individual Fishery Quota System provisions as currently configured, there appear to be no concrete measures under consideration that would serve to protect the fishermen themselves from bearing the potential long-term social and economic costs of the proposed action.

While sufficient time was not available to carry out an adequate cost/benefit analysis, or to assess the complete range of potential socioeconomic impacts of the proposed IFQ system, it does not appear that the proposal poses any real risk to current owners, little immediate risk to current fishermen, but considerable potential long-term risk to the DSFU and its future membership.

C206089 21/37

COPY

[illegible] 26, [illegible]

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Washington, D.C. 20230

Dear Honorable Barbara Franklin:

Recently the North Pacific Fisheries Management Council has voted in favor of the individual quota system for the halibut and blackcod fisheries. We hope that you will support this system as it will bring order to what is now an inefficient and [illegible].

There are many reasons why the individual quota system should be established:

1. Reduced danger to life and property.
2. Maximizing the quality of the fish and thus the value
3. Reduce the high cost of producing the product by establishing a fishery in which the fisherman can fish in conjunction with other fisheries enabling him to reduce wastage, costs, and time.

During the last halibut opening in 1991, weather limited the ability of the fleet to retrieve gear that had been set at the beginning of the opening. It was estimated that at least a third of the gear was still out at the end of the opening. By law when the opening is over, we are required to go to port and offload before going back out and retrieving any gear that we were unable to bring in. The fish on this gear are a total loss to both the fishermen, the public, and the resource. This would be practically eliminated by the implementation of this new system.

The new individual quota system would also eliminate the virtually unchecked cheating that has gone on in the past few years. Every imaginable scheme has been used to get that last pound. The quota system would restrict these fishermen to just their quota allowed.

The [illegible] for the fishermen having to travel long distances to get to the grounds on the day of fishing, regardless of weather conditions, would be eliminated. We would appreciate [illegible] you could give to this [illegible] [illegible] of [illegible]. Thank you.

Sincerely,

Vincent L. Cameron

Vincent L. Cameron
[illegible]87 [illegible] Place
[illegible]dale, Wa. 98248

C206097 [illegible] 22

6-6-72

Mr. Franklin

Please reconsider [illegible] 38[illegible] before voting on the I.F.Q. plan for Alaska. Many of us with these small family fishing boats will be devastated. We moved to Alaska so that we could have a better lifestyle [illegible] with our children. Our years of hard labor in this industry appear to mean very little when compared to the big money interests from Seattle. The advancement of the quota system will not only affect us personally but also our community & eventually our state. I hope you'll consider the ramifications of the I.F.Q. system, — please vote NO!

Sincerely

Calvin Thomas, Jerrald Toney, [illegible]

[illegible]

[illegible]

JERE T. MURRAY, Ph.D.
[illegible]
[illegible]
June [illegible] 1992

Steve Pennoyer, Director, Alaska Region
National Marine Fisheries Service, NOAA
Box 21668
Juneau AK 99802

Dear Mr. Pennoyer:

Attached are comments on the NPFMC Plan for IFQs in the sablefish and halibut fisheries. These are submitted for consideration during the review under the National Environmental Policy Act which is ongoing at this time.

Submitted are:

COMMENT #01 - Concerning analysis of impact on past participants denied QS under the plan.

COMMENT #02 - Concerning public input to the Council during the plan formulation adoption process.

COMMENT #03 - Concerning fleet and employment reduction.

COMMENT #04 - Concerning OY attainment and alternative management tools.

COMMENT #05 - Concerning the bona fide crew privileged class.

COMMENT #06 - Concerning Primary Port Clearance requirements.

COMMENT #07 - Concerning Dockside Sales and reporting requirements

COMMENT #08 - Concerning QS allocations on illegally caught fish.

COMMENT #09 - Further concerning QS allocations on illegally caught fish.

COMMENT #10 - Concerning QS [illegible]

COMMENT #11 - Concerning QS value.

COMMENT #12 - On increased government employment.

COMMENT #13 - On implementation costs.

COMMENT #14 - Concerning CDQ Program impacts and alternatives.

COMMENT #15 - Concerning data [illegible] and qualifying period and the [illegible] major

COMMENT #16 - Concerning impact on [illegible] and resources.

COMMENT #17 - Concerning impact of [illegible] fabrication [illegible].

COMMENT #18 - Permanence of the plan and [illegible] contingency.

COMMENT #19 - Concerning non-DOE people retention.

COMMENT #20 - Concerning planning cost model.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.

NEPA COMMENT # 01 on SABLEFISH/HALIBUT IFQs

JERE T. MURRAY, Ph.D.
[illegible]
[illegible]
June 8, 1992

NEPA COMMENT # 02 on SABLEFISH/HALIBUT IFQs

The Council has requested [illegible] the best [illegible] sought the opinions of the fishing community and other interested individuals on the problems this plan purports to address and of the plan itself. Indeed the Council has received voluminous response to these requests in the form of letters, form letters, petitions, verbal communications, and public testimony at Council meetings and public hearings.

During the period from January 1 through April 16, 1992 near [illegible] persons attempted to communicate their opinions to the Council, and the overwhelming majority (over 90%) were opposed to this plan.

The Council has not caused a tally of these comments to be made. The Council does not quantitatively know where the sentiment of these responses to these requests lies. These comments and other expressions of favor/disfavor should be tallied so that the Council members will know the environment in which they make this decision. Such a tally is necessary so that the Council, other interested governmental bodies, and, most importantly, the people will know the level of public support this plan has garnered. Such a tally is a measure of the environmental impact on which the sub ect document (DRAFT SEIS EIS) purports to provide the definitive statement.

The Council has been remiss in not making itself quantitatively aware of these comments which I requested. The DRAFT SEIS EIS is incomplete without informing the public of these.

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 117, Seldovia, Alaska 99663-0117
(907) 234-7646
June 6, 1992

NEPA COMMENT #03 on SABLEFISH/HALIBUT IFQs

The Supplemental Analysis dated 5/27/92, Tables 2.1 and 2.2 as discussed in Section 2.2 estimate that full adjustment to the IFQ plan will result in the following changes in these fisheries:

1. Number of participating vessels reduced by 98% (halibut), 90% (sablefish).
2. Number of fishermen reduced by 97% (halibut), 90% (sablefish).
3. Fisherman days reduced by 79% (halibut), 23% (sablefish).

The reduction for halibut fisherman days is even admitted to be an "UNDERESTIMATE" (page 2-10).

These reductions in property value and employment would seem to be rather extreme in a society in which unemployment is growing. The claim that this may not represent "unemployment" (page 2-10) is certainly without merit to the persons for whom it represents lower income! An adequate analysis of the effects of this plan must use state of the art modeling methods to ascertain and forecast the impacts these changes will have both on the people affected directly and the communities which depend upon their productivity for personal, employment and population stability. Many if not most Alaska coastal communities have demanded that this be done and this Supplemental Analysis fails.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box [illegible] [illegible], Alaska [illegible]
[illegible]
[illegible], 1990

NEPA COMMENT #04 on SABLEFISH/HALIBUT IFQs

The Magnuson Act, SEC. 303 (b) (6), allows councils to establish a system for limiting access to the fishery IN ORDER TO ACHIEVE OPTIMUM YEILD.... Other conditions are specified but this one, "IN ORDER TO ACHIEVE OPTIMUM YEILD" is the first requirement.

The basic problem of the fisheries is defined in the Supplemental Analysis, page 1-14, as "the race for fish." The EIS, page 1-7 states "The derby type fishery (read Race for fish) ... is mitigated, in some regulatory areas, by special trip limits and clearance requirements .... " The discussion continues "The result is that seasons are spread out over a much longer period of time in these areas." The Supplemental Analysis, Sec 2.2.2? discusses OY attainment. It does not argue that OY is not or can not be attained without IFQs. Indeed the above references comprise EVIDENCE that IFQs are NOT necessary! The whole discussion of this section applies equally as logically to an alternative management scenario utilizing, for instance, fleet and area partitioning as proposed and articulated by Kristen L. Stahl-Johnson, Box 2661, Kodiak AK 99615 while the actual council experience cited above provides practical support.

On the contrary there appears to be little in the way of practical evidence supporting the efficacy of IFQ plans within a social structure such as has developed in Alaska.

Thus, not only is a limited access system not allowed by the Magnuson Act as no difficulties are experienced achieving OY, but less severe, non permanent tools have seen limited and successful use and could be more widely applied to solve the basic fishery problem.

Viable alternatives to IFQs should be examined thoroughly in order that the EIS be a complete statement of impact.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 117, Seldovia, Alaska 99663-0117
(907) 234-7646
June 6, 1992

NEPA COMMENT #05 on SABLEFISH/HALIBUT IFQs

The Supplemental Analysis, in Section 7 purports to examine "Consistency with ... applicable law." Nowhere is the question of consistency with the basic law of the land considered. The requirement for a QS purchaser to be a bona fide crew and the definition of bona fide crew create a privileged class of citizens. Access to the fishery is limited to this privileged class and appears repugnant to the way our country works!

The EIS SEIS even with the Supplemental Analysis are deficient in the consideration of legal consistency.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box [illegible], Seldovia, Alaska 99663-[illegible]
907 234-7646
June 4, 1990

NEPA COMMENT #06 on SABLEFISH/HALIBUT IFQs

The Implementation Plan, Section 5.4.8, page 5-28, Supplemental Analyses, establishes CLEARANCE requirements at PRIMARY PORTS and at Union are ALASKA PORTS before vessel departure from Alaska. The Constitution of The United States at Article I, Section 9, Paragraph 6 states ... nor shall Vessels bound to, or from, one State, be obliged to enter, CLEAR, or pay Duties in another. The designation of all primary ports within Alaska clearly sets Alaska at preference to the other states and violates the Constitution.

The EIS/SEIS even with the Supplemental Analysis are deficient in the consideration of legal consistency.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box [illegible], Cordova, Alaska 99663-[illegible]
[illegible]-7546
June 6, 1992

NEPA COMMENT #07 on SABLEFISH/HALIBUT IFQs

The Implementation plan, Section 5.4.8, page 5-29, Supplemental Analysis, establishes requirements for Dockside Sales which along with some aspects of the reporting requirments would constitute excessive and unnecessary expense for the typical very small operation engaged in these sales. An analysis is in order to define the extent of these operations and the effect their removal will have on the society developing in Alaska.

The EIS SEIS even with the Supplemental Analysis are deficient in the consideration of impact on small independent operations and the social fabric of the State of Alaska.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box [illegible], Seldovia, Alaska 99663-[illegible]
(907) 234-7646
June 8, 1992

NEPA COMMENT #08 on SABLEFISH/HALIBUT IFQs

The Draft EIS, page 3-4, and Supplemental Analysis, page 7-6 p.a.m. The Council has determined that only legal landings of sablefish and halibut will count towards IFQ allocations. The Draft documents present no analysis of the extent to which this will be achieved. It is widely known that extensive illegal fishing has been occuring in these fisheries, especially perhaps, in the halibut fishery. I have previously provided estimates of the magnitude of halibut QS to be allocated on the basis of these illegal landings. (Murray, 4/10/92 letter to Richard Lauber, copied to several other Council members) Recent private discussion with a former crewmember (name and phone number available on request) has confirmed that on the order of 33% of the catch logged by some vessels has been the result of extensive exploration and bait fishing prior to legal opening and retrieval of gear set in excess of that practically workable duringthe legal fishing hours.

The magnitude of these illegal landings must be quantified and the plan must not reward them!

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box [illegible], Juneau, Alaska 99[illegible]
907 [illegible]
June 6, 1990

NEPA COMMENT #09 on SABLEFISH/HALIBUT IFQs

The impact on society of rewarding the miscreant behavior mentioned in COMMENT #08 while punishing those operators who have remained within the law has not been addressed by the Impact Documents. These are legitimate social factors which affect the future behavior of citizens of the society. Our future social environment will be adversely affected by this action.

The final EIS must give adequate consideration to this aspect of the impacts of this plan.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.

P.O. Box [illegible], Seldovia, Alaska 99663-[illegible]

(907) [illegible]

June 6, 199[illegible]

NEPA COMMENT #10 on SABLEFISH/HALIBUT IFQs

The Statement's description of difficulties associated with inclusion of crew in the pool of initial QS recipients seems shallow at best. (Supplemental, page 2-22, paragraph 5, (1)). Neither NMFS nor State of Alaska need to have the records referred to. The crew and vessel owners have all needed information concerning crew participation and the share of the vessel catch accumulated by the crew. Indeed, IRS Forms 1099 could be used to support claims. The burden of settlement should be on the crew and vessel owners not on the bureaucracy. No owner crew agreement - no QS. Simple advertisement of crew rights and responsibility to get together with owners, a time limit and the availability of owner address files should be adequate to ensure that crews rights would be protected.

Should the position expressed in COMMENT #05 concerning the bona fide crew privileged class find legal support, the discussion of the "recognition of the investment that crew members have made in the fishery..." of paragraph 6 after 5 referrenced above becomes mute. Then the crew are shafted big-time.

A thorough statement of environmental impact would include ANALYSIS of the losses the crew suffers in terms of future employment and property (as they are rightful recipients of a share of the property represented by QS).

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box [illegible] Cordova, Alaska 99663-[illegible]
907 [illegible]846
June 6, 1992

NEPA COMMENT #11 on SABLEFISH/HALIBUT IFQs

[illegible] to discussion of the expected value of QS once and if this plan is in effect. The market value of QS bears heavily on the impact this plan might have on the socio-economic environment and the legality of the process being followed for approval.

a. If QS values and date of transfer is such that over $100,000,000 per year is diverted from productive investment as a result of transfers of "paper" then this plan must be considered a "major rule" under EO 12291 and come under more substantial scrutiny.

b. The market value of QS will have a marked effect upon the final distribution of QS. The discussions suggesting that rural Alaskan communities will be able to accumulate QS are not supported by evidence that the capital will be available. The intent that bona fide crew have an advantage in the market is empty if it proves likely that they (except, of course, for those owners who become bona fide crew and are among the recipients of million dollar windfalls) have no practical hope of competing in the market for QS.

These are only the tip of the iceburg. An honest Environmental Impact Statement would contain a candid analysis directed at describing the expected market for QS and the impact that market might have on the various classes of people affected by the plan. This should include several classes of individuals, businesses, local communities, and the nation.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
[illegible]
907 [illegible]-5546
June 6, 2000

NEPA COMMENT #12 on SABLEFISH/HALIBUT IFQs

It is estimated that 42 (or more?) new government employees will be needed to effect the implementation of this plan. That is sure cold comfort to those of us who will have our incomes reduced as a result of this plan! An honest assessment of the impact of such a move should include a discussion of the impact on the American society of continued growth of the public sector employment at the expense of productive sector employment. Won't this ripple through the society as unemployed crewmen seek the 'services' of government employment offices and welfare dispensers causing a need for more 'employment' in those offices also?

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 197, Seldovia, Alaska 99663-0197
(907) 234-7646
June 6, 1992

NEPA COMMENT #13 on SABLEFISH/HALIBUT IFQs

The impact documents estimate implementation costs. Sure... these estimates fall far short of reality! For instance, no coast guard activities costs have been included (Supplemental, page 5-38). The possibilities for illegal activities, which I have argued have been substantial and undetected in the past, increase drastically under this plan. Enforcement costs estimates should be based on a worst case scenario which anticipates considerable efforts on the part of the seasoned veterans of these fisheries to overharvest their IFQs as well as the dreamland estimate provided. Remember, they have the whole Gulf of Alaska and Bering Sea to ride in now - and any time during the year to do it in!

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box [illegible], Cordova, Alaska 99663-0287
907-424-7646
June 6, 1992

NEPA COMMENT #14 on SABLEFISH/HALIBUT IFQs

There is no analysis of the CDQ Program impacts. Especially the social effects of continuing a giveaway philosophy toward peoples in need must be examined. People should be encouraged to assume responsibility for their own actions and futures. There are viable alternatives to the proposed CDQ Program which could have the effect of supporting the development of these communities as well as fostering a trend to self sufficiency rather than continued reliance upon handouts from the government. These alternatives should be analyzed.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 197, Seldovia, Alaska 99663-0197
(907) 234-7646
June 6, 1992

NEPA COMMENT #15 on SABLEFISH/HALIBUT IFQs

The data of Tables 4.2, 4.3, 4.8, 4.9, 4.10, 4.11, 4.12, 4.13 presented to the Council at the December 1991 meeting which extended the tables of the July '91 EIS have not been corrected to reflect all the errors they contained at that time. Presumably, only the counterparts of these dealing with the preferred alternative presented as Table 2.8 et seq in the Supplemental of 3/27/92 are now correct. The public has the right to see the corrected versions of these tables as well as tables including a wider range of qualifying years, eg 87 through 90, 86 through 90, etc. as well as the 'preferred' alternative, 88 through 90. At this point even the Council is unaware of the effects of including a wider range of qualifying years! The choice of 88 through 90 was, especially in the case of the halibut fishery, arbitrary and made in the absence of adequate analysis of all alternatives. The public has the right to know the details of these alternatives.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 197, Cordova, Alaska 99669-0197
907 424-7646
June 6, 1992

NEPA COMMENT #16 on SABLEFISH/HALIBUT IFQs

No analysis of the impact on the Pacific cod and rockfish resources resulting from required retention by IFQ holders has been made. Considering the willingness of many of these people to maximize income at the expense of the resource and their fellow fishermen, it is not unreasonable to expect the plan as written to result in overfishing of the cod TAC.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 237, Seldovia, Alaska 99663-0237
(907) 234-7646
June 6, 1992

NEPA COMMENT #17 on SABLEFISH/HALIBUT IFQs

Some inshore sablefish resources are managed by the State of Alaska. No mention of impacts on these fisheries, either as to continued access to resource or explosion of participation (Prince William Sound) or other impacts has been made. The impact documents are deficient.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 237, Seldovia, Alaska 99663-0237
907) 234-7646
June 6, 1992

NEPA COMMENT #18 on SABLEFISH/HALIBUT IFQs

This plan is a 'permanent solution.' No verbiage can mitigate the reality of the fact that if this plan is implemented on the order of $1 Billion of capital will be created. The rapidly expected transfer of this capital as the projected fleet consolidation takes place will result in considerable lending/borrowing. After this has taken place, it will be all but impossible to eliminate this program. A discussion is in order describing the cotingency plan to address the failure of this plan to cure the basic problem of the fisheries - 'the race for fish.'

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 197, Cordova, Alaska 99574-0197
907 424-7546
June 6, 1990

NEPA COMMENT #19 on SABLEFISH/HALIBUT IFQs

The plan requires retention of certain non CQ species in the CQ fisheries, but there is presented inadequate analysis of the effects of this requirement. There is no analysis of the markets for these products which typically, surely in the case of Pacific cod, are of rather low relative value. The many smaller Alaskan processing operations would seem to be at a substantial relative disadvantage in competing for the valued species production where the low value product accompanies it. This consideration seems to imply possible substantial negative impact on the small Alaskan operator both processor and catcher. These impacts can be expected to ripple through the Alaskan society both economically and socially.

These impacts must be quantified and explicated in the final Impact Statement.

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

JERE T. MURRAY, Ph.D.
P.O. Box 197, Seldovia, Alaska 99663-0197
907) 234-7646
June 6, 1992

NEPA COMMENT #20 on SABLEFISH/HALIBUT IFQs

The fishing cost model (EIS, Appendix II) seems to be grossly in error as it applies to the smaller classes of vessel especially. At least, it has little resemblance to my experience operating a 37' CAL vessel for over a decade. Especially deficient are the values for repairs and administration. Possibly significantly in error, depending on industry wide practices, are the values for insurance. The final document should attempt to more realistically assess these costs, especially as conclusions are drawn concerning the cost of product production versus vessel size are made based upon them!

Sincerely,

Jere T. Murray

Jere T. Murray, Ph.D.

C206225
35 24

6215 - 26th Ave. N.W.
Seattle, WA 98107

June 9, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin:

I am writing to request your assistance in adopting an IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are safety and conservation of the halibut and sablefish resource. Due to halibut seasons that consist of two or three twenty-four hour openings, there is hardly an opening that does not result in loss of life and property and these openings have to be fished regardless of weather conditions. The halibut and sablefish fisheries are in virtual chaos and have created an extremely dangerous situation.

An IFQ program will allow vessel owners the opportunity to make intelligent decisions regarding weather conditions and market conditions as to when is the best time to fish. IFQ's will allow fresh fish in the marketplace year round and a combined IFQ program will most certainly help reduce discards of halibut and resulting waste. Also, with an extended season, it will put less boats on the grounds at the same time resulting in less gear conflict.

