## **EXECUTIVE SUMMARY**

# CHANGES UNDER ALASKA'S HALIBUT IFQ PROGRAM, 1995-1997

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## **EXECUTIVE SUMMARY**

#### Introduction

In 1995, the National Marine Fisheries Service-Alaska Region (NMFS-AK) implemented a new Individual Fishing Quota (IFQ) program for management of the "fixed gear" sablefish and halibut fisheries off Alaska. These programs were developed by the North Pacific Fishery Management Council (NPFMC) and approved by the U.S. Secretary of Commerce.

The purpose of this study is to document and analyze changes that have occurred during the first three years of the halibut IFQ program. The report is restricted mainly to topics that can be addressed using National Marine Fisheries Service - Restricted Access Management Division's (NMFS-RAM) administrative and catch data. Some ancillary data are also used.

#### The Halibut IFQ Program Basics

Quota shares (QS) are the basic use-privileges under the IFQ program. QS were issued to qualified applicants who owned or leased a vessel that made legal fixed gear landings of halibut at any time during 1988, 1989, and 1990. Regular QS units were equal to a person's qualifying pounds for an area. Qualifying pounds for an area were the sum of pounds landed from the person's best five years of landings over the seven-year period from 1984 to 1990.

The QS that were issued are specific to one of eight halibut management areas and one of four vessel categories. The IFQ management areas are defined by the International Pacific Halibut Commission (IPHC): 2A, 3A, 3B, 4A, 4B, 4C, 4D, and 4E. The four vessel categories include a harvester-processor vessel category (also termed "freezer" herein) and three catcher vessel categories. The three catcher vessel categories are "35 feet or less," "36 to 60 feet," and "greater than 60 feet."

In Areas 4B, 4C, 4D, and 4E portions of the total allowable catch (TACs) were allocated to Community Development Quotas (CDQs) for communities in western Alaska. In Area 4E the entire TAC was allocated to CDQs and there has been no IFQ fishery. The Council compensated QS holders in the CDQ areas for the reductions in TAC due to CDQs by issuing them "CDQ compensation QS" in non-CDQ areas 2C through 4A.

A person's annual IFQ for an area is determined by multiplying their fraction of the total QS units in the area's QS pool by the total allowable catch (TAC) that was allocated to

the area's IFQ fishery. Adjustments for the person's underages and/or overages from the previous year are then made to determine the person's final IFQ for the year.

The QS that were issued are permanently transferable and leasable albeit with many restrictions that are discussed in the report. The NPFMC wanted to achieve some of the benefits associated with IFQ management but they were concerned that the program not lead to radical changes that would hurt communities dependent upon the fishery. As a result, the NPFMC adopted several complex rules in an effort to constrain the changes that could occur under the program. Many of these rules are discussed and explored in the report.

#### **Topics Covered In This Report**

The topics covered in the report include basic data on the extent of consolidation of QS holdings since the beginning of the program, the volume of permanent QS transfers and the price of QS units, and the volume of seasonal QS lease transfers and the price of IFQ leases. The report also includes detailed summary data on permanent transfers, including the amount of QS transferred as sales, gift and trades; the relationships between the transferors and transfer recipients; and the finance methods used in sales transfers.

The IFQ program contains several special features which the Council added to address specific objectives. The report provides data which highlight the effects of these features to date.

Topics examined include the amount and percentage of "blocked" QS as opposed to "unblocked" QS, the distribution of Community Development Quota (CDQ) compensation QS, the use of "swaps" of certain CDQ compensation QS across catcher vessel categories, and the use of a provision allowing for the "sweep-up" of small QS blocks to create more fishable blocks.

A concern of some persons is that the IFQ program might result in a radical change in the geographic distribution of QS holdings. The report provides an extensive examination of changes in the geographic distribution of QS holdings during the first three years of the program. Changes in the distribution of QS holdings are examined by state of residence, by Alaska census area, and by special resident-type designators defined for the study that classify communities as "local" or "nonlocal" to the IFQ management area and as "rural" or "urban."

Other distributional questions are also examined. These include changes in the distribution of QS by person-type, changes in the distribution of QS between initial QS recipients and new entrants, and changes in halibut harvest and delivery patterns during the first three years of the program. The report contains information on the consolidation of IFQ permit holders onto single vessel operations and the underharvest of IFQ during the 1995 to 1997 seasons.

