

EXECUTIVE SUMMARY

Changes Under Alaska's Halibut IFQ Program, 1995 to 1998

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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 report is to document and analyze changes that have occurred during the first four 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 (NMFS-RAM) administrative and harvest data. Some ancillary data are also used.

The Halibut IFQ Program Basics

Quota shares (QS) are the basic use-privileges under the halibut 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.”

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.

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.

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 the Report

The topics covered in the project 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, gifts, 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 larger QS 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 four 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 that classify communities as “local” or “nonlocal” to IFQ management areas and as “rural” or “urban.”

Other QS distribution 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 four years of the IFQ program. The report also contains information on the consolidation of IFQ permit holders onto single vessel operations and the underharvest of IFQ during the 1995 to 1998 seasons.

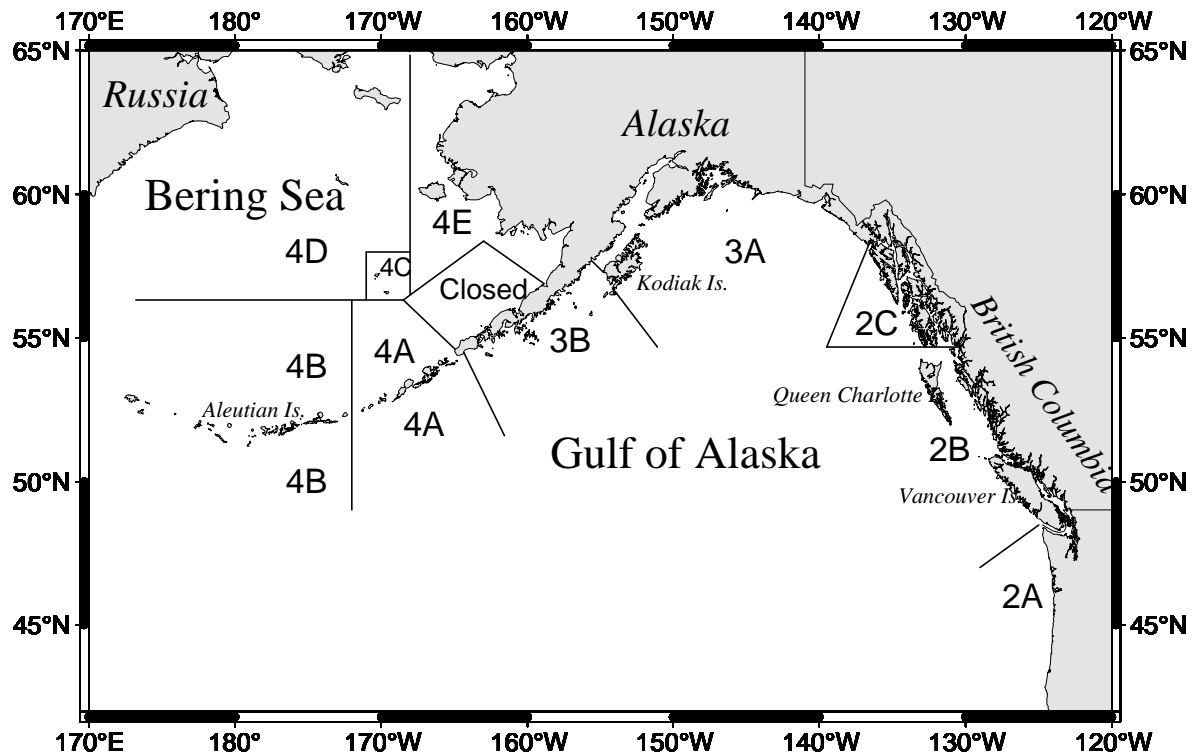


Figure 1. IPHC Halibut Management Areas

Chapter 3 Consolidation of QS Holdings, 1995 - 1998

The halibut and sablefish IFQ programs allow QS to be permanently transferred. The Council intended some consolidation of QS to occur to spread out the fishing season. It was believed that a longer and slower-paced fishery would improve ex-vessel prices, provide 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. Some of the more important features are:

QS is issued to persons and is specific to one of four vessel categories. Under most circumstances, QS from one vessel category cannot be transferred to another vessel category. Special vessel category "swaps" are an exception and are discussed in detail in Chapter 7.