I have been a longline fisherman in the North Pacific for 45 years and have seen traditional management tools fail. I see IFQ's as the best opportunity for saving the fish resource and the lives of the men who pursue it.

Thanking you in advance for your prompt attention to this matter.

Sincerely,

Byron Bassi
F/V Resolute

COPY

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1335 East-West Highway
Silver Spring, MD 20910
THE DIRECTOR

JUN 23 1992

Mr. Ivan L. Widom
City Manager
City of Seldovia
P.O. Drawer B
Seldovia, Alaska 99663

Dear Mr. Widom:

Thank you for your letter to Secretary Franklin regarding Resolution #92-07 that requests that the individual fishing quota (IFQ) program and its primary port provision not be approved.

The North Pacific Fishery Management Council (Council) has adopted, but not submitted, the IFQ proposal for Secretarial review according to the Magnuson Fishery Conservation and Management Act. The Council is expected to submit its recommendation when the required documentation is completed. The Resolution of the City of Seldovia will be made part of the administrative record that will be considered.

Sincerely,

William W. Fox, Jr.

cc: ES, GC, DUS, PCO, AS, US, EXSEC, RR, DFH, OGC w/att, GCF, F/CU(2), F/CM(2), F/CM2(2), F/AKR

Control Nos. 2483/52974/206190
F/CM2:DJLeedy:6/22/92 (2483) (D GOA & BSAI 20)

THE ASSISTANT ADMINISTRATOR
FOR FISHERIES

6

City Of Seldovia

P.O. Drawer B
Seldovia, Alaska 99663
Phone (907) 234-7643
FAX (907) 234-7430

June 10, 1992

Dr. William Fox, Jr.
Assistant Administrator for Fisheries
National Marine Fisheries Service
Silver Spring Metro Center #1
1335 East-West Highway
Silver Spring, MD 20910

Dear Mr. Fox:

The City Council of the City of Seldovia passed the enclosed Resolution, #92-07, in opposition to the IFQ program. The City also is concerned about not being designated as a "Primary Port." Implementation of both of these items will certainly remove Seldovia from the place it has historically held in the commercial fishing industry and tradition in Alaska.

Please let us know if there's anything that we can do to stop these 2 items from being implemented.

Sincerely,

Ivan L. Widom

Ivan L. Widom
City Manager

RESOLUTION 92-07

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SELDOVIA, ALASKA REQUESTING THE NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL AND ALL OTHERS INVOLVED NOT APPROVE THE INDIVIDUAL FISHING QUOTA (IFQ) PROGRAM AND THE PRIMARY PORT PROGRAM FOR THE SABLEFISH AND HALIBUT FISHERIES.

WHEREAS, the proposed Individual Fishing Quota program for the halibut and sablefish fisheries could mean up to a 95% reduction in the participating fishing vessel fleets; and

WHEREAS, in addition to the loss of jobs directly associated with the reduced number of vessels, the structure of the allocation of shares could result in the utilization of many fewer deckhands from the community on boats that continue in the fishery; and

WHEREAS, the halibut fishery represents a significant portion of many deckhand's disposable income; and

WHEREAS, the structure of the IFQ program may lead to a continuous shift in the ownership of the fishery resource to individuals outside the Seldovia community; and

WHEREAS, the City of Seldovia heavily relies commercial fishing dollars for its economic vitality and health; and

WHEREAS, loss of vessels from the Seldovia Harbor would negatively impact the City's revenue; and

WHEREAS, continuous near shore halibut fishing close to Seldovia and Homer may result in diminished local stocks and gear conflicts with negative impact on the local sport charter fleet; and

WHEREAS, the City of Seldovia is not designated as a "primary" delivery port which will influence deliveries of halibut and black cod to be made to other ports designated as "primary" ports thus reducing fish landings and fish tax for Seldovia;

NOW, THEREFORE, BE IT RESOLVED THAT: the City Council of the City of Seldovia, Alaska requests that the North Pacific Fisheries Management Council and all others involved in these programs not to approve the Individual Fishing Quota Share Program and Primary Port Program for the sablefish and halibut fisheries;

BE IF FURTHER RESOLVED THAT: the City Clerk send copies of this resolution to the North Pacific Fisheries Management Council, Governor Hickel, Senator Stevens and Senator Murkowski, Representative Young, Federal Department of Commerce, the State Department of Community and Regional Affairs and other agencies and individuals who would be interested.

PASSED AND APPROVED BY THE SELDOVIA CITY COUNCIL ON April 27, 1992.

IN WITNESS THERETO:

BY: _____
Gerald W. Willard, Mayor

ATTEST: _____
Fran Eckoldt, City Clerk

86

June 11, 1992

Dear [illegible],

I am writing to request your assistance in adopting an IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are safety and conservation of the halibut and sablefish resource. Due to halibut seasons that consist of two or three twenty-four hour openings, there is hardly an opening that does not result in loss of life and property and these openings have to be fished regardless of weather conditions. The halibut and sablefish fisheries are in virtual chaos and have created an extremely dangerous situation.

An IFQ program will allow vessel owners the opportunity to make intelligent decisions regarding weather conditions and market conditions as to when is the best time to fish. IFQ's will allow fresh fish in the marketplace year round and a combined IFQ program will most certainly help reduce discards of halibut and resulting waste. Also, with an extended season, it will put less boats on the grounds at the same time resulting in less gear conflict.

I have been a longline fisherman in the North Pacific for years and have seen traditional management tools fail. I see IFQ's as the best opportunity for saving the fish resource and the lives of the men who pursue it.

The status quo results in wasted and lost fishing gear due to gear conflicts within the longline fishery and unnecessary loss of bycatch species such as rockfish and halibut.

The current status quo management program has evolved into a marketing nightmare. The Canadians have an IFQ program and receive $2.50 to $3.00 per pound for their halibut. Alaska halibut is landed in a couple of major 24-hour openings flooding the market for a week or two then flooding the frozen market for the rest of the year. The Americans will get $0.80 per pound in Alaska due to the inability of traditional management tools to correct the current situation. In fact, the Governor of Alaska has a four star hotel and restaurant in Anchorage and must import Canadian halibut to serve the fresh fish market.

Thanking you in advance for your prompt attention to this matter.

Sincerely,

Thomas C. Fick F/V
Deborah Fick ARCO

COPY

Address EASTERN Inc.
P.O. Box 370
Sequim, WASH
98382

June 11, 1992

^F1^
^F2^
^F3^

Dear ^F4^: HONORABLE BARBARA FRANKLIN

I am writing to request your assistance in adopting an IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are safety and conservation of the halibut and sablefish resource. Due to halibut seasons that consist of two or three twenty-four hour openings, there is hardly an opening that does not result in loss of life and property and these openings have to be fished regardless of weather conditions. The halibut and sablefish fisheries are in virtual chaos and have created an extremely dangerous situation.

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Thanking you in advance for your prompt attention to this matter.

Sincerely,

Name Don Knutsen
Vessel Name F/V Eastern

C 206800

#3
28

June 14, 1992

The Honorable Barbara Franklin
Department of Commerce
Constitution Ave. & E St. N.W.
Washington D.C. 20230

Dear Barbara:

I own the F/V Norcoaster, and have fished Halibut and Blackcod for over 30 years. I hire a crew of 5 and counting myself we support 6 families. The way the fishing is getting to be. I am getting very concerned for myself & my crew, their families & the long line industry. I can find no other way to go. but to support the IFQ program for Halibut & Blackcod.

If IFQ'S were in place, we wouldn't have to fish in stormy weather. It is much easier to have an accident when the boat is pitching and rolling.

Trying to haul all the gear back in 24 hours is done at an unsafe speed. It's a fact that men perform their duties better and with less accidents when they have proper rest.

There would be less gear conflict ifs the season was spread over a longer period of time. When there is gear entaglement, or rough weather, or both, all the gear doesn't get hauled. The gear and the fish are both lost.

For these reasons I request your assistance in Adopting an IFQ Program that was passed by the North Pacific Fishery Management Council in December 1991.

Thanking you in advance for your promot attention to this matter.

Sincerely,

Elwin Cox

Elwin Cox
F/V Norcoaster

COE

C206341

29

JUNE 14, 1992

BARBARA FRANKLIN
SECRETARY OF COMMERCE,

I AM STRONGLY OPPOSED TO THE IFQ PLAN FOR ALASKAN HALIBUT AND BLACKCOD THAT THE NORTH PACIFIC FISHER MANAGEMENT COUNCIL RECENTLY VOTED FOR.

THESE FISH BELONG EQUALLY TO ALL CITIZENS. THESE FISHERIES CAN BE MANAGED SAFELY AND EFFICIENTLY AND STILL GIVE EQUAL ACCESS TO EVERYONE.

THESE COUNCIL MEMBERS HAVE SERIOUS CONFLICTS-OF-INTEREST. RON HEGGE VOTED TO GIVE HIMSELF AT LEAST A MILLION DOLLARS WORTH OF IFQ's. CLEM TILLION VOTED TO GIVE HIS SON AT LEAST $\frac{1}{4}$ MILLION AND PROBABLY $\frac{1}{2}$ MILLION DOLLARS WORTH. ITS THE CROOKEDEST DEAL I HAVE SEEN IN MY 20 YEARS OF LIVING AND WORKING IN ALASKA.

IF THIS CAN HAPPEN, WE NEED TO GET RID OF EVERY INCUMBENT THAT HAD ANYTHING TO DO WITH IT, STARTING WITH PRESIDENT BUSH IN NOVEMBER.

SID NELSON
BOX 564

e 15 1992

54 30

To the Honorable Barbara Franklin

As one of many longline fisherman who will be severely impacted by the IFQ regulations now being proposed, I feel it is time to speak out on this issue. I have come to strongly favor this IFQ program and this is why:

I am the operator and majority owner of the F/V Alrita. I have been a longliner since 1969 and have fished every season as a longliner since 1973. IN 1987 I began to fish blackcod in Alaska as an operator. Although I had worked on deck in this fishery my first couple of seasons as an operator were a trial-by-fire on grounds that were already crowded and it took a lot a trips before we started to do any good. Because of my relatively late entry and initiation period in this fishery I will not be the grand recipient of any large allocation. However much it might be, it will certainly be less than I have been averaging the last couple of seasons. I expect I'll have to borrow a hell of a lot of money in order to purchase enough additional shares to make a full season. So why do I favor a plan in which I'll have to incur more debt in order to fish alongside boats that won't? Simply because I honestly feel it is the only way to rationalize a fishery gone mad.

In my 20 years as a longliner I have grown to deeply appreciate the methods and traditions of conventional longlining. But in the last five years I have seen the effort on the grounds go completely out of control. Neither time nor space would allow me to state my opinions in this letter as to how this has been allowed to come to this present sad state of affairs but suffice to say there are too many boats setting too much gear on too little grounds. Blackcod fishing in the GOA has come to be the largest part of my livelihood. With the increase in the number and size of the boats on the grounds, our season has gone from over three months (approx. 9 trips) in 1987 to one month(3 trips) in 1991 and will probably be shortened to two or three weeks (2 trips) next year. The pace at which we are driving it on the grounds has gone from the "extremely intense" to the absurd. Boats in my class will be going around the clock next year. Blackcod fishing is going the way of the halibut style derby. I say, "Enough of this crazyness! Deliver us from chaos and rationalize our fishery while you have the chance. Give us an IFQ plan as proposed. We need it now."

Sincerely,

Arthur W. Hodgins

Arthur W. Hodgins
Owner-operator
F/V Alrita

COPY

C206430 55

COPY

Henry Kroll
P.O. Box 181
Seldovia, Alaska 99663

6/15/92

Hon. Barbara Franklin, Secretary
United States Department of Commerce
15th & Constitution Avenue, NW
Washington, DC 20230

Dear Barbara Franklin:

I just came back from fishing black cod and Halibut out of Kodiak Alaska.

I observing the US fleet of large vessels fishing black cod sixty to one hundred and fifty miles West of Kodiak Island, something I won't be able to after the IFQ's are enforced.

They were fishing twenty skate strings of gear five loran microseconds apart from three hundred fathoms to one thousand fathoms. Virtually all of the ocean bottom had gear laid over it several times during the season. Their gear for the most part is made out of three-eights inch nylon rope with hooks spaced six feet apart. I know because I saw it laid over the top of my gear several times.

Even the seamounts located over two hundred miles East-Northeast of Kodiak Island were heavily fished.

One fact became clear to me after participating in this fishery this year: No amount of government legislation will save the bank mortgages on this fleet of boats. The reason being the ocean is over fished Even with the reverse Robin Hood policy of taking away the black cod quotas from 2050 poor people and giving it to the bigger boats in the black cod fleet; financed for the most part by big businesses and Seattle Banks, will it save this fleet. These boats are doomed to go on the auction block no matter what the government does. You may as well do the right thing Barbara Franklin by rejecting this insane, anti-constitutional IFQ plan.

Clem Tillion's political formula for success has always been to fool the little people into thinking that he is on their side and then turn around siding with big business because that is where the money and the perks come from. I have observed him do this for over twenty years. Governor Hickle has money. Naturally he is going to be working for Governor Hickle.

Clem Tillion has lied and cheated to get the IFQ plan accepted by the NPFMC. I want him off the board permanently and banned from all state and federal fishery advisory positions.

Sincerely,

Henry Kroll

C206353 2
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COPY

June 15, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin:

My name is Jack E. Crowley and I am and have been a longline fisherman since 1943 and a vessel owner since 1951. In this letter, I'm asking for your support for the North Pacific Fishery Management Council's program to limit effort and preserve a fishery and a way of life.

In 1930, the industry consisted of 300-400 American and Canadian fishing vessels. They fished year-round with a closed season from November 15 to February 15 (to preserve the spawning grounds). The average catch was 55 million pounds yearly. Today the catch is about the same but now we have 8000 vessels with licenses and about 4000 boats fishing during the two one-day openings yearly.

This kind of management robs the public of fresh Alaska halibut being available over the summer months. This derby-style fishing causes much injury and even death to our fishermen. Loss of property such vessels and fishing gear are also products of this type of management.

Fishery management experts of this country as well as the world recognize an IFQ program will do much to solve the problems of management (over-capitalization and over-fishing). Those fishermen opposed to this program, in most cases, hold Alaska Limited Entry salmon and herring permits and want to be included in a fishery that they never participated in before.

The processors opposed to this program have received a limited entry program of their own (onshore\offshore) but want to deny this right to us. They know this program will cause changes in the marketing of halibut and blackcod to the benefit of the consumers and fishermen and they are unwilling to make the changes.

My family and I (four generations of fishermen) and all other longline fishermen will appreciate your support of this IFQ program.

Yours truly,

Jack E. Crowley

Jack E. Crowley, President
Pacific Ocean Fisheries, Inc.
1828 N.W. 204th
Seattle, WA 98177

COPY

C206337

Jan 15 1992
60470 ... Rd
Homer AK 99603

Dear Secretary Franklin,

Strangely enough men think they rule the world. I'd like to put a different slant on "in favor of IFQ's". I have a husband age 60 and 3 sons ranging from 24 to 35 years of age, all are fishermen. Also a son-in-law who fishes at times. Today none of us can make a living from the halibut derby of 24 hrs, its dangerous. Two years ago I almost lost 2 sons & our son-in-law because they were [illegible] with the halibut and something broke loose on their boat causing [illegible]. Thank God another vessel was not far behind and rescued them. If they could have been on an IFQ option they wouldn't have put themselves in that kind of a situation but as it stands, in 24 hrs its Do or Die is not a hell of a way to live.

Never mind about price - fish stocks - weather - over fishing Think about our husbands & sons let's give them a life worth living.

Thank You

Corinne Jones

June 15, 1992
60420 East Road
Homer, Ak. 99603

34

Dear Pat Franklin,

I have fished the waters as a commercial fisherman for some 48 years. I have been an ALASKA commercial fisherman through good times and bad, high prices and low, from red tide to oil spill. All my children were born and raised in Homer, Ak., I have no other residence but the state of Alaska what I'm trying to say is let's do something right for the Alaskan fisherman and get the IFQ system on a roll.

Let's talk Halibut Stocks. When I first fished halibut we need only to go to the Bluff Point area and we all could load up. As the state got progressively more popular and population increased we had to go a little farther out for our halibut. Now we have to go to hell and then some to find thee ole flat ones.

Let's talk Charter Boats. There used to be a few out of Homer now there's a few X 400. Add up all those halibut every day. Minimun of 4 people per vessel X 400 vessels =1600 X 2 halibut per person =3200 fish X how many days of the week (say 5) =16,000 x June, July and August =192,000 halibut caught.

Let's talk your everyday guy with his own boat, Your Sport fisherman. By the time he takes out friends, relatives and the boys he,s probably caught between 50 and 75 fish for the bunch and how many are there of THEM out there, and you fellows can sit there and tell me that our halibut fishery doesn't need the IFQ system?

Many of us are finding ourselves in the proverbial "HOLE" after the halibut opening. By the time we pay expenses, replace lost gear and pay our crew we sit down to realize it didn't pay us to go out.

Let's talk Gear Loss. Before the 24 hour race we could take the time to get our gear up, but now we either have to cut it off so as not to get caught fishing beyond the time limit or we just don't have the time to search for it. So unlike past years there is a LOT of gear still fishing out there, how much can the ocean hold? How many fish will that gear keep catching before it's last breath?

We won't even talk about economics because no amount of money can bring back a fishery once it is lost. Just like the salmon fishery, it's not BUCKS but BODIES that make for a healthy fishery. So vote YES on IFQ's and let's get on with the show.

Paul E. Jones

COPY

JUNE 16, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Dept. of Commerce
Constitution Ave & E ST NW
Washington, D.C. 20230

Dear Ms. Franklin

I am pleased with the North Pacific Management Council's passage of the Individual Fisherman Quotas for halibut. I ask that you support it as written.

As I stated to the International Pacific Halibut Comm, it is a reasonable solution to an impossible, totally unrealistic IFQ fishery. The loss of baited gear by circumstance (weather, breakdown, over lapping of gear, etc) or on purpose (too much gear out, overloading, cutting of other fisherman's long line, etc) causes a terrible wastage of halibut and other incidental fish.

The IFQ would also give fisherman better fresh market prices such as the current Canadian halibut fishery does. Our present derby system swamps the canneries & results in inferior quality control & a poorer product sold in stores.

Sincerely,

Jeffrey M. Weikman
Box 55308
North Pole, AK 99705

Copies
Ted Stevens
Frank Murkowski
Don Young
Fishing Vessel Owners Assn

COPY

June 16, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" St. N.W.
Washington, D.C. 20230

Honorable Barbara Franklin:

My name is Arne Einmo and I am the owner of the F/V Polaris. The F/V Polaris has been in my family and has been fishing in Alaskan waters continuously since 1927. Through careful resource management, it has been a viable business in the longline fishery for 55 years.

Steadily, since the mid-1970's, the longline fisheries have been condensed into pressure-cooker events which produce an ever diminishing concern for life and limb, other fishermen, the fisheries resource, and the international marketplace.

Limiting fishing effort is the logical solution to these problems and was brought up in regard to the halibut fishery at lease 10 years ago. Since then, "limited-entry" has been in continuous debate at the North Pacific Fisheries Management Council. The "IFQ' system is the result of years of that debate and has emerged as the preferred system at the Council.

The premature closure of the black cod quota caught is only one more example of the problem in the current fishery. We need an IFQ system which will allow a better fishery management system.

The IFQ proposal has gone through the entire council process and gotten approval from the council. I urge you also to support the council action as presented.

Sincerely,

Arne Einmo

Arne Einmo
F/V Polaris, Owner

5301 135th Pl. S.E.
Bellevue, WA 98006

C206444 3

COPY

June 18, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Avenue & "E" St. N. W.
Washington D. C. 20230

Subject: Individual Fishermen Quotas

Dear Secretary Franklin:

My husband has been a longline fisherman for 57 years and has always felt he could get his share without any regulations or restrictions.

This last chaotic 24-hour opening has brought him around to believing that some change must be made and the IFQ program is the best he has seen.

We will appreciate any help you can give us in adopting the IFQ program which was passed by the North Pacific Fishery Management Council this past December.