The report contains a total of sixteen chapters. The first two chapters provide an introduction and background information on the fishery and the new IFQ program. The last fourteen chapters contain the results of the study. The following sections of this executive summary provide brief synopses and key results of the topics covered in each of these chapters.

## Chapter 3 Consolidation of QS Holdings, 1995-1997

The Council's IFQ program allows QS to be permanently transferred. The Council intended some consolidation of QS to occur to spread out the fishing season. The Council hoped that a longer and slower-paced fishery would improve ex-vessel prices, provide for greater safety and less waste and enhance the profitability of individual fishing operations. However, the Council built many features into the program to constrain the extent and the nature of QS consolidation.

Chapter 3 provides a broad overview on the extent to which QS holdings were consolidated and the numbers of QS holders were reduced during the first three years of the program. Data are presented comparing distributions at initial allocation and at year-end 1997.

- The amount of QS in each area either declined slightly due to revocations or remained unchanged over the first three years of the IFQ program.
- The number of QS holders declined considerably in non-CDQ areas 2C through 4A over the first three years of the program, due mainly to transfers and consolidation. These declines ranged from 23.6% in Area 3A to 32.2% in Area 3B.
- The number of QS holders in CDQ Areas 4B through 4D also declined, but at a lower rate than the non-CDQ areas. Percentage declines ranged from 3.8% in Area 4C to 13.2% in Area 4B.
- Average and median QS units increased in all areas except Area 4E, where all the TAC is allocated to CDQs. The percentage increases in the average number of QS units ranged from 3.9% in Area 4C to 47.1% in Area 3B.
- The number of QS holders declined or remained unchanged in most vessel categories with only a few exceptions. The largest percentage declines in QS holders occurred in the "35 feet or less" catcher vessel category in Areas 4A (36.3%) and 3B (43.7%).
- The largest percentage increase in average QS holdings also occurred in the "35 feet or less" catcher vessel category in Area 4A (49.1%).
- In Areas 2C to 4A, the greatest percentage of persons received less than .01% of the total QS in those respective areas. The percentage of persons in this size category dropped significantly in those areas by year-end 1997, declining by 26.3% in Area 3A to 44.3% in Area 3B.

## Chapter 4 QS Transfers and QS Prices

Consolidation of QS and changes in the distribution of QS can occur through permanent transfers of QS. Chapter 4 provides a broad overview of the extent of permanent transfers of QS in the first three years of the program. Any transaction resulting in a permanent change of ownership is treated as a transfer in the chapter. These include regular transfers, sweep-ups of small QS blocks, and administrative transfers due to court action or other causes.

Data are presented on QS transfers, the amount of QS transferred, and the number of unique transferors over the first three years of the program. QS transfer rates and QS holder transfer rates are defined and calculated.

Chapter 4 provides estimates of QS prices over the first three years of the program based upon analyses of priced sales transactions. Estimates are provided for QS sold with and without the associated current year IFQ. Estimates from regression models are used to project a more detailed breakdown of 1995 - 1997 QS prices where existing data are too sparse.

- QS transfer rates were relatively high in non-CDQ areas 2C through 4A. The average QS transfer rates over all years in these areas ranged from 13.4% in Area 3A to 16.8% in Area 4A. QS transfer rates were lower in the CDQ areas.
- QS holder transfer rates were higher than QS transfer rates in non-CDQ areas 2C through 4A. The average QS holder transfer rates over all three years in these areas ranged from 19.5% in Area 3A to 25.1% in Area 3B.
- For most halibut area and vessel categories for which an adequate number of priced sales observations were available, the average price per QS unit increased each year from 1995 to 1997 and was higher in the larger catcher vessel categories.
- Estimates based upon a statistical model of 1995 to 1997 QS prices in Areas 2C through 4A indicated that the price of a halibut QS unit varied positively with block size.
- The estimated price per unit of unblocked QS also increased with the size of the transfer.

## Chapter 5 Halibut QS Leases

The Council's IFQ program provides for restricted leasing of QS on a seasonal basis. Holders of freezer vessel QS can lease all of the IFQ associated with that QS. Holders of catcher vessel QS could lease up to 10% of that QS during the 1995-1997 seasons. The regulations providing for leases of catcher vessel QS expired on January 2, 1998 and have not been renewed.