Some QS is issued in non-severable "blocks." A person may hold a maximum of two blocks of QS in an area, and persons with two blocks may not hold unblocked QS for that area. These rules are also discussed in more detail in Chapter 7.

During the first two years of the IFQ program, persons could not use, individually or collectively, more than 1% of the QS in Area 2C, more than 0.5% of the QS in Areas 2C, 3A, and 3B combined, or more than 0.5% of the QS in Areas 4A, 4B, 4C, 4D, and 4E combined. The rules allowed some initial issues to exceed some of these restrictions, but these persons were prevented from accumulating more QS.

In June, 1996 the Council approved an amendment that increased the combined total ownership caps in Areas 4A, 4B, 4C, 4D, and 4E from 0.5% to 1.5%. These percentages were then applied to the QS pool as it stood in 1996 to establish a set number of QS units that would be used as an ownership cap from year-to-year. The other percentage ownership caps for Area 2C and the combined Areas 2C, 3A, and 3B were also changed, to be expressed as fixed amounts of QS units.

Tables 1 and 2 indicate the number of QS holders has declined considerably in Areas 2C through 4A, which are non-CDQ areas. Percentage declines were lower in

the CDQ areas 4B through 4D. The overall amount of QS declined slightly due to administrative revocations.

Consolidation of QS holdings has increased the average QS holdings in all areas except 4E, where no IFQ fishery has occurred.

**Tables 1 and 2.
Initial Issuance and Year-end 1998 QS and QS Holders by Management Area**

Area	Initial Amount of QS Units	1998 Year-end QS Units	Net Change in Total QS Units	Percent Change QS Units
2C	59,559,390	59,551,257	-8,133	0.0
3A	185,320,928	184,723,476	-597,452	-0.3
3B	54,171,893	53,840,588	-331,305	-0.6
4A	14,551,336	14,503,009	-48,327	-0.3
4B	9,293,391	9,284,774	-8,617	-0.1
4C	3,969,186	3,969,186	0	0.0
4D	4,790,491	4,746,318	-44,173	-0.9
4E	139,999	139,999	0	0.0

Area	Initial QS Holders	1998 Year-end QS Holders	Person Net Change	Percent Change QS Holders
2C	2,387	1,685	-702	-29.4
3A	3,070	2,247	-823	-26.8
3B	1,055	669	-386	-36.6
4A	529	359	-170	-32.1
4B	152	124	-28	-18.4
4C	80	72	-8	-10.0
4D	68	56	-12	-17.6
4E	104	104	0	0.0

Table 3. Initial Issuance and Year-end 1998 QS and QS Holders by Management Area and Vessel Category