Very truly yours,

Norma S. Larsen

Norma S. Larsen for
Capt. Lloyd I. Larsen
M/V VALOROUS
16825 - 51st Ave. S. E.
Bothell, Washington 98012

c206487 X1
34

GREAT EXPECTATIONS ORGANIZATION

Friday 19 June 1992

Honorable Barbara Franklin
DEPARTMENT OF COMMERCE
15th & Constitution Ave NW
Washington DC 20230

Dear Secretary Franklin,

Enclosed you will find comprehensive explanatory material regarding the fatal flaw in the IFQ proposal. In a nutshell, the majority owners -- deckhands -- are being robbed by political insiders -- monied vessels owners who have corrupted the NPFMC system. This back-door deal will tear the fabric of virtually all coastal fishing communities. Please refer to our two written testimonies and the excerpt from Jere Murray's letter for specific details.

We need to emphasize that this is our number one priority for the federal executive agencies and enlist your support on this issue.

We would request that you contact the IRS to seek a definitive ruling regarding the independent contractor basis of commercial fishing crewmembers.

Please return the IFQ proposal to NPFMC with instructions to revise the initial quota share allocation to fairly assign shares to deckhands.

Please reply to advise us regarding your progress on this disasterous problem and don't hesitate to phone to discuss the specifics in detail.

Counting on your support, we remain

Yours sincerely,

Geo Plagenz
GEODUCK Marine

Post Office Box 3600
Homer, Alaska 99603-3600

907 235-5252
Alaska 800 478-4GEO

Council asks for study of IFQ impact

by Hal Spence
Staff Writer

The Homer City Council Monday voted unanimously to pass a resolution asking the North Pacific Fisheries Management Council not to adopt an individual transferrable quota share system before conducting a thorough analyses of the economic impact such a system would have on Alaska's fishing communities.

The city council passed the resolution opposing precipitous action by the fisheries management council on the so-called IFQ (Individual Fishing Quota) proposal for sablefish and halibut. It also asked the fisheries council to share any information it gleans from an impact study with the coastal communities likely to be affected by a quota system.

In passing the resolution, introduced by councilwoman Cathy Godfrey, the Homer council followed other coastal cities and organizations who have passed similar resolutions, including Kodiak, Cordova and Whittier, as well as the Kodiak and Kenai Peninsula borough assemblies and the Alaska Municipal League.

At Monday's meeting, the council heard from local fishermen who showed up in numbers.

The fisheries council will take public comment on implementation of the IFQ proposal Monday at the Anchorage Hilton Hotel. The final vote is expected during the council's meeting, which begins Tuesday.

The adoption of IFQs will affect Homer's economy, said Homer fisherman George Plagenz. It could mean the loss of a significant number of jobs, if, as opponents of IFQs suspect, limiting shares to vessel owners will encourage owners to hire fewer crewman and turn human jobs over to machines, he said.

"(There are) glaring problems with the proposed assignment of shares," he said. "It's illegal!

"The management council would give 100 percent of the shares to vessel owners when they are, in fact, minority owners of the fish."

Plagenz said many vessel owners, especially those living Outside, don't pay Alaska taxes and haven't complied with the legal requirements to be considered employers because under the definitions, they are not employers, but contractors.

Plagenz said the management council represents large-vessel owners who stand to profit from the proposed assignment of shares. They do not, he said, represent the individual interests of fishermen. That, he added, was the position of bodies such as the Homer City Council.

If the IFQ plan passes as currently written, Plagenz said, the owner would not be having his refrigerator fixed at Brian's Appliance (Councilman Brian Sweiven), or his back adjusted at Godfrey Chiropractic, a reference to the office of Councilwoman Cathy Godfrey's husband.

Other fisherman offered similar testimony. But not everyone at Monday's meeting opposed IFQs. Drew Scalzi, president of the North Pacific Fisheries Association, an organization of Alaska fishermen, said he could refute much of the testimony about the possible effects of IFQs the city council had heard, but declined to do that Monday. He debated the issue at the Homer Chamber of Commerce luncheon Tuesday and again on KBBI's Coffee Table program Wednesday.

"This is a very complex issue," Scalzi told the city council.

The quota proposal has been discussed and debated for years, he said Tuesday evening. The council has entered the fray at the 11th hour, he said.

GREAT EXPECTATIONS ORGANIZATION

Monday 25 November 1991

NORTH PACIFIC FISHERY MANAGEMENT COUNCIL
Post Office Box 103136
Anchorage, Alaska 99510-3136
FAX: 907-271-2817

WRITTEN TESTIMONY: MANAGEMENT OF HALIBUT IFQ PROGRAM
(For Distribution to Council Members)

We commend the NPFMC for addressing the matter of comprehensive management of the halibut fishery. At outset, it is important to underscore that we support the implementation of IFQ's. We believe that IFQ's will: help safeguard the halibut biomass, greatly reduce the unconscionably dangerous nature inherent in 24-hour openings, produce a better product for the seafood consumer, and provide enhanced prices for commercial fishermen.

This testimony addresses only the management of IFQ programs. Specifically, the testimony comments on the INITIAL QUOTA SHARE ASSIGNMENT section and related sections and subsections of the IFQ plan.

There has been copious commentary regarding the "fairness" of the IFQ plan and its effects on individuals and coastal communities. These are appropriate considerations as the council approaches a critical cusp in the evolution of fishery management: the creation and assignment of private wealth from a public resource.

When a situation seems unfair, there are three general ways to categorize it: unfortunate but inevitable, morally wrong but technically correct, or morally wrong and against the law. As currently proposed, the initial quota share assignment is immoral and ILLEGAL. It is incumbent upon the Council members to revise the method of initial quota share assignment.

The problem with the initial quota share assignment as it is currently proposed is that it awards 100% of the total qualifying poundage (used to determine shares) to vessel owners, whereas in fact, vessel owners own only a fraction of the total poundage caught on their vessel. The initial quota share assignment completely ignores the legal ownership of portions of the qualifying poundage by for-hire skippers and crew members.

Post Office Box 3600 **907 235-5252**
Homer, Alaska 99603-3600

Commercial fishing is one of the last true American "trades". Specific skills are acquired through the experience of apprenticing as a "greenhorn". When the commercial fisherman has acquired the expertise (at his own expense, working at quarter or half shares), he can take his tools and enter into a contract with any vessel owner, as an independent contractor. He is considered his own employer (self-employed).

Federal tax law recognizes the self-employed nature of commercial fishermen. But there is a critical proviso in that recognition: the commercial fishermen must work for a "share" of the catch. The fishermen *share* the total catch of the vessel, and the total catch is allocated according to agreed upon *shares*. This describes the nature of the contract between independent parties: vessel owner and fishermen.

A commercial fisherman OWNS his share of the catch. He can take it home and put it in his freezer. He can sell it through any processor of his choice. He can of course choose to sell it together with other shares of the catch to one processor, but this choice does not change his ownership of his share. In fact, the fisherman's ownership of his share of the catch is ultimately substantiated by his settlement with the vessel owner, which represents the fisherman's payment for what he owns. Any other method of explaining a fisherman's settlement payment constitutes an employer (i.e., vessel owner) - employee (commercial fisherman) relationship.

If the vessel owner at any time requires the fisherman to dispose of his share in a manner which eliminates the fisherman's independent choice, then the vessel owner is excercising "the will and control of an employer". If this situation applies, the vessel owner is required to withhold income tax, pay the employer's portion of the social security tax (FICA), and pay federal unemployment tax (FUTA). The vessel owner would additionally be required to pay state unemployment tax (as in Washington State), Workman's Compensation tax, and comply with applicable OSHA requirements.

The problem with the current initial quota share assignment is that it awards shares to vessel owners as if they owned all the fish caught on their boat, that is, as if they were employers, when in the vast majority of cases these vessel owners have not paid the various taxes nor complied with the legal requirements of employers. Quite to the contrary, the *fisherman* pays DOUBLE the employee FICA rate, has no unemployment insurance at either state or federal level, must be responsible for his own federal tax withholding and payment, and has only the limited Fisherman's Fund to protect him from the injuries of one of the three most dangerous occupations in the country. One of the things the fisherman buys for all this is the uncontested right of ownership of his share of the catch.

The Commercial Fishing Industry Vessel Safety Act of 1988 requires a written contract for fishing vessels over 20 gross tons between the vessel owner and commerical fishermen. These contracts, along with fish tickets, show exactly what share of the catch is owned by the commercial fishermen and by the vessel owner. It makes no difference if all the fish was sold under the imprint of the vessel owner's permit card. A similar criterion (paperwork versus true ownership/shares of fish) was successfully challenged as a basis for awarding limited entry permits in the Bristol Bay salmon fishery. The convenience of selling fish under one imprint number does not revoke the fisherman's ownership of his share, unless the vessel owner takes on the responsibilities of an employer.

It is an insulting irony that the proposed IFQ plan specifies a means for a "bona fide fixed gear crew member" to purchase quota shares, after having robbed the commercial fisherman of his rightful share of the quota.

We do not dispute that fairly and legally assigning initial quota shares will be more exacting than the current proposal. But mere expedience does not excuse the moral and legal theft of commercial fishermen's share of halibut quotas and the distribution of those stolen goods to vessel owners <u>for all time</u>.

As stated at outset, we support the NPFMC for addressing the IFQ situation. The need for speedy implementation is important for the resource, safety, quality, and price. But the Council should be reminded that commercial fishermen (skippers and crew members) outnumber vessel owners four or five to one. We will not sit idly while everything we have worked for is arbitrarily and illegally taken from us. Elected governmental representatives are being informed of the injustice of the proposed share assignment and commercial fishermen will seek protection for their ownership rights through class actions in courts of appropriate venue if the proposed language is passed unamended.

The facile solution is for the Council members to re-write the initial quota share assignment section to insure fair assignments to commercial fishermen, not just vessel owners. In aggregate, commercial fishermen legally own more than 50% of the halibut, the vessel owners are minority share holders. We urge you to immediately rectify the above delineated inequities and smooth the approval and implementation of a fair IFQ system. To do otherwise in light of the evidence presented will be to mire the commencement of IFQs in legal challenges and political intervention. We do not want this to happen; it is up to the Council members to insure that it does not.

Commercial fishermen work hard for a fair share. We will not unfairly (illegally) be deprived of our share of the halibut quota.

Sincerely,

Geo Plagenz
GEODUCK Marine

cc: Common Council of The City of Homer
IRS Anchorage District Office
Leonard Herzog, Esq

	Name	City, State	Date received
9	Geo Plazens, GEODUCK Marine	Homer, AK	November 25, 1991

Favors/opposes IFQ plan: Favors with qualifications

Comments:

1 Favors IFQs because will safeguard halibut, increase safety, higher quality fish for consumer, and higher prices for fishermen.

2 Crew member are legal owners of fish caught of vessels and can dispose of them as they wish unless vessel owner pays taxes, therefore crewmen should get their share of initial allocation.

10 Name

Wednesday 15 April 1992

NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL
605 West 4th Avenue
Anchorage, Alaska 99501
FAX: **907-271-2817**

WRITTEN TESTIMONY: **HALIBUT IFQ PROGRAM** - SUPPLEMENTAL ANALYSIS
(For Distribution to Council Members)

We have previously submitted testimony to NPFMC [written-11/25/91; public hearing-12/02/91] which supported IFQ's as beneficial for the resource, safety, quality, and price.

However, the testimony contained the *crucial caveat* that the initial quota share allocation language was flawed, illegal, and had to be changed for IFQ's to gain the support of the majority owners of the resource: the deckhands, who constitute 80% of the workforce.

As currently written, 100% of the initial quota shares would be assigned to vessel owners. Our previous testimony advised NPFMC that such an assignment would violate federal (IRS) tax law, in that it assumes vessel owners to be "employers" and fishing to be a "work for hire"-basis contract employment. Both of these assumptions are incorrect. And if they *were* correct, vessel owners would be retroactively (throughout the qualification period) subject to withholding and depositing federal taxes, paying the employer's share of social security [FICA], state and federal unemployment insurance, and state workers compensation.

But vessel owners in no way comply with "employer" qualifications and do not pay "employer" payments. They are not employers. Commercial fishing as it is prosecuted in the halibut longline fishery is not "work for hire" -- it is a **"share"-basis** enterprise and this is why vessel owners pay far less in taxes than *real* employers.

It is also why a deckhand *owns* his "share" of the fish.

The NPFMC Advisory Panel reviewed the initial quota share allocation and recommended that 58% of the quota be assigned to deckhands, with 42% assigned to vessel owners. The Council controverted this recommendation and assigned 100% of the quota to vessel owners. ***Why?***

A deckhand withholds and deposits his own federal taxes, pays an employee share AND an employer share of FICA, finances his own unemployment from savings, and makes due with Fisherman's Fund if he is injured. By law and by contract the deckhand owns his

law, the deliberative advice of its own Advisory Panel, and the testimony of the majority of the workforce and the majority owners -- attempting to deprive deckhands of their small but rightful and legal initial quota share assignment?

Governments were swift to recognize the magnitude of NPFMC derailing the AP-recommended 58/42 allocation. They understood that concentrating ownership of 100% of the resource under the control of 20% or less of the workforce would have severe economic impacts. Specifically, in Alaska a significant majority of vessel owners would purchase mechanical baiting machines in Seattle, not renew their contract relationship with Alaskan deckhands, bring family members on board to work, and take their profits out of state at the end of the season. Numerous studies were commissioned, but it doesn't take a degree in economics to understand that when the majority owners (58%) of a resource -- who also constitute over 80% of the workforce in the industry -- are cavalierly *administered* out of their ownership economies will be shattered.

We advised NPFMC in previous testimony (11/25/91-Page 4) that failure to allocate initial quota shares to deckhands along with vessel owners would precipitate legislative intervention. Of course, merely assigning the initial quota shares legally 58/42 would have put most governments in a position to support NPFMC on the IFQ issue, since that one correction to the plan comprehensively addresses the "fairness" issue and its economic implications. But the Council again ignored good advice.

Therefore, we have testified in writing and/or public testimony before local, borough, and state representatives on the issue of quota share allocations to deckhands. We report to NPFMC the *unanimous* resolutions of the City of Homer Council, the Kenai Peninsula Borough Assembly, and the State of Alaska House of Representatives against IFQ language which awards 100% of the initial quota to vessel owners, rather than the 58/42 formula.

If NPFMC does not legally allocate 58% of initial quota shares to deckhands, intervention at the federal level will commence. We have previously advised NPFMC that political finesse does not obviate legal obligations and that on the slim chance Commerce accepts the allocation language (percentage) as presented we will seek protection for the ownership rights of deckhands through class actions in appropriate judicial venues. ***Why*** does NPFMC want to doom an otherwise healthy IFQ proposal to a purgatory of Washington meddling and court review
?

Legislative bodies, and much more frequently administrators and regulators are overruled by courts for writing illegal laws and regulations. The enabling legislation for NPFMC requires *fair*

and balanced representation in the appointment of members. Nothing in the composition of the Council nor in its stance on quota share assignments to deckhands reveals a fair representation of deckhands in the commercial fisheries. This calls into question the very authority of the Council to promulgate IFQ regulations.

It's your last chance, NPFMC. Ammend the IFQ plan to legally allocate initial quota shares to deckhands, or watch the current plan get volleyed in Washington and arrested in the courts. The issue will come up again, too late, and we'll do this all over again -- correctly, at last.

You are fooling yourselves if you listen only to vessel owners. Citizens, residents, taxpayers, voters..***deckhands*** are watching. The situation is clear and no shell game will fool the people as to what's really up.

Sincerely,

Geo Plagenz
GEODUCK Marine

cc: Steve Pennoyer, NMFS
Hon Barbara Franklin, Commerce
Hon Frank Murkowski, US Sen
Hon Ted Stevens, US Sen

Another of my problems with the plan is the status of the crew. Consider these facts about the relationship between many crewmembers and the vessel owners in Alaskan longline fisheries.

Crewmen:

Typically agree to work for a share of the catch.

Then, by law, have the option to sell the resulting fish on their own permit.

Pay both the employee's and employer's share of Social Security taxes.

Have no unemployment insurance, workman's compensation coverage, medical insurance, retirement benefits or any similar perks by virtue of their "employment."

In many cases, pay part of the direct costs of production of the fish including bait, fuel, food and so forth.

May pay these costs on a man for man basis or a share basis.

Share the risk of a poor catch to the extent of sometimes owing the vessel for a trip.

May be required to supply their own survival gear, and certainly share the risks of working in hazardous conditions while doing the most dangerous work on the vessel.

Often, as part of the job, build the longline gear from components, thereby increasing the value of the components to the owner and decreasing the cost of the investment, with no additional compensation.

Regularly perform a variety of maintenence chores on the vessel, its machinery and gear; including typical routine maintenence such as cleaning, painting and lubricating oil and filter changes. Indeed, in some cases individual crewmen have full responsibility for maintenence and storage of their share of the fishing gear.

In essence, many and certainly virtually all well experienced competent crewmen in these longline fisheries are boat owner/operators without a boat. Indeed many make the last step and become an owner/operator. These people are not employees in the traditional sense. They have been an essential part of the accumulation of any property interest (and this is what IFQs are all about) which the vessels may receive based on past production. It is inappropriate that the vessel owners be given all benefits of this interest to the detriment of the crew; detriment which will result in many of them not having continued occupation opportunities in these fisheries. Give them their rightfully earned share of the quota shares and they will have leverage in their bargaining position and compensation for their loss should they opt to sell out of the fishery. This is the position their de facto partners, the owners, will be in. It is appropriate that the crew have this position also. The supposed problems of finding them and verifying their claims are blown out of proportion. They will come forward, and no QS need be issued to owners or crew until the crew and owners agree and submit an application. All that need be verified is the owners QS allocation and the fact that the crew cosign the application. No application - no QS to owners. You can bet the owners will settle with the crew expeditiously! NMFS will be able to give current addresses of owners to crewmen on request, as these are needed for the crewless plan to work.

COPY 6-19-92 39

1992 JUN 29 P 4:25

Dear Barbara Franklin

Enclosed is a copy of a letter that I wrote to the N.P.F.M.C last February. Please read it.

It is critical that the I.F.Q.s for blackcod & halibut in Alaska be implemented!!

The derby openings that have taken place over the past few years are getting progressively worse!! This springs openings were totally discusting!! Fishermen fighting over grounds - before, during, and after the openings. gear set upon gear - set upon gear!! Gear left behind on the bottom of the ocean because fishermen didnt/couldnt get their gear back up. The ocean is becoming a garbage can for left gear!!

This past halibut opening (June 8th) was the worst one yet!! The cold storages are still processing halibut today - 11 days later!!! Would you like to eat that fish? What a terrible way to manage a fishery!!

I was a deckhand on an Alaskan longliner for 10 years. There is so much opposition to I.F.Q.s. Alot of this opposition comes from people that arent even in the fishing industry. I'll tell you right now - almost all the professional longliners and their crews are PRO-I.F.Q!!

I know you may or may not know alot about fishing so please - please listen to the professionals - or go out on one of these derby openings and get a first hand opinion!!

One last thing - the gear/sales industry oppose IFQs because they have never sold so much gear - ask yourself where is this gear. Its littering our oceans!! Sincerely,

Laura J. Phillips P.O. 21 Pelican, Ak. 99832 - Laura J. Phillips

N.P.F.M.C. 2-25-92

Dear Council Members,

I would like to congratulate you on finally making your decision on implementing I.F.Q.'s!!

I find it frustrating, as I'm sure you do, that now that there is a system to implement - all sorts of people come out of the woodwork to say that they strongly oppose I.F.Q.'s. I would like to ask these people how many limited entry cards they hold? I know that alot of people protesting I.F.Q.'s in the Pelican/Sitka area are card holders of trolling - which already is fortunate enough to have a limited entry system!!! I feel that these people are not too interested in the future of the resource but are mainly interested in their own pocketbooks!!!

There is so much talk about the social and economic impacts on fishermen and communities. Fishermen will survive and so will the communities. On top of all that - the product will be better, the resource will be much more stable, and people - husbands and daddys won't have to risk their lives so much!!! Fishermen and communities didn't die-off and turn to ghost towns when limited entry was imposed on Salmon, Crab, or Herring. Why should longline be any different?? These products are still sold locally and not all taken to far off ports - neither will be the case with blackcod or halibut!!!

All this talk opposing I.F.Q.'s is [illegible]

by "newcomers" to the longline industry and knew when they bought their gear that you were discussing I.F.Q.'s all the time!!! What about the "old timers" who have probably spent more years on the ocean than these newcomers have spent walking??? No one seems to care about them. No one seems to care about the "fathers" of the longline sector about the resource itself. Like I said earlier their only worried about how big their slice of the pie is. If all these "newcomers" are so interested in longlining they could always get jobs as crew on boats or buy some I.F.Q.'s of their own!!