Chapter 5 examines the extent to which the leasing provisions were used during the first three years of the halibut program. Data are presented on the amount and percentage of QS leased and the number and percentage of QS holders who leased out QS. QS and QS holder lease rates are defined and calculated.

Price information was available for some leases. These data are used to provide statistics on IFQ lease prices during the first three years of the program.

- At the start of the program, leasing of catcher vessel QS was more difficult because rules that put some QS into non-severable blocks interacted with a 10% leasing restriction for catcher vessel QS. A rule change that became effective September 9, 1996 allowed 10% of the IFQ associated with blocked QS to be leased.
- There were 144 halibut lease transactions over the first three years of the IFQ program. All but six of the leases occurred in Areas 2C through 4A.
- QS lease rates for the three years period calculated across all vessel categories were low in all areas, ranging from 0% in Areas 4C and 4E to 2.7% in Area 4D. QS holder lease rates were also low.
- Leasing of halibut QS was largely confined to freezer vessel QS. There were no leases of freezer vessel QS in Areas 4C or 4E; however, in other areas QS lease rates for freezer vessel QS ranged from 12.3% in Area 4B to 33.4% on Area 3B over all years from 1995 to 1997.
- There was very little catcher vessel QS leased, and catcher vessel QS lease rates were less than 1% in all areas and vessel categories over the first three years of the program.
- The use of a hired skipper may have been a better alternative than leasing for some initial QS recipients over this time period. During 1997 the Council adopted a proposal that was designed to constrain this practice. Minimum vessel ownership percentages were required for persons who wish to use hired skippers. NMFS-RAM implemented this proposal in the 1998 season.

• Over all areas, the average lease price of freezer vessel QS increased from \$.84 per pound of IFQ in 1995 to \$.99 per pound of IFQ in 1996, then decreased to \$.67 per pound of IFQ in 1997.

# Chapter 6 Types of Transfers, Financing of Transfers, Relationships Between Transferors and Transfer Recipients, and Use of Brokers.

Persons who want to transfer QS must complete a transfer application form. The transfer application form collects basic information on each transfer.

Chapter 6 summarizes some of this basic information. Data are provided which classify permanent transfers as sales, gifts, trades, or other. Summary data are included that classify transfers by the nature of the relationship between the parties to the transfer (e.g., family, friend, business partner, or "no relationship"). The chapter also includes data on the use of brokers to facilitate QS transfers.

Chapter 6 also examines priced QS transfers and includes a breakdown of the finance sources used by buyers. The finance sources include bank, Commercial Fishing and Agricultural Bank (CFAB), Department of Commerce and Economic Development (DCED), personal, processor, and other.

- "Priced sales" (prices reported) were the predominant transfer type in most areas over the 1995-1997 time period. The percentage of QS transferred classified as "other sales" (no prices available), "gifts," and "trades" was relatively small in most areas.
- The percentage of QS in non-CDQ areas transferred as "priced sales" ranged from 68.3% in Area 4A to 75.9% in Area 2C over the 1995-1997 period. In CDQ Areas 4B and 4D, "priced sales" accounted for 66.9% and 61.2% of the respective transferred QS.
- The percentage of QS transferred that was classified as "gift" ranged from 0.0% on Area 4E to 15.8% in Area 4B over the 1995-1997 period.
- Brokers were utilized in a high percentage of QS transfers. Brokers were involved in 44.8% of the transactions in 1995, 51.4% in 1996, and 50.4% of the transactions in 1997.
- In most areas, the majority of the QS that was transferred between parties indicated "no relationship." In Area 4E, there was only 1 transfer of a very small amount of QS over the 1995-1997 time period. Apart from this area, the percentage of the QS transferred where there was no relationship between the transferor and transfer recipient ranged from 43.7% in Area 4C to 72.9% in Area 4D over the three year period.

- Apart from Area 4E, the percentage of QS that was transferred between family members ranged from 14.0% in Areas 3A and 4D to 30.5% in Area 4C over the three year period.
- Apart from Area 4E, the percentage of QS that was transferred between friends ranged from 3.8% in Area 4D to 18.9% in Area 4A over the three year period.
- "Personal Resources" were the primary source of financing indicated for "priced sale" transfers. The percentage of QS transferred in "priced sales" transactions that indicated "personal resources" as a finance source ranged from 39.4% in Area 4D to 68.2% in Area 4B over the three year period.
- The percentage of QS transferred in priced sales transactions that indicated "bank" as a finance source ranged from 12.9% in Area 4B to 27.3% in Area 4D over the three year period.
- The percentage of QS transferred in priced sales transactions that indicated "seller" as a finance source ranged from 6.5% in Area 4C to 16.7% in Area 4B over the three year period.
- Alaska's Department of Commerce and Economic Development and the Commercial Fishing and Agricultural Bank financed a small number of QS transfers in non-CDQ areas. "Processors" also provided a source of financing in a small number of transfers.