I.F.Q.'s deal with all of the important factors of/for the resource - overcrowding, bycatch, safety, and waste. Congratulations to all of you on the council - for a job well done!! I.F.Q.'s would prohibit waste of other species because the fishermen wouldn't be just targeting on say - blackcod. If one is fishing for blackcod - you could still have rockfish etc., without wasting them float away dead because you're too busy with blackcod.

Again, I would like to congratulate you all for getting the I.F.Q. system going. Now lets see you follow thru!! How long will this take?? I certainly hope not another 5 years because by then it will be too late. Let's go!!! Let's stop wasting the resource and human lives. Let's stop arguing over who gets what and start to protect our resource before it's too late!!!

I am very concerned about how long it will take to put these I.F.Q.'s through. Where were

all these opposing views when you were spending hours and hours listening to public testimony - over the past several years? I say they were all probably away on vacation!!!

~~Let's~~ stop the arguing - a decision has been made - implement it now - before it's too late !!!!

thank-you!!

Sincerely

Maura J. Phillips

Maura J. Phillips
P.O. 21
Pelican, AK. 99832
735-2449

COPY

June 19, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution A ve. & E St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin:

My name is David Olsen and I am the owner and operator of the F/V Leviathan. I have been fishing for twenty years for this boat. Three generations of my family have fished in Alaska for halibut and sablefish.

The way the fishery is going now we need better management. IFQ's seem to be the best possibility for that. It is so crowded on the fishing grounds right now, we have trouble trying to find a place to fish, and the gear loss and conflicts are tremendous. We could have much better quality fish and get a lot better price for the fish, too.

We are being forced to fish when we are told to fish regardless of the weather conditions, which makes it very dangerous at times, especially for small boat operators. More people are hurt or even killed from the present fisheries management system.

In my opinion, the IFQ system is the only possible way to make the fishery survive.

Sincerely,

David Olsen
F/V Leviathan, Owner/operator
18306 85th Place West
Edmonds, Washington 98026

39

C 206671

COPY

June 20. 1992

1992 JUN 29 P 4: 25

The Honorable Barbara Franklin
Secretary, United States Department of Commerce
15th & Constitution Ave., NW
Washington, DC 20230

Dear Secretary Franklin:

I am writing to you because of my concern about the continuing forward progress of the proposed Individual Fishing Quota system, for halibut and black cod in the gulf of Alaska and Prince William Sound proposed by the North Pacific Fisheries Management Council. I opposed this issue when possible on the local level. Well, the issue is now on the federal level and much closer to implementation and I am even more concerned. I am a commercial fisherman in Cordova, Alaska, supporting a family of six with my fishing activities. Over the last eight years I have increased my effort and investment in the longline-bottomfish industry here and am just about to the point of making a living. The proposed IFQ system will, basically, wipe me out. I will not get enough of a quota to support my obligations and investment, not because I am a bad fisherman but only because the timing is wrong. This is true for most of the fishermen here in Cordova. I have, at my own expense because of the importance of this issue, attended all of the public meetings held on this issue and voiced my opinion. From the beginning I was amazed at the amount of opposition to the proposed system and the continued efforts of the NPFMC to implement it. Most small, coastal communities in Alaska have declared their opposition to this proposal, the State of Alaska, both by Senate and House of Representative resolutions opposes the plan. The only supporters are a few wealthy, large, organizations that will benefit immensely from the implementation of the proposal. Activity in these fisheries will be reduced to a small percentage of what it is now, individual fishermen, small communities and others will suffer. A public resource will be harvested by a few, well financed and well connected individuals and corporations. Do you really think this is progress and are you willing to allow this?

Please, I ask you on behalf of myself and other individuals involved in these fisheries, do what you can to fairly and justly allocate these resources. If there are things that can be done to improve the conditions under which these fish are harvested, by all means lets do that, but lets not allow a few to control a resource that is
here for all.

One other point I would like to comment on are the actions of Clem Tillion of the NPFMC. I have had the opportunity to discuss the issues of this proposal with Mr. Tillion on more than one occasion. My opinion is that Mr. Tillion in no way either represents or listens

to any of the fishermen in Alaska. I do not know what drives the man but it is not the interest of the people he is supposed to represent. Whatever can be done to limit his ability to implement regulations would be a positive step.

Thank you for your time and help.

Sincerely,

Bill Kaltenekker

COPY

North Pacific Fisheries Protection Association

P.O. Box 202895 • Anchorage, AK 99520-2895 • (206) 781-0336

June 22, 1992

Honorable Barbara Franklin, Secretary
United States Department of Commerce
15th & Constitution Avenue NW
Washington DC 20230

Re: Draft Supplement EIS, NOA, AK, Halibut and Sablefish Fixed Gear Fisheries Individual Fishing Quota Management(IFQ) Alternative.

Madam Secretary:

The North Pacific Fisheries Protection Association is a membership organization formed by three people, a skipper, a crew member and an attorney just over eighteen months ago to address proposed management regimes for the North Pacific Ocean from the perspective of the people, communities and cultures dependant upon the North Pacific Ecosystem for their lifestyles, livelihoods and even for their lives. We are now more than one hundred fifty members working as a group and in coalition with other organizations with thousands of members in Alaska, the Pacific Northwest and throughout the Coastal United States. We have been actively involved in review and analysis of the proposal by the North Pacific Fisheries Management Council to impose the IFQ program on the Halibut and Sablefish fisheries. We have appreciated the opportunity to comment upon that plan and, to a limited extent, to comment on this Draft Supplement, before the NPFMC and the Advisory Panel and Science and Statistical Committee of the NPFMC. We are pleased to have the opportunity to raise several points of concern regarding the Draft Supplement EIS and the EIS process in this case.

I. ALTERNATIVES TO IFQ PROGRAM NOT CONSIDERED

The major flaw in the EIS which is not cured by the Draft Supplement EIS is the total failure to satisfy the requirement of Section 42 USC 4332(C)(iii)for a detailed statement by the responsible official on: "Alternatives to the proposed action", and the total failure to address the requirement of 42 USC 4332(E) that the agency "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."

The record in this case is replete with expressions of concern regarding the failure of the Council to fully consider alternatives

to the IFQ program. Both the Chairman of the council and staff members have conceded that the management tools such as time and area closures, trip limits, gear and vessel limitations and restrictions and exclusive area registration have never even been referred to the Council staff for review as alternatives to the IFQ and the status quo. The only alternatives studied and analyzed by the Council staff and reported on to the council were other IFQ proposals. Repeatedly, the Council asked individuals and organizations who raised questions about the IFQ proposals to present alternatives. Repeatedly, real alternatives were presented but none of those alternatives were ever referred to the staff, the Advisory Panel or the SSC for review and analysis. Such review and analysis is essential for the Council to truly "consider" alternatives and clearly would be necessary to satisfy 42 USC 4332(E) which requires a written report on those alternatives. There is no legal basis supporting the contention of the Council that what amounts to a facial or nominal compliance with the requirements of the law by presentation of four or five slightly different combinations and permutations of a single preferred program satisfies the "consideration of alternatives" required by NEPA. The Draft Supplement EIS should be returned to the Council with directions that the Council fully consider management alternatives proposed to the Council by the AP, SSC, fisheries organizations and individuals in order to provide themselves and the public, as well as you, with an accurate and complete analysis and statement on the comparative benefits and costs of the alternative management regimes for Sablefish and Halibut.

II. <u>ENVIRONMENTAL IMPACTS NOT FULLY EVALUATED</u>

A second problem with the EIS not cured by the Draft Supplement is the inadequate satisfaction of the requirement of Section 42 USC 4332(C)(i) for a detailed statement on:"the environmental impact of the proposed action". At page 6-2 the summary comments are made that "An IFQ program is expected to result in increased highgrading" and "An IFQ program will increase intentional under-reporting of landings". No further discussion of the implications of these statements is undertaken. The long term viability of the stocks is dependant, in large part, on the effective management of the short-term harvest limitations. Here the Council has conceded potentially serious conservation impacts but rather than a full discussion, the SSEIS states: " With the exception of increased administrative and enforcement costs, the costs of an IFQ program have not been quantified." and "the net effect on fishing mortality that is not accounted for in reported landings is not known". Granting that NEPA does not technically require a formal cost/benefit analysis, NEPA requirements surely have not been met by such cavalier reference to impacts of potentially great significance to the environment in the conservation and management of the fishery resource. In evaluating this concern, we would ask you to reflect on the fact that the purported reduction in by-catch is only speculation, but even if true, by-catch is at least random in its effect on the health of the ecosystem. The

deliberate highgrading which it is conceded will occur is a conscious targeted removal of the largest, most robust fish and the discard, after comparison for size and weight, of the smaller fish. The impact on the fish stocks may not be known with certainty, but should be analyzed and reported on to the Council, the public and to you before the implementation of the program proceeds because of the potential for significant long term damage to the stocks. This is important in the case of Sablefish, but appears to be required with regard to the Halibut because of terms and conditions of the Northern Pacific Halibut Act of 1982. The increase in "intentional under reporting of landings" is of even greater consequence because that kind of conduct removes the biomass from the system completely and, from an economic point of view, reduces the price by increasing supply and puts more and more pressure on the fishers to kill and land larger and larger quantities of fish, both by pressuring for larger legal quotas and by illegal under reporting, to make their fixed expenses. There may be satisfactory answers to these problems and information shortfalls, but the answers do not appear in the document presented for review.

THE IFQ PLAN IS NOT COMPLETE AND THEREFORE SEIS REVIEW IS NOT TIMELY OR APPROPRIATE

Even with the presentation of the "preferred alternative" SEIS at the Council meeting, the IFQ proponents conceded that the "details" of the IFQ program would be in the implementing regulations and rules and that any questions about the specific impacts on particular communities, cultures or other stocks of fish or marine mammals would have to wait until those regulations were issued. With so much of the substance of the plan not decided, it is virtually impossible for reviewers to make the best and most valuable comments on the program. The Draft supplement EIS should be withdrawn, returned to Council and rewritten to take into consideration the environmental, social, cultural and economic impacts likely to result from the implementation of the plan as the plan is defined in the implementing rules and regulations.

THE IFQ PLAN MUST BE REVIEWED PURSUANT TO EXECUTIVE ORDER 12291

The DSEIS states that approximately 12,000 people will lose employment in the fishery as a result of the IFQ program. If each of those people earned only $10,000.00 per year that would be a dislocation of $120 million per year, well over the $100 million threshold of the Executive Order. The indirect employment losses are projected to at least equal, if not exceed, the direct fishing industry losses.

THE PROCESS AND SUBSTANCE OF THE NOTICE TO COMMENT ON THE DRAFT SEIS WAS FLAWED

The executive director of the North Pacific Management Council gave notice in the official Council newsletter that the time for comment on the Draft SEIS ended before the document was even officially released for review. This error was substantial and was not corrected, as it might have been, by a satisfactory notice to all

recipients of the newsletter that the review period did not terminate until June 29, 1992. While Federal Register publication would normally satisfy all legal notice requirements, we believe that the erroneous statement, which the executive Director admitted to on the record, has so much potential to mislead the public that some affirmative actions on the part of the Council or the Agency are necessary to ensure the integrity of the process. The notice, with regard to substance, failed to inform the public that the Halibut IFQ program would require the amendment of regulations under the Halibut Act since the program proposed by the Council does not conform to the provisions and requirements of the Act and therefore is in conflict with the Halibut Act regulations. We believe that any substantial amendment of Halibut Act regulations constitutes a significant action in and of itself and would therefore require at least an opportunity for public hearings and comments if not a full EIS review.

Given the uncertainty in the program, the deep divisions in the fishing community, the massive social, economic, and cultural impacts and the shortfalls in the analysis of the program, an additional period of review after inclusion of the missing information would be appropriate.

We appreciate the opportunity to comment.

Yours Truly,

Laura K. Cooper
Executive Director

David L. Allison
Counsel

FAX TRANSMISSION NOTICE

DATE 6/22 TIME 1:20pm PST

TO

COMPANY: NMFS

ATT: Steve Penoyer

FAX# 907-586-7131 PH#

PAGES (INCLUDING THIS COVER SHEET) 5

CONTENTS: Comments on IFQ DSEIS

NOTES:

FROM

North Pacific Fisheries Protection Assn.
Dave Allison

FILE	ACT	INFO	ROUTE TO	INT
			Director	
			Deputy Director	DJK
			2	

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COPY

Mr. and Mrs. John McHenry
11546 6th Ave NW
Seattle, WA 98177

1992 JUN 29 P 4:26

June 22, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave & "E" St. N.W
Washington, D.C. 20230

Dear Secretary Franklin,

I am writing to request your assistance in adopting an IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are the conservation of the halibut and sablefish resource and safety. Due to halibut seasons that consist of two or three twenty-four hour openings, there is hardly an opening that does not result in loss of life and property and these openings have to be fished regardless of weather conditions. The halibut and sablefish fisheries are in virtual chaos and have created an extremely dangerous situation.

Adopting an IFQ program would allow vessel owners the opportunity to make intelligent decisions regarding weather and market conditions, alleviating the pressure of a decision between fishing in poor weather or giving up a sizeable portion of a year's income. IFQ's would allow fresh fish in the marketplace year round, and a combined IFQ program would most certainly help reduce discards of halibut and resulting waste. Also, with an extended season, it would put fewer boats on the grounds at the same time resulting in less gear conflict.

I have worked in the fishing industry for a number of years, and my husband has been a longline fisherman in the North Pacific for sixteen years. We have both seen traditional management tools fail, and see IFQ's as the best opportunity for saving the fish resource and the lives of the men and women who pursue it.

The current status quo management program has evolved into a marketing nightmare. The Canadians have an IFQ program and receive $2.50 to $3.00 per pound for their halibut while the Americans receive $0.80 per pound under the current system which floods the fresh market for a week or two and the frozen market for the rest of the year.

Another facet of the current system, often overlooked or belittled is the effect on the family life of a commercial fisherman. With the yearly increase in effort on the halibut and sablefish resource, it is becoming increasingly difficult for fishermen to leave the grounds while fishing time remains, fearing that taking a break at the the wrong time could result in financial disaster. These marathon derbies result in increasingly long separations from home and family; three month separations are now commonplace.

We need this IFQ program to restore sanity and safety in the industry thank you in advance for your prompt attention to this critical matter

Sincerely,

Dorota McHenry
F.V. Seymour

COPY

Ronald A. White
PO Box 605
Homer, AK 99603
(907) 235-8311

June 22, 1992

Barbara Franklin
Secretary of Commerce
15th and Constitution Avenue
Washington, D.C. 20230

Dear Barbara:

I am asking you to take a good look at the NPFC proposal for the IFQ plan for Black Cod and particulary Halibut.

In a nutshell, this plan will hurt alot of people and will make a few people very wealthy.

I am hoping that this system of checks and balances will work. There is a blatant conflict of interest as the members on the NPFC that voted for IFQ's will gain substantialy.

You are the last check and many of us that will be hurt and penalized are hoping and praying that you will stop this unfair and unethical proposal as there are other alternatives. Thank you.

Sincerely,

Ronald A. White

Ronald A. White

cc: Combined Alaska Delegation
120 Trading Bay Road
Suite 350
Kenai, AK 99611

raw

~~27~~
45

COPY

BIO ECONOMIC RESEARCH AND ANALYSIS

NORMAN STADEM
ECONOMIST

1826 E. 26th Ave.
Anchorage, AK 99508
(907) 272-0908

June 23, 1992

Mr. Steve Pennoyer, Director, Alaska Region
National Marine Fisheries Service, NOAA
P.O. Box 21668
Juneau, AK 99801

Dear Mr. Pennoyer:

I am submitting the enclosed in response to the call for public input to the National Environmental Policy Act (NEPA) review process of the North Pacific Fishery Management Council (NPFMC) sablefish and halibut individual fishing quota (IFQ) management programs.

The preferred alternative sablefish and halibut IFQ programs are fatally flawed. As an analogy in support of this assertion, suppose that we give a sky diver all the requisite gear except for the parachute. Obviously, any jump would be disastrous to the sky diver. The missing piece of gear is critically important and central to the success of sky diving. All other gear is useless without the parachute.

Similarly, the IFQ program lacks the central element necessary to make the privatization paradigm work to rationalize the fisheries. That is, it fails to provide an effective mechanism to ascribe the prerogatives and the responsibilities associated with private property to sablefish and halibut stocks. The privatization paradigm requires that all permited actions associated with a particular property be fully specified, internalized and enforceable. Failure of these sets of conditions to hold generates externalities. To the extent that externalities (goods or bads) exist we get sub-optimal allocation of resources.

The proposed IFQ program does not ascribe private ownership terms to the fish stocks. Thus, the central element necessary to privatizing the object at issue is missing. Nothing will be changed to improve the open

accesss situation that could not be accomplished within the existing framework, with intelligent management. The result is that the fishery, in fact, remains an open access fishery. Externalities associated with unpriced or unowned resources still obtain -- rule of capture, for example. The privatization paradigm is without relevance in rationalizing the fisheries, because it does not privatize the critical element -- the fish stocks.

Clearly, the IFQ program can not and will not function as advertised. What can we expect in consequence? I submit that we will see sub-optimal behavior on a grand scale. High grading is only one aspect of this.

For sake of argument assume the general conditions existing as of the May 7-8, 1992, halibut opening. Price quotes were $.75 for 10-40, $.90 for 40-60, and $1.05 for 60 pound and up. Respectively, the larger fish fetched 20% and 40% more than the 10-40 pound class. Under open access, fishermen retain and sell their entire load. But under the IFQ scenario the incentive will be to high grade the load.

Assume, conservatively, that 20% to 40% of fish caught are in the 10-40 pound class. Given the 1992 Alaskan (areas 3 and 4) halibut total allowable catch (TAC) of 41,730,000 pounds, the potential harvest of low valued halibut is between 8.35 million and 16.69 million pounds. With the discretionary time to do so and with an incentive of between $2.51 million and $5.00 million, we can expect substantial amount of intentional and wanton waste, i.e., high grading. Enforcement costs to prevent this will be high and no one, including holders of IFQs, will want to pay the bill.

Similarly, the Canadian program has shown that price for fresh halibut can fluctuate widely in a short time. A fisherman hailing a load who discovers that price has dropped substantially from the expected high value, will have an incentive to minimize the low-valued load in anticipation of better future opportunities.

Clearly, the IFQ management program is designed to

encourage and, in fact, institutionalize intentional and wanton waste -- similar to the egregious waste that is tolerated in the trawl fisheries. Granted there is waste under open access management, but this comes primarily from uncoordinated management programs. An intelligent approach was allowing the retention of sablefish with halibut during the May 1992 halibut season. This is the direction that the NPFMC should be moving, rather than attempting social engineering -- in which it has little, if any, expertise.

The implications of dramatic changes in ownership rights within the fisheries is too vast to comprehend. No matter what management system is chosen it will have its unique problems. There seems to be little value in changing one set of known problems for another set of unknown problems given the conjectural nature of anticipated improvements.

The time for submitting comments in regard to the NEPA review of the sablefish and halibut IFQ program comes at a bad time for those actively involved in the Alaskan fisheries. I have not been able to analyze or to develop comments additional to those submitted previously.

It would be interesting to learn what new research has been done by your staff, or other appropriate staff, to assess compliance with NEPA requirements. I doubt if much work, other than perhaps reasserting assumptions, conjectures and speculations in support of previously asserted conclusions, has been undertaken to support conclusions of the NEPA review. Obviously, time and budget constraints precludes any meaningful study of the issues in such a short time.

In the same vein, I have elected to resubmit my previous written testimony and comments to the Council as well as two letters to Walter J. Hickel, Governor of Alaska. These two letters bring out points not addressed in comments directed to the Council.

Sincerly yours,

Mr. Pennoyer

June 23, 1992

Norman Stadem
Economist

cc: Senator Fred Zharoff
Marcus Hartley, NPFMC

Enclosures:

COPY

Box 1367
Petersburg, AK. 99835

1992 JUN 29 P 5:15

June 25, 1992

Dear Secretary Franklin:

The NPFMC has approved an IFQ plan for black cod and halibut for Alaska. This is an action that is long overdue. Your support of this plan would certainly be appreciated by the professional fishermen. Before the final vote taken at the last council meeting, I read the Supplemental Analysis. It is quite a lengthy document. The only conclusion that can be drawn from the evidence in that document is to implement the plan.

I am a long time salmon fisherman, but a relatively short time longliner, beginning in 1984. I am a small boat fisherman, a 40 foot boat, who takes two crewmen with me during the halibut openings. My crewmen are fully employed in other occupations. I am not. This is the case of a great many crewmembers in both the halibut and sablefish fisheries off of Southeast Alaska. They fish the short openings looking for the big hit and the extra bucks but they have no investment in the fisheries nor in the resource.

The present system of an open fishery is devistating to the stocks. There is a tremendous amount of gear set and it cannot all be retrieved in 24 hours when the weather is good. When a sudden blow comes up the results are disastrous. Dead and lost fish are the rule, not the exception. Last falls mop up fishery is a good example. In a straight line from Lisianski Inlet to Salisbury Sound, a distance of about 40 miles, 26 flag poles and bouys were seen still in the water a week after the closure. Multiply this by the fishable waters of Alaska's Gulf and the stock damage of the present management system is evident.

I am not going to receive the average quota that I have been catching the last five or six years if an IFQ program is begun, but it is the only alternative that we have that will bring some semblance of order to the fisheries and protect the stocks from wasteful fishing methods. The data in the analysis is very complete. I believe the evidence is there for an excellent case for IFQ implementation. If politics are put aside and the resource and the wise use of the resource is the only consideration, the IFQ plan will be implemented.

Sincerely,

Robert G. Schell

Robert G. Schell
F/V Alice Faye

2116 N. 153rd
Seattle, WA 98133

June 26, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin:

The F/V North has been longline fishing in Alaska since it was built in 1924 and is still owned by the same family. My brother and I fished with our father and then it was taken over by us when he retired in 1955.

Over the years we have seen many changes in the industries. Now we need your help to make one that is long overdue. That is the IFQ program.

The way the longline industry has been going the last several years, has caused a loss of boats, crew, injuries to crew, loss of fishing gear, and fish.

Now after many years, the IFQ program has finally won approval from the North Pacific Fisheries Management Council. We urge your support for the IFQ program.

I see IFQ's as the best opportunity for saving the fish resource and the lives of the men who pursue it.

Sincerely,

John Haram
Arnold Haram
Owners, F/V North

A 43

United Fishermen's Marketing Association, Inc.

P.O. Box 1035 Kodiak, Alaska 99615

Telephone 486-3453

June 29, 1992

Mr. Steven Pennoyer
Director, Alaska Region
National Marine Fisheries Service/NOAA
P.O. Box 21668
Juneau, AK 99802-1668

SENT VIA FAX # 907-586-7131

Re: NEPA COMMENT: EIS No. 920159, DRAFT SUPPLEMENT, NOA, AK, Halibut and Sablefish Fixed Gear Fisheries Individual Fishing Quota Management (IFQ) Alternative (Federal Register; Friday, May 15, 1992; Volume 57, No. 95, pages 20825 and 20826).

Dear Mr. Pennoyer,

The Sablefish/Halibut IFQ Proposal that was adopted in December, 1991, by the North Pacific Fishery Management Council ("Council") is inflationary. It significantly increases the cost to government to manage the sablefish and halibut fisheries. It increases the cost to industry to participate in the sablefish and halibut fisheries. It increases the cost of sablefish and halibut to the consumer. EIS No. 920159 does not adequately address the issue of the inflationary impact of the Council-adopted Sablefish/Halibut IFQ Proposal.

The Council-adopted Sablefish/Halibut IFQ Proposal will significantly increase the debt-burden that the industry must carry. It will increase the debt-service that the industry must carry. The increased costs of debt that will result from the Council-adopted Sablefish/Halibut IFQ Proposal will not be even remotely offset by a commensurate increase in benefits. EIS No. 920159 does not adequately address or attempt to predict the increased costs of debt that will occur as a result of the Council-adopted Sablefish/Halibut IFQ Proposal.

The increased management costs to government, the increased production costs to industry, and the increased debt-burden and debt-service that will fall upon a significant number of small independent business entities as a result of The Council-adopted Sablefish/Halibut IFQ Proposal all represent a dangerous non-productive use of capital. This is especially true where industry capital is concerned.

We do not believe that the government, the industry, the consumer or society can afford the Council-adopted Sablefish/Halibut IFQ Proposal. The source of revenues that are needed by the National Marine Fisheries Service ("NMFS") to offset the direct costs of managing the sablefish and halibut resources under the Council-adopted IFQ Proposal have not been adequately measured or predicted in EIS No. 920159.

We believe that several important NMFS, Council and industry programs and priorities will and must be compromised, diminished, or otherwise reduced in order to re-distribute the NMFS human and financial (budget) resources so as to absorb the significant increase in the cost of managing the sablefish and halibut resources under the Council-adopted Sablefish/Halibut IFQ regime. We believe that the Council-adopted Sablefish/Halibut IFQ Proposal will result in an inevitable redistribution of research and management priorities. EIS No. 920159 does not adequately address, analyze or consider these issues.

We do not believe that the inordinate amount of time, energy and human and financial resources that the Council and NMFS will and must devote to managing the sablefish and halibut

resources under the Council-adopted Sablefish/Halibut IFQ Proposal have been considered by EIS No. 920159. Already, and for several years, significant issues regarding the management of the array of fisheries under Council jurisdiction have not been addressed with the attention that they should be afforded; EIS No. 920159 does not adequately address, analyze or consider this issue.

The source of revenues that will be needed by industry to offset the increased costs of participating in the sablefish and halibut fisheries under the Council-adopted Sablefish/Halibut IFQ Proposal have not been adequately identified, analyzed or considered in EIS No. 920159. These increased costs will and must come from increased revenues (i.e., increased prices) and/or from existing profits. Many of these increased costs must and will come from operating profits; this will have the affect of diminishing such essential capital investments as maintenance and upkeep, replacement of plant and equipment, modernization, and investments in safety-related modifications, equipment, and supplies. These issues have not been adequately identified, analyzed or considered in EIS No. 920159.

Employment will also bear a significant portion of the increased cost burden that industry will carry as a result of the Council-adopted Sablefish/Halibut IFQ Proposal. Crew shares must and will be negatively impacted. Other employee income and benefits will be negatively impacted. The general level of employment itself will be negatively impacted. As a matter of economic and political policy, the employment impacts that result from the Council-adopted Sablefish/Halibut IFQ Proposal are not rational. EIS No. 920159 does not adequately develop an analysis that addresses these significant negative social and economic impacts.

The Council-adopted Sablefish/Halibut IFQ Proposal has tremendous biological, social and economic costs. It will complicate and convolute the administration, enforcement and management of the sablefish and halibut resources. It will put conservation of the sablefish and halibut resources at greater conservation risk than ever before. It will result in a major and unintended and unanticipated re-distribution of wealth, ownership and employment. EIS No. 920159 does not properly outline these issues, nor does it address the related national social and economic policy implications of the Council-adopted Sablefish/Halibut IFQ Proposal.

The Council-adopted Sablefish/Halibut IFQ Proposal should be considered a Major Rule under Executive Order 12291. The fact alone that the ownership of the sablefish and halibut resources will be taken away from the public and given away to private individuals and other private entities represents an annual transfer of wealth far in excess of $100 Million. The increased industry and government costs, the biological impacts to the sablefish and halibut resources, the re-allocation of resources and wealth, the disenfranchisement of employment, the deleterious impact to existing processing entities; all these negative social, economic and biological costs warrant that the Council-adopted Sablefish/Halibut IFQ Proposal should be considered a Major Rule under Executive Order 12291.

Sincerely,

Jeffrey R. Stephan

P.O. Box 13
Pelican, Alaska 99832
June 28, 1992

Secretary of Commerce Barbara Franklin
14th Street & Constitution Avenue, N.W.
Washington, D.C. 20230

Dear Ms. Franklin:

The management of fisheries in the Gulf of Alaska is a common concern. A substantial amount of time, money and effort by the North Pacific Fisheries Management Council and those involved have worked together to provide to you a workable solution to the many difficulties facing the fishing industry today. NPFMC members are dedicated to resource management. fisheries will survive as a way of living. The Constitution of the Great State of Alaska was amended to allow limited entry in the salmon industry. To protect the life style of Alaskan fishermen and enhancement of salmon stocks. Individual fishing quotas are a form of limited entry to save a traditional fleet and the communities which are inherently linked to the fisheries economics.

My family supports Individual fishing quotas for sablefish and halibut. We are active commercial fishers. We are hard working individuals and are successful in the fisheries today. But we know the fishery can be managed much differently and still be successful.

On May 15, 1992, opening day to the sablefish fishery, the VHF radio was jammed with people calling out loran lines, fighting over a place to set their lines. It is crowded out on the edge. Gear being set over gear. Tangled up mess being set down. Try hauling the lines back and hooks get stripped off of gear, fish are lost, gear gets cut loose. Often times as many as 4 to 5 boats get tangled up because one boat set over the top of them. Some boat try to work together to make it work but it only takes one to mess it all up. Gear gets lost because less experienced fishers set too much gear unable to haul it all back.

Every year the grounds are more and more crowded with new entrants. We have lost valuable fishing time to: 1.. Help the Coast Guard search and rescue men overboard because the boat went down. Our standards for safety are excellent. We realize the dangers and recognize the need to be prepared for anything that might happen. 2.. Mechanical breakdowns unforeseen yet fishing time lost cannot be made up. 3.. Having to tow boats in because of mechanical failure in their boat. 4.. We have had longline gear from another vessel get tangled up in our propeller trying to undo snarled up set over gear. To get the line out involves running into town and hiring a diver. When an opening is a matter of days the make or break issue means being ready for anything. In order to be successful today means setting as much gear as you can haul back. [illegible] no time to regroup must fish until a closure.

Alaskan commercial longliners once had a year round livelihood longlining sablefish and halibut offshore Southeast Alaska. Now we take our living across the Gulf of Alaska and west to the Bering Sea. It is a way of life and often dangerous but it is all we know. fish. Fish till you cannot fish no more.

I am trying to give you a feel for what it is really like out here. We live in rural Alaska. And we support our community by selling the fish we catch in our homeport. We hire local family and friends. We are year round residents. These workers sometimes fish in weather that most people ordinarily would not venture out into. This is the only opportunity they will have to fish.

The fish we sell is always top quality but it might be months before the consumer gets to eat it. It would be great if the consumer could get the top quality that we sell.

There is a value added potential being lost because of the catch as much as you can in x amount of time. Local communities could reap the benefits of value added fish products. Communities need incentives and expertise to help develop the ability to utilize the value added potential. We need sound resource management not only to survive as rural communities but also to sustain fish populations for future generations to utilize.

The North Pacific Fisheries Management Council recognizes a need for a change. And much thought, consideration, and hard knowledgeable work has gone into this decision of IFQ. The Council members know first hand just what the fishing industry is all about and are committed to find the right solutions. The NPFMC is analyzing the Sitka Block Proposal as a safety mechanism to save the small boat fleet.

I respectfully ask you to uphold the NPFMC's approval of the Individual Fishing Quota system for the sablefish and halibut longline fisheries. It take guts and determination to make a change. Thank you for your valuable time.

Sincerely yours,

Patricia Phillips

Patricia Phillips

James & Patricia Phillips
F/V Nancy K
P.O. Box 33
Pelican, Alaska 99832

49 50

[illegible]

Re: [illegible] Proposal

[illegible] commercial [illegible] in Alaska for the past [illegible] years. [illegible] adamantly against the appointment to [illegible] of the North Pacific Fishery Management Council. Thank you for listening to our concerns and [illegible].

[illegible] fishermen, we stand to lose 33% of our income [illegible] implementation of the [illegible] plan. We are boat [illegible], and to minimize expenses, we will have to eliminate the crew. [illegible] crewman jobs will be lost, plus many [illegible] support industries.

[illegible] the National Marine Fisheries Capitol Construction Fund, we purchased a new boat in 1990. The [illegible] boat and our home in Alaska will plummet.

[illegible] that we have [illegible], there is not a [illegible] to warrant [illegible]'s. Traditional [illegible] management have not yet been [illegible]?

[illegible] plan will [illegible] millionaires (several of [illegible] on the [illegible]). Many thousands of us will lose the [illegible], for no particular reason.

[illegible] economic impact report. 90% of the [illegible] expect to receive [illegible]% of their [illegible] going to need to buy [illegible] stay at their current [illegible] will create a monster.

[illegible] the [illegible] proposal at [illegible].

[illegible],

[illegible]

Kodiak Island Borough

710 MILL BAY ROAD
KODIAK, ALASKA 99615-6340
PHONE (907) 486-5736

June 29, 1992

Mr. Steven Pennoyer
Director, Alaska Region
National Marine Fisheries Service/NOAA
P.O. Box 21668
Juneau, Alaska 99802-1868

Dear Mr. Pennoyer:

Attached please find comments submitted by the Kodiak Island Borough relative to **EIS No. 920159**, DRAFT SUPPLEMENT, NOA, AK, Halibut and Sablefish Fixed Gear Fisheries Individual Fishing Quota Management (IFQ) Alternative. The notice of availability and the request for comments regarding EIS No. 920159 was published in the Federal Register on Friday, May 15, 1992 (Volume 57, No. 95; pages 20825 and 20826).

Please be advised that although we are faxing these comments to you, we are also sending a hard copy of these comments to you via the U.S. Mail. Thank you.

Sincerely,

Jerome M. Selby
Borough Mayor

Attachment

cc: Dr. William W. Fox, Jr.
Assistant Administrator for Fisheries
National Marine Fisheries Service/NOAA
1335 East West Highway
Silver Spring, MD 20910

NOTE: Sent Via Fax #301-713-2258 Hard copy of comments sent via U.S. Mail.

TO: Mr. Steven Pennoyer
Director, Alaska Region
National Marine Fisheries Service/NOAA/Department of Commerce

FROM: Jerome M. Selby, Mayor
Kodiak Island Borough
Phone: 907-486-9301; Fax: 907-486-9374

DATE: June 28, 1992

SUBJECT: NEPA COMMENT; EIS No. 920159, DRAFT SUPPLEMENT, NOA, AK, Halibut and Sablefish Fixed Gear Fisheries Individual Fishing Quota Management (IFQ) Alternative.

I. DECISION MADE BY THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL ("COUNCIL") PRIOR TO THE COUNCIL HAVING DEVELOPED A SUFFICIENT ANALYSIS UPON WHICH TO BASE A DECISION

The North Pacific Fishery Management Council ("Council") adopted a program for Individual Fishing Quotas ("IFQ"s") for the fixed gear sablefish and halibut fisheries off Alaska prior to having considered the effects of available alternatives for combined management of the sablefish and halibut fisheries, including the cumulative effects of the Council-adopted Sablefish/Halibut IFQ Program.

On December 8, 1991, the Council adopted a program for IFQ's for the fixed gear sablefish and halibut fisheries off Alaska. On March 27, 1992, the Council released a SUPPLEMENTAL ANALYSIS OF THE INDIVIDUAL FISHING QUOTA MANAGEMENT ALTERNATIVE FOR FIXED GEAR SABLEFISH AND HALIBUT FISHERIES ("Supplemental Analysis"). This Supplemental Analysis was the first analysis that was prepared by the Council for consideration by the public or the Council that addressed the combined management of the sablefish and halibut fisheries, including the cumulative and combined effects of the Council-adopted Sablefish/Halibut IFQ Program. This Supplemental Analysis was completed more than 3 months after the Council made a decision regarding a combined IFQ program for sablefish and halibut. The Council should have considered alternatives for the combined management of the sablefish and halibut fisheries, including alternatives for a combined IFQ program for sablefish and halibut, before they adopted a final Sablefish/Halibut IFQ Program. The Supplemental Analysis indicates that the Council had previously prepared 4 analyses upon which the Council based their decision of December 8, 1991, to adopt a combined IFQ program for sablefish and halibut. It is important to note that 3 of these analyses addressed only the sablefish fishery, and 1 of these analyses addressed only the halibut fishery. Prior to the Council adoption of the IFQ program for sablefish and halibut on December 8, 1992, the Council did not have before it, and therefore did not consider, an analysis of the cumulative and combined effects of alternatives for a combined management regime for the sablefish and halibut fisheries, including a combined IFQ program for sablefish and halibut. Prior to March 27, 1992 (more than 3 months after the Council made their decision), neither the Council nor the Public had an opportunity to consider or comment upon an analysis of the cumulative and combined effects of alternatives for a combined management regime for the sablefish and halibut fisheries, including a combined IFQ program for sablefish and halibut.

II. "HIGHGRADING" OF SABLEFISH AND HALIBUT UNDER THE COUNCIL-ADOPTED SABLEFISH/HALIBUT IFQ PROGRAM

EIS No. 920159 recognizes that highgrading will occur, however, it does not sufficiently

or adequately develop or address the effects or impacts of highgrading. The Council-adopted Sablefish/Halibut IFQ Program will significantly increase the opportunity and economic incentive to highgrade sablefish and halibut. The Council did not sufficiently consider or analyze the extent to which highgrading of sablefish and halibut will occur under the Council-adopted Sablefish/Halibut IFQ Program. The Council did not sufficiently consider or analyze the significant and increased economic incentive that is presented to fishers and processors to highgrade sablefish and halibut under the Council-adopted Sablefish/Halibut IFQ Program. Highgrading is encouraged under the Council-adopted Sablefish/Halibut IFQ program.

EIS No. 920159 does not adequately consider the costs for monitoring and enforcement that are related to the highgrading that will occur under the Council-adopted Sablefish/Halibut IFQ Program. EIS No. 920159 does not identify the source of funds that will be needed to measure such highgrading. EIS No. 920159 does not sufficiently analyze the ability of the National Marine Fisheries Service ("NMFS") to measure the level and extent of highgrading.

EIS No. 920159 does not adequately consider or determine the environmental costs of highgrading, including the biological harm to the long-term productivity, sex-composition, age-composition and localized stock depletion of sablefish and halibut stocks. EIS No. 920159 does not adequately consider or determine the biological, social and economic costs of highgrading.

HALIBUT: Halibut fishers, processors and marketers have traditionally received more money per pound (on an ex-vessel and wholesale basis) for large halibut. Although there are variations from year to year, from region to region, from processor to processor and from marketer to marketer, it can generally be said that the incremental weight separations that have traditionally been used for grading at the ex-vessel purchase point, for inventory accounting, for ex-processor sales and for wholesale marketing/distribution of halibut are: (1) 10 lbs. to 20 lbs. ("10/20's"), (2) over 20 lbs. to 40 lbs. ("20/40's"), (3) over 40 lbs. to 60 lbs. ("40/60's), (4) over 60 lbs. to 80 lbs. ("60/80's"), (5) over 80 lbs. to 100 lbs. ("80/ups") and (6) over 100 lbs. ("100/ups").

Given the same above-mentioned variations, it can generally be said that the incremental weight separations that have traditionally been used by processors for establishing the ex-vessel purchase price of halibut are (1) 10 lbs. to 40 lbs. ("10/40's"), (2) over 40 lbs. to 60 lbs. ("40/60's"), and (3) over 60 lbs. ("60/ups"); OR (1) 10 lbs. to 40 lbs. ("10/40's"), and (2) over 40 lbs. ("40/ups"), OR (1)10 lbs. to 60 lbs. ("10/60's") and (2) over 60 lbs. ("60/ups").

The Council-adopted Sablefish/Halibut IFQ Program will provide a significant opportunity and economic incentive to fishers to prospect for and target on large-size halibut, and also to discard small-size halibut (with associated fishing-related and handling-related mortality). It is important to note that female halibut represent the majority of large-size halibut. Generally, there is an economic incentive for fishers, processors and marketers to sell large-size halibut; generally, the larger size-grades receive a higher price. Fishers generally sell halibut in 2 or 3 different size-grades, processors and marketers generally sell halibut in 4 or 5 different size-grades. Generally, fishers receive a substantial premium for larger size-grades of halibut at the ex-vessel sales point. Generally, processors and other marketers further along in the distribution chain receive a premium for larger size-grades of halibut at the sales point at which they sell.

Under the Council-adopted Sablefish/Halibut IFQ Program, fishers will have an economic incentive to target large-size halibut (i.e., female halibut) in filling their IFQ. In doing so, fishers will discard small-size halibut (with associated fishing-related and handling-

related mortality). Some believe that the Council-adopted Sablefish/Halibut IFQ Program will result in more fishers directly processing, marketing and distributing their harvest of halibut. This is an obvious added economic incentive to highgrade halibut IFQ's (i.e., the economic benefits of using the most valuable componment of the halibut resource, and of taking advantage of the higher premiums available at the ex-processor and ex-marketer/distributor levels).