# Chapter 7 Distribution of QS By Blocking Factor, CDQ Compensation QS, and CDQ Compensation QS Swaps.

Prior to implementation of the IFQ program, the Council added several special features to the IFQ plan. The Council decided that QS units that were worth less than 20,000 pounds of a hypothetical IFQ when they were issued would be placed into a nonseverable "block" and thereafter could only be transferred as a single unit.

The Council also restricted the number of blocks that a person could hold in an area. Within an area, if a person held any unblocked QS they could hold only one block of QS. If the person did not hold unblocked QS for an area then the person could hold up to two blocks for that area. The objective of these blocking rules was to preserve a portion of the QS for smaller fishing operations.

Another feature of the program was the allocation of certain portions of the TAC in halibut areas 4B, 4C, 4D, and 4E to Community Development Quotas (CDQs). This had the result of reducing the available catch for QS holders in these areas. The Council decided that it wanted to make QS holders in all areas share proportionally in this loss by compensating the QS holders in the CDQ areas with an allocation of QS in the non-CDQ areas of 2C, 3A, 3B, and 4A. These compensatory shares were termed "CDQ compensation QS."

Regulations provide that if a person is issued CDQ compensation QS for an area where the person already has QS, then the CDQ compensation QS is combined with their existing QS and is either "blocked" or "unblocked" depending on sum total of their QS.

However, if a person is issued CDQ compensation QS in an area for which the person has no other QS, then the CDQ compensation QS is left unblocked. Moreover, if the CDQ compensation QS is catcher vessel QS, it can be fished on any size catcher vessel and upon first transfer it can be permanently assigned to the specific catcher vessel category designated by the transfer recipient. This ability to "swap" certain CDQ compensation QS across catcher vessel categories within an area is termed "swapability" in the report. The ability to swap such QS across catcher vessel categories expires upon the first transfer.

Chapter 7 examines the distribution of QS by block status at initial issuance and at year-end 1997. The block status can be "blocked," "unblocked," "non-swappable" CDQ compensation QS, or "swappable" CDQ compensation QS.

- Large percentages of the total QS were issued in blocks. The percentage of blocked QS initially issued varied from 35.4% in Area 3A to 100% in Area 4E. More than half the QS was blocked in Areas 2C, 3B, 4A, 4C and 4E.
- CDQ compensation QS initially represented approximately 2.1% of the total QS issued in non-CDQ Areas 2C through 4A.
- Non-swappable CDQ compensation QS was rolled into a person's blocked or unblocked QS at initial issuance. Swappable CDQ compensation QS is classified as unblocked up to first transfer. At year-end 1997, the percentage of QS classified as unblocked had increased slightly in Areas 2C through 4B. The number of persons holding unblocked QS also increased in these areas.
- The amount of swappable CDQ compensation QS had declined sharply by year-end 1997. Transfers either with or without an accompanying swap reduce the amount of swappable QS because the privilege to swap across catcher vessel categories disappears upon the first transfer. The decline in swappable CDQ compensation QS ranged from 44.3% in Area 4A to 91.1% in Area 3A over the 1995-1997 period.
- The highest number of "swaps" occurred in Area 2C where by year-end 1997 there had been 87 swaps to different vessel categories. During the same time period, there were 63 swaps to different vessel categories in Area 3A, 82 in Area 3B, and 52 in Area 4A.
- Vessel category swaps tended to move QS to the "36 to 60 foot" catcher vessel category in Area 2C, and the "greater than 60 foot" catcher vessel category in Areas 3A, 3B, and 4A.

## Chapter 8 "Sweep-ups" of Small QS Blocks

Prior to the IFQ program the halibut fishery was characterized by short derby-like openings with a large turnover of participants on an annual basis. The Council's initial allocation methodology included persons who owned or leased a vessel(s) that made landings in the halibut fishery at any time during the 1988, 1989, or 1990 seasons.