In 1991, on average, ex-vessel halibut prices were in the range of $1.75/lb. for 10/40's, $2.00/lb. for 40/60's, and $2.25/lb. for 60/ups; OR $1.85/lb. for 10/40's and $2.25/lb. for 40/ups. So far during 1992, on average, ex-vessel halibut prices have been in the range of $.75/lb. for 10/40's, $.90/lb. for 40/60's, and $1.05/lb. for 60/ups; OR $.80/lb. for 10/40's and $1.00/lb. for 40/ups.

SABLEFISH: Sablefish fishers, processors and marketers have traditionally received more money per pound (on an ex-vessel and wholesale basis) for large sablefish. Although there are variations from year to year, from region to region, from processor to processor and from marketer to marketer, it can generally be said that the incremental weight separations that have traditionally been used for grading at the ex-vessel purchase point, for inventory accounting, for ex-processor sales and for wholesale marketing/distribution of of sablefish are: (1) 1 lb. to 2 lbs. ("1/2's"), (2) over 2 lbs. to 3 lbs. ("2/3's"), (3) over 3 lbs. to 4 lbs. ("3/4's), (4) over 4 lbs. to 5 lbs. ("4/5's"), (5) over 5 lbs. to 7 lbs. (5/7's), and (6) over 7 lbs. ("7/ups").

Given the same above-mentioned variations, it can generally be said that the incremental weight separations that have traditionally been used by processors for establishing the ex-vessel purchase price of sablefish are (1) 1 lb. to 5 lbs. ("5/downs"), and (2) over 5 lbs. ("5/ups").

The Council-adopted Sablefish/Halibut IFQ Program will provide a significant opportunity and economic incentive to fishers to prospect for and target on large-size sablefish, and to discard small-size sablefish (with associated fishing-related and handling-related mortality). Generally, there is an economic incentive for fishers, processors and marketers to sell large-size sablefish; generally, the larger size grades receive a nigher price. Fishers generally sell sablefish in 2 or 3 different size-grades, processors and marketers generally sell sablefish in 5 or 6 different size-grades. Generally, fishers receive a substantial premium for larger size-grades of sablefish at the ex-vessel sales point. Generally, processors and other marketers further along in the distribution chain receive a premium for larger size-grades of sablefish at the sales point at which they sell.

Under the Council-adopted Sablefish/Halibut IFQ Program, fishers will have an economic incentive to target large-size sablefish in filling their IFQ. In doing so, fishers will discard small-size sablefish (with associated fishing-related and handling-related mortality). Some believe that the Council-adopted Sablefish/Halibut IFQ Program will result in more fishers directly processing, marketing and distributing their harvest of sablefish. This is an obvious added economic incentive to highgrade sablefish IFQ's (i.e., the economic benefits of using the most valuable componment of the sablefish resource, and of taking advantage of the higher premiums available at the ex-processor and ex-marketer/distributor levels).

In 1991, on average, ex-vessel sablefish prices were in the range of $1.35/lb. for 5/downs, and $1.65/lb. for 5 ups; OR, $1.35/lb. for 5/downs, $1.65/lb. for 5/7's, and $1.70/lb. for 7/ups. So far during 1992, on average, ex-vessel sablefish prices nave been in the range of $1.50/lb. for 5/downs, and $1.85/lb. for 5/ups.

III. UNDER-REPORTING OF SABLEFISH AND HALIBUT REMOVALS UNDER THE COUNCIL-ADOPOTED SABLEFISH/HALIBUT IFQ PROGRAM

The Council-adopted Sablefish/Halibut IFQ program will significantly increase the opportunity and economic incentive to under-report and black-market sablefish and halibut removals. The Council did not sufficiently consider or analyze the extent to which the under-reporting and black-marketeering of sablefish and halibut removals will occur under the Council-adopted Sablefish/Halibut IFQ program.

EIS No. 920159 does not adequately consider the monitoring and enforcement costs that are related to the under-reporting and black-marketing that is encouraged under the Council-adopted Sablefish/Halibut IFQ program. EIS No. 920159 does not adequately consider or determine the environmental costs of under-reporting and black-marketing, including the biological impacts to the productivity of sablefish and halibut stocks. EIS No. 920159 does not adequately consider or determine the social and economic costs of under-reporting and black-marketing.

IV. TEMPORARY SUSPENSION OF THE HALIBUT PSC LIMITS FOR THE FIXED GEAR FISHERIES

The Council-adopted Sablefish/Halibut IFQ Program includes a suspension of the halibut fixed gear Prohibited Species Catch ("PSC") limits for the first two years of the Program.

The Council did not make an informed decision regarding the suspension of the halibut fixed gear PSC limits. The Council did not have before them an adequate and complete analysis and evaluation of the impacts of their decision to suspend the halibut fixed gear PSC limits, or of the impacts of the alternatives to their decision.

The Council failed to provide the public with an adequate and complete analysis and evaluation of the impacts regarding the suspension of the halibut fixed gear PSC limits, or of the impacts of the alternatives to their decision; therefore the public was not able to provide informed testimony to the Council regarding the impacts of this decision.

EIS No. 920159 does not adequately analyze and evaluate the biological, economic and social impacts of the suspension of the halibut fixed gear PSC limits during the first two years of operation of the Council-adopted Sablefish/Halibut IFQ Program. EIS No. 920159 only addresses this issue in a very simple and cursory way.

V. SOCIAL IMPACT ASSESSMENT ("SIA").

The Council did not make an informed decision regarding the Council-adopted Sablefish/Halibut IFQ Program. The Council did not have before them an adequate or complete assessment of the social impacts of the Council-adopted Sablefish/Halibut IFQ Proposal, or of the alternatives to IFQ management for the sablefish and halibut fisheries, or of the several alternatives within IFQ management.

During numerous occasions of testimony to the Council regarding the development of the Council-adopted Sablefish/Halibut IFQ Program, several requests were made by individuals and organizations for the Council to develop, review and consider a complete Social Impact Assessment of the Council-adopted Sablefish/Halibut IFQ Program, of the alternatives to IFQ management for the sablefish and halibut fisheries, and of the alternatives within IFQ management for the sablefish and halibut fisheries.

The Council failed to provide the public with an adequate and complete analysis of the social impacts of the Council-adopted Sablefish/Halibut IFQ Proposal, or of the alternatives to IFQ management for the sablefish and halibut fisheries, or of the several alternatives within IFQ management for the sablefish and halibut fisheries; therefore the public was not able to provide informed testimony to the Council regarding the social impacts of these alternatives.

During the development of the Council-adopted Inshore/Offshore Proposal, representatives of the National Oceanic and Atmospheric Administration ("NOAA") and NMFS required that the Council develop, review and consider a Social Impact Assessment prior to any Council action regarding any Inshore/Offshore Proposal that the Council contemplated for Secretarial Review/Approval. NOAA and NMFS viewed the SIA as a necessary and integral part of the Council Process and of the Secretarial Review/Approval Process.

The Secretary should apply the same standard with regard to an SIA for the Council-adopted Sablefish/Halibut IFQ Proposal that was applied by the Secretary with regard to the Inshore/Offshore issue.

EIS No. 920159 does not include a sufficient, adequate and complete assessment of the social impacts that will result from the Council-adopted Sablefish/Halibut IFQ Program. EIS No. 920159 does not include a sufficient, adequate and complete assessment of the social impacts of the alternatives to IFQ management for the sablefish and halibut fisheries, or of the several alternatives within IFQ management. EIS No. 920159 does not include a sufficient, adequate and complete analysis of the social impacts of the alternatives for a combined management regime for the sablefish and halibut fisheries, including alternatives for a combined IFQ program for sablefish and halibut.

A Social Impact Assessment should have addressed several important issues that have already been recognized as important, such as the need to sustain and encourage the positive social benefits for Coastal communities (as was described in the decision that approved the Inshore/Offshore Program). A Social Impact Assessment would clearly demonstrate that the Council-adopted Sablefish/Halibut IFQ Proposal inflicts significant negative social impact on Alaskan coastal communities.

VI. COST-BENEFIT ANALYSIS.

The Council did not make an informed decision regarding the Council-adopted Sablefish/Halibut IFQ Proposal. The Council did not have before them an adequate or complete analysis of the benefits and costs of the Council-adopted Sablefish/Halibut IFQ Proposal, or of the alternatives to IFQ management for the sablefish and halibut fisheries, or of the several alternatives within IFQ management.

During numerous occasions of testimony to the Council regarding the development of the Council-adopted Sablefish/Halibut IFQ Program, several requests were made by individuals and organizations for the Council to develop, review and consider a complete Cost-Benefit Analysis of the Council-adopted Sablefish/Halibut IFQ Program, of the alternatives to IFQ management for the sablefish and halibut fisheries, and of the alternatives within IFQ management.

The Council failed to provide the public with an adequate and complete analysis of the benefits and costs of the Council-adopted Sablefish/Halibut IFQ Proposal, or of the alternatives to IFQ management for the sablefish and halibut fisheries, or of the several alternatives within IFQ management for the sablefish and halibut fisheries; therefore the public was not able to provide informed testimony to the Council regarding the benefits and costs of these alternatives.

As part of the Secretarial Review Process for the Council-adopted Inshore/Offshore Proposal, a Cost-Benefit Analysis was developed. The CBA was developed by a NMFS-led team of economists. Representatives of the Secretary of Commerce ("Secretary") viewed the CBA as a necessary and integral part of the Secretarial Approval Process. Indeed, further development and refinement of the Inshore/Offshore CBA continues as part of the ongoing Secretarial Approval Process. The Secretary should apply the same standard with regard to a CBA for the combined management of the sablefish and halibut fisheries that was applied by the Secretary with regard to the Inshore/Offshore issue.

EIS No. 920159 does not include a sufficient, adequate and complete analysis of the costs and benefits of the Council-adopted Sablefish/Halibut IFQ Proposal. EIS No. 920159 does not include a sufficient, adequate and complete analysis of the costs and benefits of the alternatives to IFQ management for the sablefish and halibut fisheries, or of the several alternatives within IFQ management. EIS No. 920159 does not include a sufficient, adequate and complete analysis of the costs and benefits of the alternatives for a combined management regime for the sablefish and halibut fisheries, including alternatives for a combined IFQ program for sablefish and halibut. EIS No. 920159 does not allow the public to adequately determine if the Council's proposed action will produce net benefits to society.

VII. COST OF IMPLEMENTATION, MANAGEMENT AND ENFORCEMENT

The Council did not make an informed decision regarding the costs of accomplishing the implementation of the Council-adopted Sablefish/Halibut IFQ Program. The Council did not have before them an adequate and complete analysis and evaluation of the implementation, administrative, management and enforcement costs that will result from the Council-adopted Sablefish/Halibut IFQ Program, or of similiar costs for other management alternatives.

The Council failed to provide the public with an adequate and complete analysis and evaluation of the impacts regarding the suspension of the halibut fixed gear PSC limits, or of the impacts of the alternatives to their decision; therefore the public was not able to provide informed testimony to the Council regarding the impacts of this decision.

EIS No. 920159 does not present an accurate reflection and accounting of the significant increase in implementation, administrative, management and enforcement costs that will result from the Council-adopted Sablefish/Halibut IFQ Program.

EIS No. 920159 does not adequately analyze and evaluate the biological, economic and social impacts of the increased implementation, administrative, management and enforcement costs that will result from the Council-adopted Sablefish/Halibut IFQ Program, or of similiar costs for other management alternatives.

EIS No. 920159 does not adequately present the costs of accomplishing the implementation of the Council-adopted Sablefish/Halibut IFQ Program. EIS No. 920159 does not adequately identify the source of funds (i.e., Congressional appropriation, re-programming within the NMFS/NOAA Budget, industry contributions, taxation of industry, assessment of industry, etc.) to provide for these costs. Will other NMFS/NOAA programs be reduced to provide funds for the implementation of the Council-adopted Sablefish/Halibut IFQ Program?

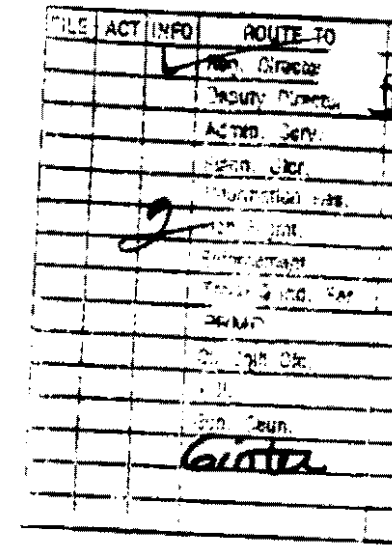
United States
Environmental Protection
Agency

Region 10
1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington

~~30~~ 52

EPA



REPLY TO
ATTN OF: WD-126

JUN 29 1992

Steven Pennoyer
Director, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

Dear Mr. Pennoyer:

The Environmental Protection Agency (EPA) has reviewed the Draft Supplemental Environmental Impact Statement (EIS) for **Proposed Implementation of an Individual Fishing Quota Management System for the Halibut and Sablefish Fixed Gear Fisheries in the Gulf of Alaska and Bering Sea, Alaska**. Our review was conducted in accordance with the National Environmental Policy Act (NEPA) and our responsibilities under Section 309 of the Clean Air Act.

The document under review contains a supplemental draft EIS and Regulatory Impact Review Summary. This draft supplemental EIS has combined the individual fishing quota alternative from two separate previous EISs for sablefish and halibut. It evaluates the potential environmental, economic, and social impacts of a proposed Individual Fishing Quota (IFQ) system for managing these two fisheries. The current open access, "derby" style fishery has resulted in a number of problems: gear conflicts, fishing mortality from fish left on lost gear, bycatch loss, product wholesomeness, as well as the safety of vessels and fishermen.

In our comments on the halibut draft EIS we expressed environmental concerns based on the potential for "highgrading" and under reporting of catch under the IFQ management system. We requested that the final EIS analyze whether these activities could potentially contribute to overfishing problems. If the potential existed for halibut stocks to be depleted from highgrading and under reporting, we suggested that the final EIS discuss enforcement mechanisms that could be used to prevent such a problem. We expressed no environmental concerns with the sablefish draft supplemental EISs.

We understand that the purpose of this supplemental draft EIS was not to provide the formal response to comments that is required by NEPA for inclusion in a final EIS. Our review of this document did not find any discussions that would resolve or address the concerns we expressed on the draft EIS for the halibut fishery

management plans or the draft and supplemental draft EISs for the sablefish fishery management plans.

Based on our review, we are rating the supplemental draft EIS, EC-2 (Environmental Concerns, Insufficient Information). Our environmental concerns continue to be based on the potential for adverse impacts on sablefish and halibut stocks from highgrading and under reporting. Additional information is requested to clarify whether these activities could put the halibut and sablefish stocks at risk. An explanation of the EPA rating system for draft EISs is enclosed for your reference. This rating and a summary of our comments will be published in the Federal Register.

We appreciate the opportunity to review this supplemental draft EIS and provide comments. If you have any questions about our review comments or our review procedures please contact Sally Brough in the Environmental Review Section at (206) 553-4012.

Sincerely,

Ronald A. Lee

Ronald A. Lee, Chief
Environmental Evaluation Branch

SUMMARY OF THE EPA RATING SYSTEM
FOR DRAFT ENVIRONMENTAL IMPACT STATEMENTS:
DEFINITIONS AND FOLLOW-UP ACTION *

Environmental Impact of the Action

LO--Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities with no more than minor changes to the proposal.

EC--Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EO--Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information

The draft EIS does not contain sufficient information for EPA fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment

June 29, 1992

The Honorable Barbara Franklin
Secretary Of Commerce
Department of Commerce
Constitution Ave. & E St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin:

I am writing to request your assistance in adopting an Individual Fisherman Quota program that was passed by the North Pacific Fishery Management Council in December of '991.

I have been involved in the longline industry for 15 years, as a spouse, co-owner, fishing partner and financial manager. My husband, Peter Knutsen, has been involved in the industry his entire working life, and has been active in preserving, promoting and enhancing this industry to keep it as a viable way of life.

The halibut fishery has become 2or 3 24 hour "derbies" in which life is usually lost and property lost or destroyed. It is imperative that the professional fishermen fish these openings as their livelihoods depend on the catch. Any mechanical problem in one of these openings result in severe loss of income for 6 to 8 families, and fatigue contributes to accidents and injuries.

An IFQ program will allow vessel owners to make intelligent decisions about the best time to fish. They can take into consideration weather, market, and family obligations for crew an themselves. This program will also put fresh fish into the market-place year round, a major benefit to the consumer.

The status quo results in wasted and lost fishing gear due to gear conflicts within the longline fishery and unnecessary loss of bycatch species.

Thank you for your support and attention to this matter.

Sincerely,

Joyce P. Knutsen

Joyce P. Knutsen
FV Northern
7149 NE Port Madison RD
Bainbridge Is., WA 98110

207069 5

June 29, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & E St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin:

I am writing to request your assistance in adopting an IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are safety and conservation of the halibut and sablefish resource. Due to halibut seasons that consist of two or three twenty-four hour openings, there is loss of life and property in these openings and the fishermen must fish regardless of weather conditions, as this is their livelihood. This results in the halibut and sablefish fisheries being in virtual chaos, and an extremely dangerous situation for personnel.

An IFQ program will allow vessel owners the opportunity to make intelligent decisions regarding weather conditions and market conditions as to when is the best time to fish. IFQ'S will allow fresh fish in the market place year round, which will benefit the consumer. A combined IFQ program will most certainly help reduce discards of halibut and resulting waste. Also, with an extended season, it will put less boats on the grounds at the same time resulting in less gear conflict.

I have been a longline fisherman in the North Pacific for 35 years, I began when I was a teenager, hence my entire working life has been in this industry, and I have been active in trying to preserve it. I have seen traditional management tools fail. I see IFQ'S as the best opportunity for saving the fish resource and the lives of the men and women who prusue it.

Thank you for your prompt attention to this matter.

Sincerely,

Peter Knutsen
FV Northern
7149 NE port Madison Rd
Bainbridge Island, WA98110

49

P.O. Box 781
Petersburg, Alaska 99833
June 29, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Avenue and "8" St N.W.
Washington D.C. 20230

Dear Secretary Franklin

I am a longtime member of the Alaska fishing industry and an active participant in the longline fisheries. I want to express my support for sablefish and halibut individual fishing Quotas (IFQ). IFQs are a solution to the waste bycatch, safety problems, and severe overcrowding we have in the longline fisheries. The North Pacific Management Council has spent many years carefully reviewing management alternatives. I agree with the Council's choice. The time for change is now and IFQs are the change we need.

Thank you for your time and attention.

Sincerely,

Edwin Fuglvog

EDWIN FUGLVOG

C 206994 49 5

June 29, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & E St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin:

I am writing to express my support for the proposed halibut and black cod IFQ program which is before the council. Some of my reasons for supporting this program are listed below:

1. An IFQ program would have the effect of spreading quotas over a longer period of time. The cost of storage would be reduced and fresh product would be supplied to the market for a larger part of the year, thus maximizing revenue to fishermen and processers and **more fully satisfying the consumer's desire for fresh product.**

2. By being able to choose fishing times, fishermen would be able to target species when those **species are in prime condition**. This would result in a **better quality product** being delivered to the market and **fewer fish being taken to fill quotas.**

3. This proposal will disperse the fleet over a longer fishing season, resulting in less congestion and a **reduction in gear loss and the waste associated with it.**

4. Combined IFQ proposal will help reduce discards and waste at sea. Also, it will help to **reduce problems associated with by-catch.**

5. The current "derby" style of fishing has forced vessel operators into taking **unnecessary risks** at sea. An IFQ program would allow fishermen to use good judgement rather than being forced to fish during **dangerous weather conditions** and to the point of accident-producing **fatigue.**

For the above reasons, I strongly urge the council to adopt the proposed IFQ program for halibut and black cod.

Yours truly,

Marvin J. Gjerde, Captain
F/V Tordenskjold
12217 152nd Pl SE
Snohomish, WA 98290

#2068 July 1, 1992
Seward, Alaska

Dear Secretary Barbara,

Please support / approve the Individual Fishermens Quota management plan. Despite good weather conditions (the June Halibut opener is a reliable negative indicator) major problems exist under the present Commercial Halibut fishery as follows:

1. Overhaul time — a waste of time, energy, resource
2. Low Halibut prices due to excess frozen storage, foreign competition.
3. High insurance rates compared to length of present Halibut fishery.
4. Inability to attract experienced, reliable crewmen for the short fishing period and low pay.
5. Present system is a tense / drag on the local community in every respect and to the State of Alaska economy as a whole.

Therefore, I/we request an end to the present High-Risk-no-win Halibut fishery. No more studies or years of delay please.

Please give your support / approval to the Individual Fishermens Quota (I.F.Q's) Management plan and immediate Funding / scheduled implementation of the I.F.Q's plan.

F/V ASSIDUOUS - 40'
MAX H. + DONNA E. CUTSHALL
2101 OLYMPIA RD.
P.O. Box 969
SEWARD, AK. 99664
PH 224-3776

Sincerely,
Max H. Cutshall
Donna E. Cutshall

ALASKA RESIDENTS

C207550

Address

July 7, 1992

Dear Longline

^F1^ Secretary of Commerce
^F2^ Dept. of Commerce
^F3^ Constitution Ave. & E St. N.W., Washington, DC,
Dear ^F4^: Barbara Franklin

I am writing to request your assistance in adopting an IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are safety and conservation of the halibut and sablefish resource. Due to halibut seasons that consist of two or three twenty-four hour openings, there is hardly an opening that does not result in loss of life and property and these openings have to be fished regardless of weather conditions. The halibut and sablefish fisheries are in virtual chaos and have created an extremely dangerous situation.

An IFQ program will allow vessel owners the opportunity to make intelligent decisions regarding weather conditions and market conditions as to when is the best time to fish. IFQ's will allow fresh fish in the marketplace year round and a combined IFQ program will most certainly help reduce discards of halibut and resulting waste. Also, with an extended season, it will put less boats on the grounds at the same time resulting in less gear conflict.

I have been a longline fisherman in the North Pacific for years and have seen traditional management tools fail. I see IFQ's as the best opportunity for saving the fish resource and the lives of the men who pursue it.

The status quo results in wasted and lost fishing gear due to gear conflicts within the longline fishery and unnecessary loss of bycatch species such as rockfish and halibut.

The current status quo management program has evolved into a marketing nightmare. The Canadians have an IFQ program and receive $2.50 to $3.00 per pound for their halibut. Alaska halibut is landed in a couple of major 24-hour openings flooding the market for a week or two then flooding the frozen market for the rest of the year. The Americans will get $0.80 per pound in Alaska due to the inability of traditional management tools to correct the current situation. In fact, the Governor of Alaska has a four star hotel and restaurant in Anchorage and must import Canadian halibut to serve the fresh fish market.

Thanking you in advance for your prompt attention to this matter.

Sincerely,

C 2 7119

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July 8, 1992

Secretary of Commerce
Barbara Hackman Franklin
Washington, D.C. 20230

Dear Secretary Franklin:

I am deeply concerned about the 24 hour halibut season in the Gulf of Alaska. This is a ridiculous as well as destructive and dangerous plan. Limiting the season to 24 hours creates chaos. I think it is embarassing and sad that such a plan has been allowed to threaten the safety of fisherman and carelessly slaughter fish.

I urge you to stop this free-for-all NOW! I ask you to take action and create a plan that ensures the safety of fisherman and protects the health of the halibut.

Please respond to this letter.

Thank you.

Sincerely yours,

Heidi Paulson

Heidi Paulson

cc: North Pacific Fishery Management Council
United States and Canada Halibut Commission
Alaska Department of Fish and Game

F / V Grant

JACK G. KNUTSEN

800 NORTHWEST ELFORD DRIVE
SEATTLE, WASHINGTON 98177
(206) 362-2525

July 9, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" St. N. W.
Washington, D. C. 20230

Dear Ms. Franklin;

My name is Jack Knutsen. I am a longliner from Seattle, and have been fishing for halibut and black cod in Alaska for 39 years. I am writing in support of the proposal for IFQ's in the black cod and halibut fisheries of the Gulf of Alaska and Bering Sea.

For myself and others, this has been a long, drawn out, frustrating process. We have been involved in the limited entry process since 1978. We have seen the fisheries deteriorate into derby type fisheries. All the bad things have happened. The quality of fish goes down every year, markets are being lost with frozen fish laying in cold storages for years, gear is being lost all over the place, and our safety record is horrendous and getting worse. Worst of all, the consumer is being robbed of any kind of a decent product.

I honestly believe that if we really tried to design a worse system than we have now, it couldn't be done. The short openings put tremendous pressure on people to catch fish anyway they can, weather and conservation be damned. We have created a new breed of fishermen who do not care about quality, conservation, or the long term health of the fishery. Every fishery is over-capitalized; desperate people keep entering other people's fisheries; the situation is a mess and getting worse.

Quite frankly, it seems to be almost too much to have the final decision made in Washington, D.C. We have been going to meetings and hearings and giving testimony for years. The members of the group I belong to (Fishing Vessel Owners' Association of Seattle) have given up a lot of their home life over the years to participate, because they certainly couldn't give up fishing time. The Council process is slow, arduous and a bureaucratic nightmare. Everybody has had their input. But after all these years, a decision has been made and I think it deserves your support.

F / V Grant

JACK G. KNUTSEN

800 NORTHWEST ELFORD DRIVE
SEATTLE, WASHINGTON 98177
(206) 362-2525

I would like to make two other points. In my opinion, the opposition to IFQ's comes from two groups. The first group is comprised of fishing oriented people from Central and Western Alaska. They oppose IFQ's from a free enterprise, open oceans for all, wave the flag point of view. They are also the same people who have supported the inshore part of the onshore/offshore issue. On one hand they argue for free enterprise, while on the other hand they support the most restrictive fishery decision of aii time. Onshore/offshore dwarfs IFQ's in it's ramifications and its exclusionary nature. I have a very hard time making any sense of their views. The other major opposition comes from fishermen in other fisheries or ones with very short histoories in black cod and halibut. Quite obviously, even though most of them hold permits in the salmon, herring, or crab fisheries, they do not want to be excluded from anything. They have used the halibut and black cod fisheries to finance the buying of permits and construction of new vessels in their primary fisheries.

If one were to poll the general public in Alaska about IFQ's, one would probably find a majority opposed. If one polled active, full time fishermen from Alaska and Washington, one would find overwhelming support. It is a tough decision you have to make, no doubt about it. I feel this is the last chance we have to make sense out of the Alaskan fisheries, and I certainly hope you support IFQ's.

Sincerely,

Jack D. Knutsen

Jack G. Knutsen

jgk/gk
cc

8531 Cascadian Ave.
Everett, WA 98208

July 9, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin:

I am writing to request your assistance in adopting the I.F.Q. program that was passed by the North Pacific Fisheries Management Council in December.

I have owned and operated my current vessel in the North Pacific Halibut and Black Cod Fisheries for the past 14 years. During that time I have seen these seasons reduced to a few days annually. This years Gulf Halibut season appears will be one 24-hour opening with a second 24-hour opening on a curtailed poundage limit, based on vessel size class.

Based on the economic necessities of such severely limited seasons, fishermen are forced to disregard good judgment and fish as much gear as possible, regardless of weather conditions, etc., which results in lost lives and vessels virtually every opening. Not to mention huge amounts of lost gear and wasted fish.

I feel traditional management tools have failed and are leading these fisheries towards total ruin. The present system results in wasted and lost fishing gear, due to gear conflicts, and unnecessary loss of by catch species, such as rock fish and halibut. I see I.F.Q.'s as the best opportunity of saving these fish resources and the lives of the people who pursue it.

An I.F.Q. program will allow vessel owners the opportunity to make intelligent decisions regarding weather and marketing conditions, as to when is the best time to fish. I.F.Q.'s will allow fresh fish in the marketplace year round. Along with greatly reducing discards of Halibut and Black Cod from conflicting seasons. Also, with an extended season, it will put less boats on the grounds at the same time, resulting in less gear conflict.

A prime example of the potential for maximizing the economic benefits of these fisheries is that the Canadians already under an I.F.Q. program and have been fishing for between $2.50 and $3.00 per pound for the last 4 months. While we receive approximately $1.00 per pound, after the one 24-hour opening we fished.

I sincerely hope you will help support the eventual passage of this program. Thank you.

Sincerely,

Brad Oldfield
F/V Pegasus

Brad Oldfield
F/V Pegasus

C207163

Don W. Jester
19230 Basin View Drive
Fort Bragg, California 95437
(707)964-7516

July 12, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Deoartment of Commerceffice Building
Constitution Ave. & "E" St. N.W.
Washington D.C. 20230

Dear Secretary Franklin,

I want to be on record being in favor of ITQ's.

We have been fishing Blackcod and Halibut in Alaska since 1983. The first year we fished Halibut (1983) we were allowed to fish 34 days. In 1991 we were only allowed to fish two and one half days! Blackcod is going the same way. The first year (1983) we could fish all year. In 1991 the season lasted only four weeks and two days in the central Gulf.

Now it appears the season may only last three and one half weeks in 1992. I believe it is because of all the new boats entering the fishery. Fishermen talk about using traditional management tools. They don't work.

A perfect example: look at the Blackcod an Halibut fishery in California, Oregon, and Washington. In 1991 the quota was only 3,800 tons; a fishing period of approximately eight weeks. This is drastic reduction from previous years when the season was year-round. Now the quota is severely limited due to poor management practices.

You must support ITQ's to bring back sanity to a fishery that has become wasteful and dangerous!

Sincerely,

Don W Jester

Don W. Jester
Commercial Fisherman

F/V EASTERN, INC.
139 N. 203rd, Seattle, WA 98133 * (206)546-9457

July 13, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" Street N.W.
Washington, D.C., 20230

Dear Secretary Franklin:

I am writing to request your assistance in adopting an IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are safety and conservation of the halibut and sablefish resource. Due to halibut seasons that consist of two or three twenty-four hour openings, there is hardly an opening that does not result in loss of life and property and these openings have to be fished regardless of weather conditions. The halibut and sablefish fisheries are in virtual chaos and have created an extremely dangerous situation.

An IFQ program will allow vessel owners the opportunity to make intelligent decisions regarding weather conditions and market conditions as to when the best time to fish is. IFQ's will allow fresh fish into the marketplace year round and a combined IFQ program will most certainly help reduce discards of halibut and resulting waste. Also, with an extended season, it will put less boats on the grounds at the same time resulting in less gear conflict.

I have been a longline fisherman in the North Pacific for years and have seen traditional management tools fail. I see IFQ's as the best opportunity for saving the fish resource and the lives of the men who pursue it.

The status quo results in wasted and lost fishing gear due to gear conflicts within the longline fishery and unnecessary loss of bycatch species such as rockfish and halibut.

The current status quo management program has evolved into a marketing nightmare. The Canadians have an IFQ program and receive $2.50 to $3.00 per pound for their halibut. Alaska halibut is landed in a couple of major twenty-four hour openings flooding the market for a week or two then flooding the frozen market for the rest of the year. The Americans will get $0.80 per pound in Alaska due to the inability of traditional management tools to correct the current situation. In fact,

the Governor or Alaska has a four star hotel and restaurant in Anchorage and must import Canadian halibut to serve the fresh fish market.

Thank you for your consideration to this matter.

Sincerely,

Daryl D. Knutsen
F/V Eastern, Inc.

DDK/mak

C20 7221

Susan Diehl Sather
Wife of Skipper Kevin Sather
F/V Hoover
4819 175th Street S.E.
Bothell, Washington 98012

July 15, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Avenue & "E" Street N.W.
Washington, D.C. 20230

Dear Honorable Barbara Franklin:

I support adopting the IFQ program that was passed by the North Pacific Fishing Management Council in December 1991 and am asking you for your support as well. This program will help maintain the Halibut and Sable fish species, as well as encourage safety.

If you will look into the chaotic way the fishery has been run this year, due to the fact that there is no limit on the number of entrants, you can't help but be convinced this must be adopted. The fishermen are constantly living on rumors that "maybe" there will be a one day opening here or there. It makes it very hard to plan for the opening since we're often only given a day or two notice that there may be an opening in another State. The Captains not only have to hire a crew, but they must be sure their boats are safe and geared properly, they must procure food, ice and bait, and then travel to their destination. Or, conversely, the Captain may decide to go to a particular multi-day opening in one state, only to be told a day later it is closed.

The cause of all this chaos is "open entry". The number of boats allowed to fish particular openings must be limited and regulated. One of the crewmen called back to Washington, D.C. in an attempt to find out "when" they would be able to fish and the response was, We may not tell you until the day it opens, and then we may shut it down the very same day.

This has got to stop. If ever the safety of the men were at risk before, it is much worse now. Before, if they had a one day opening in the Bering Sea in April they had to go no matter what because the livelihoods of their men and families depended upon it.

Now they are running around like chickens with their heads cut off trying to scratch out a living.

I predict we will make 20% or less of last's year's income. My husband has always done well and was the top producing boat in the Seattle fleet last year. This year I don't know how we will make it. Take out a loan? Do you want to loan us the money to live?

IFQ's must be adopted!!!

Sincerely,

Susan Diehl Sather
(H) 486-4126

To: The Honourable Barbara Franklin, Secretary of Commerce

Re: Individual Transferable Quota proposal for North Pacific Halibut fishery

Ms. Franklin:

I oppose the implementation of the I.T.Q. proposal for the commercial halibut fishery in the North Pacific, and I urge you to return the proposal to the North Pacific Fisheries Council unsigned for further consideration. There are a number of reasons for my opposition. The amount of the overall quota that could be owned by one person is much too large. This could lead to a situation where a very few large vessels would control the entire catch, and numerous fisherpersons would be excluded from participation in this lucrative fishery. That would not be in the interests of either the persons involved, or the communities and states in which they live.

The proposal does not address the problem of waste, particularly the waste of "bycatch" halibut by large trawlers in amounts measured in millions of pounds.

The proposal does not allocate any share of the quota to the crew members who participate year after year, and are just as necessary to success as the vessels and gear with which they fish. The proposal is just not fair, or acceptable as it stands. It would cause economic hardship in many small communities in Alaska which are already suffering from recession.

I propose that the "bycatch" allowed to bottom trawlers be reduced by 20% immediately, and by an equal ammount in two years (to give them time to adjust their fishing methods). This would be a start toward a sensible plan for management of the halibut fishery.

Sincerely,

Winslow Hoffman

Winslow Hoffman
P.O. box 1842
Homer, Alaska, 99603

F/V EASTERN, INC.
139 N. 203rd, Seattle, WA 98133 * (206)546-9457

C207375

July 17, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" Street N.W.
Washington, D.C., 20230

Dear Secretary Franklin:

I am writing to request your assistance in adopting an IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are safety and conservation of the halibut and sablefish resource. Due to halibut seasons that consist of two or three twenty-four hour openings, there is hardly an opening that does not result in loss of life and property and these openings have to be fished regardless of weather conditions. The halibut and sablefish fisheries are in virtual chaos and have created an extremely dangerous situation.

An IFQ program will allow vessel owners the opportunity to make intelligent decisions regarding weather conditions and market conditions as to when the best time to fish is. IFQ's will allow fresh fish into the marketplace year round and a combined IFQ program will most certainly help reduce discards of halibut and resulting waste. Also, with an extended season, it will put less boats on the grounds at the same time resulting in less gear conflict.

My husband and generations of the men and women in his family have been longline fishermen in the North Pacific for years and have seen traditional management tools fail. In the eight years that I have been involved with this industry I have witnessed the struggle of longliners to make a living in the most environmentally helpful, and yet the most physically and, now it seems, financially dangerous fishery in our industry. I see IFQ's as the best opportunity for saving the fish resource and the lives and livelihoods of the men who pursue it.

The status quo results in wasted and lost fishing gear due to gear conflicts within the longline fishery and unnecessary loss of bycatch species such as rockfish and halibut.

The current status quo management program has evolved into a marketing nightmare. The Canadians have an IFQ program and receive $2.50 to $3.00 per pound for their halibut. Alaska halibut is landed in a couple of major twenty-four hour openings

per pound in Alaska due to the inability of traditional management tools to correct the current situation. In fact, the Governor or Alaska has a four star hotel and restaurant in Anchorage and must import Canadian halibut to serve the fresh fish market.

Thank you for your attention to this matter.

Sincerely,

Marife A. Knutsen
F/V Eastern, Inc.

/mak

#8C

C207695

COPY

Jim Francel
339 Wortman Ln
Sitka AK 99835

U.S. Sec. of Commerce
Robert Masbacher
Herbert Hoover Bldg
14 St. Rm 5858
Washington DC 20230

Dear Robert Masbacher,

I live in Sitka Alaska and am 41 years old. This is the first time I have ever written anyone in the government about my opinion in my life, obviously I feel strongly about the following

I am against the IFQ proposal for halibut. You are proposing,

[illegible] You are proposing
to privatize a publicly owned
resource. Its unbelievable! Lets
get a fair market return on
a publically owned resource like
we do with oil, national forest
timber, etc. etc.! You can
easily limit entry by charging
or auctioning the right to fish

for a period of time. Kill this
proposal and look out for
the interest of the taxpayer!

Sincerely

[signature]

COPY

NELS OTNESS
P.O. BOX 366
PETERSBURG, AK 99833-0366

Barbara Franklin
Secretary of Commerce
14th St. and Constitution Ave. NW
Washington, DC 20230

Re: Support of Individual Fishing Quotas

Dear Secretary Franklin;

I am writing to support the implementation of Individual Fishing Quotas for the halibut and black cod fisheries off Alaska. Even though I have some concerns about specific aspects of the proposed program, there just does not seem to be any other acceptable solution to the problem of too many boats, too much waste, and too little time to conduct an orderly fishery. The opponents of this plan have not been able to show me a viable alternative. They complain we have not been studying this long enough, but many of us started working toward a solution 15 years ago when the magnitude of the problems began to steadily increase.

I have been long-lining for 50 years. In my opinion the current status of the halibut and black cod long-line fisheries with short seasons and too many boats is appalling. We are wasting too much fish and we are not able to maximize the value of the resource under the current system.

The IFQ program makes a lot of sense to me and will provide us with a logical, orderly fishery that will have more value to fishermen and local communities. The program will also provide consumers with products of higher quality, and they will be available fresh for much longer periods of time than under the current "system".

Let's get on with the IFQ program.

Sincerely,

Nels K Otness

C 2C5934 '79
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COPY

DOROTHY S. OTNESS
BOX 388
PETERSBURG, AK 99833

Barbara Franklin
Secretary of Commerce
14th St. and Constitution Ave. NW
Washington, DC 20230

Re: Support of Individual Fishing Quotas

Dear Secretary Franklin;

I write to support Individual Fishing Quotas for black cod and halibut off Alaskan shores. Many have written to you from different points of view, and I have been involved with this industry all of my life so I can discuss most of the aspects of this issue in varying ways. The main thing I want to say in this letter is that there is a good deal of terror felt by those on shore when the boats go out long-lining under the current management system.

Our husbands, fathers, friends and relatives go fishing when they are scheduled to do so. The folks who set this schedule sit in town in their warm offices while the fishermen take their chances with what the weather deals them. There are no second chances, no time to say "this is not worth it, we'll try when the weather comes down". With so few days (hours) to participate in these fisheries they all go and try, even when it is not safe. Look at the vessel and life loss during these fisheries when you consider maintaining the present system. Every fisherman has boat payments, insurance payments, gear expenses, and just general living expenses. Fishermen are not being given an opportunity to meet these obligations in anything resembling a sane manner. These people go out in something akin to the stagecoach land-rush days, and many people and vessels do not return.

We live in terror until we hear from the boats at the end of the opening. We are first concerned about the men, and if anyone was injured. Then we worry about the vessel and its equipment because of the special stresses these wild fisheries place on them. Then we wonder if they got all the gear back or if we have to purchase more before the next opening. THEN we ask if they caught any fish..... It is a crazy method to make a living. If things had been like this when we purchased a boat, we would not have purchased it. Things have deteriorated so much over the years that an industry that used to carry a moderate risk factor has become an incredibly high risk way to make a living. All the new Coast Guard regulations in the world will not have as much positive effect on safety in the long-line fisheries as will passage of the IFQ system.

Sincerely,

Dorothy S. Otness

OPINION

A GOOD SUMMARY!

A declaration of war

Dear Editor:

April 22, 1992, is a day which should long be remembered by all Alaskans. On that morning, the North Pacific Fishery Management Council, an industry special interest panel composed of unelected political appointees, took the public fish resources which belong to the people of Alaska.

The council voted to implement a quota system which will give away all future commercial rights to halibut and black cod off the Alaska coast.