Because of this, large numbers of persons with only a small amount of landings received a small initial allocation of QS. The IFQ regulations put initial QS allocations into non-severable blocks if the amount of the QS was worth less than 20,000 pounds of a hypothetical IFQ. Many of the QS blocks were very small and some were too small to make a fishing trip worthwhile.

In an effort to enhance consolidation of these blocks, the Council adopted a "sweep-up" provision for small blocks of QS. Originally it allowed a QS holder to acquire a number of small blocks and combine them into a single block as long as that single block was still worth less than 1,000 pounds of a hypothetical IFQ. In December, 1996 the sweep-up block size limit was raised to 3,000 pounds of a hypothetical halibut IFQ.

Chapter 8 examines the extent to which the sweep-up provisions were used during the first three years of the halibut IFQ program. The tables in the section are based on the new higher sweep-up limits.

- The percentage of QS in small blocks that were "sweepable" ranged from 3.6% in Area 4B to 16.1% in Area 3B at year-end 1997.
- Sweepable blocks were a substantial percentage of the total blocked QS in each area, ranging from 9.9% in Area 4B to 27.2% in Area 4C.
- Substantial percentages of QS holders hold sweepable blocks. Persons holding sweepable blocks represented from 34.1% of all QS holders in Area 4B to 60.3% of all QS holders in Area 3A at year-end 1997.
- All of the sweep-up transactions occurred in non-CDQ areas 2C through 4A.
- There were relatively few sweep-up transactions from 1995 to 1996, but in 1997 the number of transactions increased dramatically. This increase may have been related to the higher sweep-up limits that went into effect in late 1996.

## Chapter 9 Changes In QS Holdings By Type of Person

Under the Council's IFQ program, QS can be owned by individuals (natural persons who were initial QS recipients), corporations, one-owner corporations, estates, partnerships, crew (natural persons who were not initial QS recipients but who met the qualifications to acquire QS), and other entities. However, the Council has included provisions which should encourage QS to move gradually to individual owner-operators.

Tables in Chapter 9 show, by person-type, the amount and percentage of QS held and the number and percentage of QS holders. Data are provided for the fishery at initial issuance and at year-end 1997.

- Individuals, meaning natural persons who were initial QS recipients, held the highest percentage of any person-type in all areas except 4D both at initial issuance and at the end of 1997. The percentage of the QS that was held by individuals varied from 31.2% in Area 4D to 89.0% in Area 4E at the end of 1997.
- Crew persons, meaning individuals (natural persons) who were not initial QS recipients, acquired QS in all areas except Area 4E. Apart from Area 4E, crew had acquired holdings ranging from 8.2% of the QS in Area 4B to 16.2% of the QS in Area 4A.
- The percentage of the QS held by corporations (sum of regular corporations, one-owner, and new corporations) varied considerably between areas. In Areas 2C and 4E only 2.2% and 8.3% of the respective QS was held by corporations at the end of 1997. In contrast, the percentage of QS held by all corporations in other areas varied from 21.3% in Area 4C to 45.7% in Area 4D.
- The percentage of QS held by partnerships was relatively small. At the end of 1997, there were no partnerships listed in Area 4E. In other areas, partnerships held between 0.6% of the QS in Area 2C to 12.1% of the QS in Area 4D.

## Chapter 10 Distribution of QS by State of Residence

Prior to the IFQ program, persons participating in the halibut fishery came from Alaska and from other states, particularly Washington and Oregon. A concern in Alaska is that QS holdings might gradually drift to holders outside of Alaska thereby reducing the economic impacts of the halibut fishery on Alaska.

Chapter 10 examines the distribution of QS and QS holders by state of residence (Alaska, Washington, Oregon, and other). The tables provide a broad overview of how these distributions have changed in the first three years of the IFQ program.

- In all areas, the QS holdings of persons from Oregon and other states were small relative to the holdings of persons from Alaska and Washington.
- In Areas 2C, 3A, 3B, 4A, 4C, and 4E persons from Alaska held the highest percentage of QS at both initial issuance and at year-end 1997.
- From initial issuance through 1997, persons from Alaska showed slight increases in QS holdings in Areas 2C, 3A, 4A, 4C, and 4D and slight decreases in QS holdings in Areas 3B and 4B.
- In all areas except 4D, the majority of QS holders were from Alaska both at initial issuance and at year-end 1997.
- Persons from Washington held the majority of the QS in Areas 4B and 4D both at initial issuance and at year-end 1997. The percentage of the QS held by persons from Washington varied from 8.9% in Area 4E to 64.2% in Area 4D at year-end 1997.
- The average QS holdings of persons from Washington were considerably higher than the average QS holdings of persons from Alaska in most areas.