The NPFMC is a federal government panel. In passing the measure they disregarded the wishes of the duly elected representatives of the Alaska people, including Gov. Hickel, the state House of Representatives, and the government of virtually every coastal community in the state. (The Anchorage Assembly had no problem overriding the customary veto of our own mayor, hizzonner Tom Fink, to pass our own resolution.)

Several chambers of commerce, the Alaska Municipal League and others, expressed opposition. The well-founded objections of many conscientious individual Native Alaskans and Native organizations, including Sealaska Corporation, were cast aside without any consideration.

Ted Stevens, to his credit, opposed this measure. Tony Knowles personally testified against it. Attorney General Charles Cole expressed his belief that it is unconstitutional. Don Young and Frank Murkowski preferred to let the council have its say before expressing a position. We must hope that they will have sufficient influence with President Bush's Department of Commerce to see that this despicable quota plan is dumped in the trash.

It is time for the people to unite against this kind of crap.

Any politician who fails to stand up for the people of Alaska must go — by election or recall. We have stood aside for too long, letting extremists run our lives and getting the shaft in return for our cooperation.

These people aren't content to chip away at our freedom, they want to grab it all. I don't know how in the world to win this struggle, but I promise to make life a living hell for the tyrants who are trying to steal the birthright of our children.

Pete Farris
Anchorage

COPY

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C205546 2/2

George McNamara
Box 260
CRESCENT CITY, CA 95531

Dear Sec Franklin:

I oppose the IFQ plan of the NPMC and I don't know any body around here in halibut country that supports it. We do need another management plan, but it should be consistant with our "traditional values.

#1. Be fair to those young people coming along who need ENTRY possibilities.

#2. Stretch out the season to benifit the fishermen and the consumer - there are a lot of ways to do that.

#3. Be fair, it's not fair to those who didn't bring in fish during those particular years.

I hope you take these objections into consideration, we've come to despise Wickel around here.

Sincerely

George McNamara

Secretary Commerce:
Hon. Barbara Franklin:
U.S. Dept. Commerce:

This letter culminates a long series of letters in opposition to the privatization of the halibut and sablefish resources of the north Pacific,

I believe the flagrant conflicts of interest in the North Pacific Management Council have denied me representation in the management process. Many council members stand to make millions of dollars from decisions that they have made, refusing to acknowledge their conflicts or abstain from voting those issues. The serving interests of those individuals constitute an unacceptable perversion of the political process. In violation of the guarantees of Equal Protection of the 14th Amendment

No doubt you are aware of the overwhelming opposition to this plan in Alaska. The Alaska House of representatives voted unanimously against IFQ. The Senate would have done likewise except for Senator Richard Eliason held the bill hostage in committee. Nearly every community in this state has passed resolutions against this plan. Anchorage did so by overriding the veto of its mayor.

The management regime of the pacific
ouncil, managing California, Oregon, and Washi
akes an interesting comparison to the
resent plans of the NPMC. As I unde
tand it, members of that council not on
cknowledge conflics; but they abstain fr
oting them. The list of NPMC mem
ith familial or direct conflicts forms
ll most the total membership of that coun
I believe the "preferred alternative" of the
orth Pacific Halibut and Sablefish management
lan is seriously flawed. That the plan
s discriminitory on the basis of wealth
ust because the court allowed some serious
regularity in the Surf Clam fishery is no
eason to permit any and all injustice in
e longline fisheries of the North Pacific.
For fifteen years I have lived the life of a
mple fisherman, taking only enough to mak
living. Now I face the end of that lifestyle
ause a few men want it all. This is a
ry great injustice, one I will fight with
ery fiber of my being. I will not tolerat
is. When my legal remedies are exausted.
will continue this fight with every mean
my disposal.

Signed D. Rutter
617 Katlian E-15
Sitka AK 99835

halibut supplied daily from the Canadians who have an IFQ plan in effect. It has been very successful for them. The American consumer is pleased to purchase fresh halibut more than once or twice a year.

As our own government encourages us to buy American products not installing an IFQ plan that provide us regularly with fresh fish would be asking American Foreigners to buy from the Canadians.

On a more personal level my biggest concern is the safety of my husband. Under the existing system he is forced to fish under severe weather conditions. He has no choice he has to pay our house payment and to feed our children. His crew men are in the same

position.

We have three small children and one more due in October. I can't imagine our lives without their father.

Sincerely,

Susan [illegible]

[illegible] Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. [illegible] St. N.W.
Washington D.C. [illegible]

Tom Lemman
[illegible]
[illegible]

Dear Secretary [illegible]:

[illegible] support [illegible]. Traditional management [illegible] inadequate to manage the longline fisheries. [illegible] plan drafted and approved by the N.M.F.M.C. will provide an effective and efficient means to manage the resource.

This is not a hastily conceived plan - it is well thought out, with input from all sectors of the industry, and I support its implementation as soon as possible.

Sincerely,

Tom Lemman
Owner Operator
F/V Heather [illegible]

C20 170 39/67 75

My name is Susan Leclarde and I have been married to an independent longline fisherman for thirteen years.

I urge you to pass the IFQ plan that was approved last December and last April by the North Pacific Management Council.

How sad it would be to see a fisheries destroyed due to mismanagement as was the story of the once flourishing East Coast fisheries.

Many families like ourselves depend on the existence of this resource to survive. Halibut and Black Cod are our only source of income. To destroy this fisheries would only be destroying families like ourselves.

When I go to our local super market I see fresh

shall be treated equally." Though the vast majority of participants in the fishery are licensed crewmen and operators, the NPFMC has not included us in the allocation of quota shares. The vessel owners tell us "You can get into the fishery, just get some money and buy some quota." The truth is that the resource belongs to all of us as Americans. It is being stolen from us. And we are being told we can buy it from them at a prohibitively high price. One more piece of evidence that in America today the rich get richer- the rest of us get nothing.

Last year I submitted a plan outlining a more equitable means of distributing quota shares, if the Council insisted on privatizing this National asset. It gave licensed crewmen and operators the average of their share of the catch over the qualifying years (On a fishing trip, the boat, operator, and crew each get a share of the catch. The crew does not get a wage. Everyone shares the risk of the fishing operation.) The plan was pushed aside because it could have included as many as 50000 fishermen. They said it was too complicated. Madam Secretary, that just is not good enough. The recommended plan does not even consider fishermen. You have to be a vessel owner or lease holder to get a quota share. That is not fair. Nor is it what the Magnuson Act was intended to do.

We, as crewmembers and skippers, would be happy to pay for the set-up, management and enforcement of an equitable IFQ program through a user fee if we were included in the Quota Share distribution. The vessel owners should be willing to do as much and no IFQ program should go forward until such a payment provision is included. Then the program would at least approach fairness for the fishermen and the public.

Madam Secretary, you can start the process of reversing the trend of wealth division in our country. Do not sign this plan. There are better ways to solve the problems in our fishery than to give in to those people greedy enough to say "Give it to me, I'll fix it."

We understand why Dr.Fox is pushing IFQ's. We understand "the tragedy of the commons." We understand the advantages of private ownership. But why do those of us who are not wheeler-dealers get nothing when it is time to privatize. Why does financial investment need to be the only criteria for getting quota share? We have invested years of our lives working in this fishery. We have the fishing trip settlements, pay records and fishing licenses to prove it. We deserve our share of the equity in this fishery if it is going to be carved up and given away.

I don't believe my government owes me a living. By the same token I don't believe my government has the right to take my livelihood away, without just compensation, so that others can have a more lucrative, convenient work environment, and hold or sell that right in perpetuity. If the NPFMC had adopted my proposed distribution plan we would have been compensated in the same

proportion as the vessel owners. The plan is on the record. It was submitted by Councilman Larry Cotter. We have earned our share of the value of this fishery. We have families and loved ones who depend on our livelihood. Don't give in to the argument of management expedience at the expense of the vast majority of fishermen. Send this IFQ plan back to the Council for reworking. It is bad public policy, and it sets a bad precedent. To not include fishermen in the distribution of fishing shares is simply not good enough.

Sincerely,

Peter A. Soileau
F/V Nettie H.
Member, Deep Sea Fishermen's Union and
North Pacific Fisheries Protection Assn.

Teru
Lundsten

Teru Osato Lundsten
1939 Eighth Avenue West
Seattle, Washington 98119

COPY

July 29,1992

Doctor William Fox
Assistant Administrator for Fisheries
National Marine Fisheries Service
1335 East West Highway
Silver Spring, Maryland 20910

Dear Doctor Fox,

I strongly urge you to help implement the Individual Fishing Quota plan as passed by the North Pacific Fisheries Management Council.

Professional, full-time fishermen (including my husband, Mark, who did much to help develop this plan) have worked hard for years to forge a plan that will save the fishery, human lives, and their livelihood. I believe it is a good, viable plan that is best for all in the long run.

Most importantly, throughout their efforts they have believed that the system would work; and so far it has, through the Council level. Please see it through to completion, and make the system work all the way.

Sincerely,

T. Lundsten

Teru Osato Lundsten

Peter A. Soileau
511 N.W. 62nd. st.
Seattle WA. 98107
206-781-0130

Honorable Barbara Franklin, Secretary
Department of Commerce
15th. & Constitution Ave. N.W.
Washington D.C. 20230

Re: Individual Fishing Quota (IFQ)
proposal of North Pacific
Fisheries Management Council (NPFMC)

Dear Secretary Franklin:

This letter is to say in a very clear, very loud voice: Please do not sign the Individual Fishing Quota program proposed by the North Pacific Fisheries Management Council into law. It is a radical resource give-away "remedy" to the serious problems in our fishery. It unfairly allocates the wealth of our fishery to an exclusive group, to the exclusion of thousands of fishermen.

The proponents of this plan talk about the safety issue; Statistics show that fishing is no more dangerous than it ever was. They talk about conserving the resource; the NPFMC has done nothing up to now to solve the problem, though many adequate management tools were available. This issue has nothing to do with conservation, because we fish around a strict quota.If we were dealing with an endangered species we could accept the loss of our livelihood, but this plan is pure allocation of fishing rights. They talk about rationalizing the fishery; yes, we all want fishing to be more convenient. These are all very timely issues. But the one issue they don't talk about, the most important issue in this discriminatory law, is WHO GETS THE FISH!

In this day and age, when the middle class in America is rapidly diminishing, when the underclass is rioting out of frustration with the system, when five percent of the population controls fifty percent of the wealth in our country, the NPFMC passes a proposal which gives MILLIONS of dollars worth of fishing rights to a few vessel owners. It is absolutely unconscionable. I have been a commercial fisherman since 1979. I have operated the F/V Nettie H. for three years, yet because I am not a vessel owner, the NPFMC sees fit to bypass me and my shipmates and give the wealth of our fishery to the businessmen who own the boats. Granted, many of the vessel owners are also fishermen, but the vast majority of fishermen are not vessel owners. The Magnuson act clearly states that "If it is necessary to assign fishing rights, all fishermen

FRANK H. MURKOWSKI
ALASKA

COMMITTEES:
SELECT COMMITTEE ON INTELLIGENCE (VICE CHAIRMAN)
ENERGY AND NATURAL RESOURCES
FOREIGN RELATIONS
VETERANS' AFFAIRS
SELECT COMMITTEE ON INDIAN AFFAIRS

United States Senate

WASHINGTON, DC 20510-0202
(202) 224-6665

222 WEST 7TH AVENUE, BOX 7
ANCHORAGE, AK 99513-7570
(907) 271-3735

101 12TH AVENUE, BOX 7
FAIRBANKS, AK 99701-6278
(907) 456-0233

P.O. BOX 21647
JUNEAU, AK 99802-1647
(907) 586-7400

130 TRADING BAY ROAD, SUITE 350
KENAI, AK 99611-7716
(907) 283-5808

109 MAIN STREET
KETCHIKAN, AK 99901-6489
(907) 225-6880

July 21, 1992

Mr. and Mrs. Phil Robbins
P.O. BOx 2284
Kodiak, Alaska 99615

Dear Lisa and Phil:

Thank you for contacting me about the controversial plan to establish an Individual Fishery Quota system for halibut and blackcod, as proposed by the North Pacific Fishery Management Council. In the past several months I have received hundreds of heartfelt appeals and carefully reasoned arguments on both sides of this issue. Because the matter has become so contentious, and because it would create such a sweeping change in the way these fisheries are managed, I want to let you know exactly where I stand.

I have watched for several years as this issue developed, yet I still find that the potential impacts on Alaskans and Alaskan communities are not clearly understood. While I appreciate the intent of the IFQ effort, I also believe a number of very important questions must be answered before the matter can be resolved.

In light of this, I am not supporting approval of the plan at this time. There must be better evidence that benefits outweigh detriments before a positive decision can be made. I intend to urge the Secretary of Commerce to take steps to ensure that additional information is available for public review, so that Alaskans can have their questions and concerns answered satisfactorily.

Most people agree that the status quo is unacceptable. Time, effort, fish value, and fish quality all are suffering in the current derby-style fisheries. More importantly, human lives are at risk from working to the point of exhaustion and fishing in marginal weather. IFQs are intended to address these problems by allowing the market to dictate when and how hard a vessel fishes, and encouraging consolidation instead of overcapitalization.

However, the risks are great. Shifts in landing patterns or a loss of jobs through too-rapid consolidation could have disastrous impacts in small communities where economic well-being can be seriously affected by changes that are too small to be felt by large cities. We must be

sure that dramatic changes are not accompanied by equally dramatic problems.

Let me be clear -- I am not condemning the IFQ concept; it is a tool that should be available for use at the right time and in the right place. But we must be sure the time and place are right for us. For example, although we are watching the results of British Columbia's experiment in IFQs with great interest, we cannot assume that IFQ experiences elsewhere -- good or bad -- would be duplicated in Alaska.

It is not enough to simply predict an overall gain in fishery value. We have to examine both costs and benefits in the broadest sense. We must look very carefully at both short- and long-term impacts. We must look for potential changes in fish markets and prices, and at the possibility that other fisheries would be affected. And above all, we must remember the human element. We must examine where people live, what their employment patterns are, and how those might change. And we must look at the probable effect on municipalities -- especially small coastal communities -- as well as individuals.

Many of these concerns were expressed to the Council during its public process, and in response, it set certain conditions on the plan, and resolved to explore some possible amendments. I respect the Council's efforts, but the fact is that we don't know if its conditions are sufficient, or even whether they target the right areas.

Granted, there are urgent problems to correct, but we must be sure that our solutions do not create more -- and worse -- difficulties. And we need that knowledge before a decision is made. Work to date has focused on the theoretical, without looking adequately at the specific conditions to be found in Alaska's fisheries and their supporting infrastructure. That omission must be rectified.

Sincerely,

Frank H. Murkowski
United States Senator

206839

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C 207752

COPY

P.O. Box [illegible]
Kodiak, Alaska [illegible]
[illegible], 199[illegible]

Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
[illegible] Constitution
Washington, D.C. [illegible]

Dear Secretary of Commerce Franklin:

As 21-year fishermen of Kodiak, Alaska, we are in danger of losing one of our most important fisheries, the halibut through implementation of IFQ's. It is indeed frustrating that over [illegible]% of the fishermen are against the program, overwhelming evidence suggests it will not result in conservation of the stock, the economic impact study shows tens of thousands will lose their jobs, and still the program goes forward. Indeed the democratic process can be very difficult to understand. If anything is to be learned of this experience, it's that money talks.

Enclosed please find a copy of a reply from Senator Murkowski regarding his opinion of the IFQ system for blackcod and halibut. Although it is not altogether sympathetic to our position, it does recommend further study before implementation of a program that can have devastating impact.

Thank you.

Sincerely,

Phillip + Lisa [illegible]

Phillip and Lisa [illegible]

halibut is landed in a couple of major 24-hour openings flooding the market for a week or two then flooding the frozen market for the rest of the year. The Americans will be paid $0.60 per pound in Alaska due to the inability of traditional management tools to correct the current situation. In fact, the Governor of Alaska has a four star hotel and restaurant in Anchorage and must import Canadian halibut to serve the fresh fish market.

Thanking you in advance for your prompt attention to this matter.

Sincerely,

Kenneth R. Aase, Owner
Fishing Vessel Sunset

C2077686

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. ...
Washington D. C. 20230

[illegible]

1992 AUG -4 P 3:02

July 20, 1992

Dear Barbara Franklin,

I am writing this letter in support of the IFQprogram that waspassed by the North Pacific Fishery Management Council in December of 1991.

An IFQ program will allow vessel owners the opportunity to make intelligent decisions regarding weather conditions and market conditions as to when is the best time to fish. This program will allow fresh fish in the marketplace year round and will certainly help reduce wastage of fish.

Please support the IFQ program.

Owner/operator

F/V Memories

David W Erickson

C20 '396

Private Client Group

The Wall Street Building
2930 Wetmore Avenue
Suite 100
Everett, Washington 98201
206 258 6292
800 937 0372 Toll Free
FAX 206 259 8351

Merrill Lynch

July 18, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Ave. & "E" St. N.W.
Washington, D.C. 20230

Dear Secretary Franklin,

The North Pacific Management Council has passed its version of Individual Fisherman Quota's (IFQ's). I would like you to support this program.

Instead of reviewing the common reasons cited for its passage, safety and conservation of the resource, I would like to address a conventional objection distracters mention. The passage of IFQ's will make a few fisherman wealthy. The argument that future generations will not be able to become fisherman because of the expense of IFQ's is a baseless argument.

In 1866 my great great grandfather immigrated from Switzerland and homesteaded 80 acres of farm land in Lancaster County Nebraska. Five generations and 122 years later I purchased my first home on less than 1/4 acre for a price of $73,000. Are there people farming today that had to purchase their farms instead of homesteading? Obviously.

My final point is this, professional longline fisherman used to fish five months a year for halibut, today they fish maybe 48 hours. Tomorrow if IFQ's don't pass the professional longline fisherman will become extinct. It seems to me they are more important than the spotted owl or Snake River salmon. Please protect them.

Respectfully,

Jeffrey Moormeier

Jeffrey Moormeier
Financial Consultant
(800)937-0372
(206)259-8318

C207401

2913 112th Place S.W.
Mukilteo, Wa. 98275
July 20, 1992

The Honorable Barbara Franklin
Secretary of Commerce
Department of Commerce
Constitution Avenue & E St. N.W.
Washington, D.C. 20530

Dear Secretary Franklin,

I am writing to request your assistance in adopting in IFQ program that was passed by the North Pacific Fishery Management Council in December of 1991.

Two of the strongest reasons for adopting this IFQ program are safety and conservation of the halibut and sablefish resource. Due to halibut seasons that consist of two or three twenty-four hour openings, there is hardly an opening that does not result in loss of life and property and these openings have to be fished regardless of weather conditions. The halibut and sablefish fisheries are in virtual chaos and have created an extremely dangerous situation.

An IFQ program will allow vessel owners the opportunity to make intelligent decisions regarding weather conditions and market conditions as to when is the best time to fish. IFQ's will allow fresh fish in the marketplace year round and a combined IFQ program will most certainly help reduce discards of halibut and resulting waste. Also, with an extended season, it will put less boats on the grounds at the same time resulting in less gear conflicts.

I have been a longline fisherman in the North Pacific for 14 years and have seen traditional management tools fail. I see IFQ's as the best opportunity for saving the fish resource and the lives of the men who pursue it.

The status quo results in wasted and lost fishing gear due to gear conflicts within the longline fishery and unnecessary loss of bycatch species such as rockfish and halibut.

The current status quo management program has evolved into a marketing nightmare. The Canadians have an IFQ program and receive $2.00 to $3.00 per pound for their halibut. Alaska

APPENDIX G

List of Preparers

Dr. Joe Terry, Dave Colpo, and Brian Brooke
Alaska Fisheries Science Center
7600 Sand Point Way N.E., Building 4
Seattle, Washington 98115

Marcus Hartley, Chris Oliver, and Dr. Russell Harding
North Pacific Fishery Management Council
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Anchorage, Alaska 99510

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National Marine Fisheries Service
P.O. Box 1668
Juneau, Alaska 99802

Agencies Consulted

Alaska Department of Fish & Game
Alaska Fishery Science Center
Commercial Fishery Entry Commission
International Pacific Halibut Commission
Oregon Department of Fish & Wildlife
Pacific Fishery Management Council

Various persons from other management agencies and from the fishing industry were collectively responsible for drafting the implementation plan contained in Chapter 5 of this document and are listed in that section. Portions of this document are borrowed from previous analysis documents which also relied heavily on contributions from other authors.