# Chapter 11 Changes By Management Area, Rural-Urban, Local-Nonlocal

Under Alaska's limited entry program, there has been a movement of permits away from holders who live in rural areas that are "local" to limited fisheries to holders who live in urban areas that are "nonlocal" to the limited fisheries. Some persons are concerned that similar results might occur under the halibut IFQ program.

Chapter 11 examines changes in QS holdings within Alaska and between Alaska and other states using special resident-type classifications. All communities within Alaska are classified as "rural" or "urban" based upon 1990 census definitions, and as "local" or "nonlocal" to each halibut management area. Persons within each community can then be placed into one of five resident-types relative to the halibut management area for which a QS applies. These are as follows:

Alaska Rural Local (ARL) Alaska resident residing in a rural community that is

local to the halibut management area.

Alaska Urban Local (AUL) Alaska resident residing in an urban community that is

*local* to the halibut management area.

Alaska Rural Nonlocal (ARN) Alaska resident residing in a rural community that is

nonlocal to the halibut management area.

Alaska Urban Nonlocal (AUN) Alaska resident residing in an urban community that is

nonlocal to the halibut management area.

Nonresident Nonresidents of Alaska

Chapter 11 examines the distribution of QS and QS holders by these five special resident-types.

- ARLs received QS in all management areas except 4D. Their largest shares of initial QS allocations came in Area 4E (59.3%), 4C (34.0%), and 2C (30.1%). By the end of 1997, ARL holdings had declined in Areas 2C, 3B, 4A, and 4E and had risen in Areas 3A and 4C.
- AULs received an initial allocation of QS in Areas 2C (50.3%), 3A (43.1%), and 4A (2.5%) only. By year-end 1997 AULs held a small percentage of the

- QS in Area 4B also. AUL holdings had increased in Area 2C and 4A and declined in Area 3A.
- ARNs received small percentages of the QS in all management areas. These percentages ranged from less than 1% in Areas 2C, 4C, and 4D up to 6.2% in Area 4A at initial issuance. By year-end 1997, ARN holdings had declined in Areas 2C, 3A, 3B, and 4A and risen in Areas 4B, 4C, and 4D.
- AUNs received QS in all areas and received over 20% of the QS in Areas 3B, 4A, 4B, 4C, and 4E at initial issuance. AUN holdings had increased in areas 3A, 3B, 4A, 4D, and 4E and declined in the other areas by year-end 1997.
- Nonresidents received QS in every area. They received over half of the QS in Areas 4A, 4B, and 4D and over 35% in six of the areas. By year-end 1997, nonresident QS holdings had declined in Areas 2C, 3A, 4A, 4C, and 4D and increased slightly in 3B and 4B.
- The amount of QS held by each resident type may change for three reasons: QS can be transferred to other resident types; QS holders can move to a place with a different resident-type classification (migration); or QS can be administratively revoked. Both transfers and migrations were important causes of changes in the distribution of QS holdings.
- Quota share transfers may occur between persons in the same resident category (intra-cohort) or between persons of different resident categories (cross-cohort).
- The percentages of intra-cohort and cross-cohort transfers varied widely by resident-type and management area, although intra-cohort transfer may have been more likely for the majority of areas and resident-types. Intra-cohort transfers were especially prevalent among nonresidents.

## Chapter 12 Distribution of Halibut QS By Census Area

There have been concerns that the IFQ program might result in a dramatic restructuring that could increase the role of the halibut fishery in some areas while reducing its impact in other areas. Chapter 12 provides another view of the changes that have occurred in the geographic distribution of QS holdings since initial issuance.

In this chapter, QS holders from Alaska are assigned to census areas based upon their addresses. Persons who reside outside of Alaska were put into a single "Outside Alaska" category. The distribution of QS and QS holders are then examined at initial issuance and at year-end 1997.

- Census areas that show relatively high percentages (over 10% at initial issue or year-end 1997) of QS held by Alaskans are: Juneau, Petersburg/Wrangell and Sitka (Area 2C); Kodiak (Areas 3A, 3B, 4A, 4B, and 4C); Kenai Peninsula (Areas 3A and 4A); Aleutian Islands West (Area 4C); and Bethel and the MatSu Borough (Area 4E).
- Persons who reside outside of Alaska held substantial portions of the QS in all areas except 4E, ranging from 15.1% in Area 2C to 79.1% in Area 4D by the end of 1997. Nonresidents held a majority of the QS in areas 4A, 4B, and 4D at both initial issuance and year-end 1997.
- The number of persons who held QS declined in most census areas. This parallels the overall decline in QS holders due to transfers and consolidation.
- The percent decline of QS holders for non-CDQ management Areas 2C through 4A is relatively high for some census areas. This may be partially due to QS holders for CDQ areas transferring their CDQ compensation QS.

## Chapter 13 New Entrants In The Fishery

The Council provided a means under the IFQ program for new persons to receive halibut QS through transfer and enter the fishery. Any person from the United States can acquire harvester-processor (category A) QS. Only persons who are initial QS recipients or IFQ crew members may receive catcher vessel QS through transfer. Under the IFQ program, an IFQ crew member is defined as any individual who has at least 150 days experience working as part of a harvesting crew in any United States commercial fishery or as any individual who receives an initial allocation of QS.

New entrants may also occur by regulations which allow an individual to transfer QS to the individual's solely owned corporation (a new entity). New entrants might also occur because of transfers due to court order, operation of law, or as part of a security agreement. However, in these latter cases IFQ is not assigned unless the person receiving the QS transfer meets all of the eligibility requirements.

Chapter 13 examines the distribution of QS ownership between initial QS recipients and new entrants at year-end 1997. New entrants to the management area, new entrants to the halibut fishery, and new entrants to the IFQ program are all differentiated.

- A new entrant to a management area may have been an initial QS recipient in some other management area(s). A new entrant to the halibut IFQ program may have been an initial QS recipient in the sablefish fishery. A new entrant to both IFQ programs did not receive an initial allocation in either fishery.
- By the end of 1997, new entrants to management areas held significant amounts of the QS in each management area except 4E, where all of the TAC is allocated to CDQs and where very few transfers have occurred. Excluding Area 4E, the percentage of QS held by new entrants to each management area ranged from 12.6% in Area 3A to 24.9% in Area 4A at the end of 1997.
- By the end of 1997, new entrants to each management area represented a significant portion of the QS holders in every management area except 4E. Excluding Area 4E, the percentage of QS holders represented by new entrants to each management area ranged from 11.7% in Area 4C to 24.6% in Area 4D at the end of 1997.
- By the end of 1997, new entrants to the halibut IFQ fishery represented a significant portion of the QS holders in all management areas except 4E. Excluding Area 4E, the percentage of QS holders represented by new entrants to the halibut fishery ranged from 10.4% in Area 4C to 21.3% in Area 4D at the end of 1997.

- The percentage of QS holders represented by new entrants to either the halibut or the sablefish IFQ programs also ranged from 10.4% in Area 4C to 21.3% in Area 4D at the end of 1997.
- A substantial portion of the persons who had QS leases were new entrants. This is true in all areas from Area 2C through 4A over the 1995-1997 period.

## Chapter 14 Changes In Harvest and Delivery Patterns

Chapters 14 to 16 concentrate on halibut harvest data as opposed to QS holdings. Chapter 14 examines the distribution of harvest and deliveries in several different ways.

Data are provided on the delivery of Alaska-caught halibut by state of delivery and by Alaska census area of delivery. These data are for the 1990-1997 time period, which covers the four years immediately prior to the IFQ program and the three years since the IFQ program was implemented. These data highlight the variation in delivery patterns over the time period.

Data are also provided which compare the number of persons recording individual landings in the years preceding the IFQ program with the number of persons recording landings in the first three years of the IFQ program.

In addition, the chapter provides data on the harvest of halibut by year and quarter and the harvest of halibut by the state of residence of the QS holder. A special section is also included which estimates the use of hired skippers in the fishery under the IFQ program.

- The percentages of the Alaska halibut harvest delivered to Alaska, Washington, and other states have not changed substantially in the first three years of the IFQ program.
- The Kodiak Island Borough census area and the Kenai Peninsula/Anchorage aggregated area receive the highest percentage of the halibut pounds delivered in Alaska. This has not changed under the IFQ program.
- The percentage of halibut pounds delivered to the Sitka Borough, the Juneau Borough, and the Wrangell/Petersburg census area have increased slightly during the first three years of the program over 1990 to 1994 levels.
- The percentage of halibut pounds delivered to the Valdez-Cordova census area and the Ketchikan/Prince of Wales aggregated area has decreased during the first three years of the program over 1990 to 1994 levels. Other census areas show 1995-1997 percentages that fluctuate within the ranges of 1990 to 1994 levels.
- In many areas, the number of persons who recorded landings from 1995 through 1997 was roughly equivalent to the average number of persons who recorded landings over the 1990 to 1994 period; however, there were fairly large percentage decreases in persons with landings in Areas 2C, 3A, and 4C.

- The vast majority of the halibut harvest in the first three years of the IFQ program occurred in the second and third quarters of each year in all management areas.
- From 1995 to 1997 in Areas 2C, 3A, 3B, 4A, and 4C, the majority of IFQ permit holders with landings used QS owned by Alaska residents. QS owners from Alaska were also credited with the majority of pounds harvested in Areas 2C, 3A, and 4C in these years.
- In Areas 4B and 4D, the highest percentage of IFQ permit holders with landings in the 1995-1997 seasons used QS owned by Washington residents. Washington QS owners were also credited with the majority of the halibut harvest in these areas and years.
- Hired skippers were widely used in all areas except Area 2C during the first three years of the program. The use of hired skippers increased in all areas over the 1995-1997 time period. In 1997, the percentage of the harvest attributed to hired skippers was only 1.8% in Area 2C, but in other areas it ranged from 29.4% in Area 4C to 69.6% in Area 4D.
- Use of hired skippers was more common in the harvester-processor vessel category and the "greater than 60 feet" catcher vessel category.

# Chapter 15 Overharvest and Underharvest of IFQs and TACs

This chapter compares actual harvests in each management area with the TAC for each year from 1990 through 1997. The chapter also examines the amount of totally unfished IFQ held by initial QS recipients who have not altered their QS holdings.

- Over the 1990 to 1994 time period, harvests that exceeded the TAC were common.
- In each of the first three years of the IFQ program, the TAC was underharvested in all areas. However, the amount of underharvest decreased from 1995 to 1996 in six of the seven areas where an IFQ fishery occurred, and continued to decrease from 1996 to 1997 in all areas.
- During 1997, the percentage of the TAC that was harvested ranged from 87.0% in Area 4C to 97.3% in Area 3B.
- By 1997, the percentage of initial QS recipients who had not transferred, leased, or otherwise altered their QS holdings ranged from 41.9% of the initial QS holders in Area 3B to 67.5% of the initial QS holders in Area 4C. As expected, this percentage has declined in each year since 1995 in all areas.
- Of the persons who had not yet altered their QS holdings, some also did not fish their IFQ in 1997. This percentage ranged from 18.3% of the initial QS holders in Area 3B to 27.0% in Area 4C. On average, these persons held relatively small amounts of QS.

## Chapter 16 Consolidation of IFQ Permit Holders On Vessels

One way a reduction in the number of fishing operations occurs under the IFQ program is the consolidation of QS holdings. Another way a reduction can occur is when IFQ holders combine to fish their IFQ holdings from a single vessel.

Chapter 16 provides time series data on harvests and participation in the halibut fishery from 1990 through 1997. These data suggest the extent to which vessels have been used by more than one person both before and since implementation of the IFQ program.

- In Areas 2C, 3A, and 4C the number of persons and vessels with landings has fallen substantially under the IFQ program. In Areas 3B, 4A, 4B, and 4D there has not been a pronounced change.
- Larger harvests appear to be correlated with high numbers of person-landing days and vessel landing-days in some areas, particularly in Areas 3B and 4C. In other areas there appears to be no significant correlation between harvests and landing-days.
- In all areas except 4C and 4E, the ratio of number of persons with landings to number of vessels with landings rose in 1995 over the 1990-1994 average, and continued to rise in 1996. In 1997, the ratios continued at roughly the same levels. This provides evidence that some persons are using the same vessel and that the practice of multiple persons recording a landing off a single vessel has increased under the IFQ program.