Area	Vessel Category	Initial Amount of QS	1998 Amount of QS	Initial QS Holders	1998 QS Holders
2C	Freezer	1,249,141	1,249,141	31	29
	GT 60 ft.	2,933,494	2,702,528	138	83
	36-60 ft.	45,700,604	46,512,181	1,145	855
	LE 35 ft.	9,676,151	9,087,407	1,096	758
		59,559,390	59,551,257	2,410	1,725
3A	Freezer	4,755,112	4,755,112	36	37
	GT 60 ft.	68,051,777	68,347,490	300	277
	36-60 ft.	98,852,165	98,745,121	1,495	1,111
	LE 35 ft.	13,661,874	12,875,753	1,287	923
		185,320,928	184,723,476	3,118	2,348
3B	Freezer	1,593,155	1,593,155	19	18
	GT 60 ft.	29,863,254	29,944,248	214	175
	36-60 ft.	20,683,904	20,621,534	559	374
	LE 35 ft.	2,031,580	1,681,651	284	139
		54,171,893	53,840,588	1,076	706
4A	Freezer	619,003	619,003	15	17
	GT 60 ft.	8,508,678	8,531,883	140	124
	36-60 ft.	4,295,604	4,287,490	146	100
	LE 35 ft.	1,128,051	1,064,633	237	138
		14,551,336	14,503,009	538	379
4B	Freezer	553,489	553,489	8	7
	GT 60 ft.	7,120,537	7,114,526	82	70
	36-60 ft.	1,350,369	1,347,763	36	28
	LE 35 ft.	268,996	268,996	27	25
		9,293,391	9,284,774	153	130
4C	Freezer	18,876	18,876	1	1
	GT 60 ft.	1,767,422	1,620,607	29	26
	36-60 ft.	1,007,084	820,661	20	17
	LE 35 ft.	1,175,804	1,509,042	31	32
		3,969,186	3,969,186	81	76
4D	Freezer	413,936	413,936	5	5
	GT 60 ft.	4,021,310	4,021,310	50	43
	36-60 ft.	355,245	311,072	14	11
		4,790,491	4,746,318	69	59
4E	GT 60 ft.	11,176	11,176	2	2
	36-60 ft.	37,032	37,032	7	7
	LE 35 ft.	91,791	91,791	95	95
		139,999	139,999	104	104

The halibut IFQ program created four distinct vessel categories in each of the eight halibut management areas. One vessel category consists of harvester-processor vessels (designated “freezer” herein); the other three consist of catcher vessels less than or equal to 35 feet, from 36 to 60 feet, and greater than 60 feet. Under most circumstances, QS cannot be transferred across vessel categories; however, the regulations allow catcher vessel CDQ compensation QS to be “swapped” to a different vessel category upon its first transfer.

In January 1996, the Council approved a “fish down” amendment that allows catcher vessel QS to be used on vessels of the same vessel size class or smaller. The Council did this to allow more flexibility for QS owners to acquire more catcher vessel QS. The amendment allows the use of larger vessel category QS on smaller vessels, except in Area 2C where “fish down” of category B (greater than 60 feet) QS is allowed only for QS blocks worth less than 5,000 pounds (based upon 1996 quotas). This amendment became effective August 16, 1996.

Table 3 shows that halibut QS was issued in 30 different area/vessel category combinations. Persons may hold QS for more than one vessel category. There were no qualifying freezer vessels in Area 4E, nor were there vessels in the “35 foot or less” category in Area 4D.

Consolidation is indicated by the decrease in the number of persons holding QS in the respective vessel categories. Substantial consolidation has occurred in many vessel categories, particularly those in Areas 2C through 4A.

As stated, the amount of QS in vessel categories has not changed much because QS transfers across vessel categories are only allowed by special rules for the “swap” of CDQ compensation QS. Administrative revocations of QS may also change the amount of QS within a vessel category.

Chapter 4 QS Transfers and QS Prices

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

Table 4 provides data on QS transfers, the amount of QS transferred, and the number of unique transferors summed over the first four years of the program.

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 11.6% in Area 3A to 14.2% in Area 4A. Average QS transfer rates were lower in the CDQ areas of 4B to 4E.

QS holder transfer rates were higher than QS transfer rates in all non-CDQ areas 2C through 4A.

Table 4. Halibut QS Transfer Rates Over the 1995-1998 Period

Area	Sum of QS Transferred	QS Transfer Rate %	Sum of QS Transferors	QS Holder Transfer Rate %
2C	29,013,413	12.2	1,374	18.4
3A	85,120,062	11.6	1,730	17.5
3B	25,170,031	11.7	716	22.5
4A	8,176,923	14.2	356	21.5
4B	3,220,827	8.7	72	13.3
4C	1,313,474	8.3	24	7.8
4D	2,021,347	10.6	39	15.5
4E	1,856	0.3	1	0.2

Table 5. Annual Prices for Halibut QS With IFQ Transfer By Area and Year

Area	Year	Mean Price \$/IFQ	Total IFQs Transferred Used for Pricing	Mean Price \$/QS	Total QS Transferred Used for Pricing	Number of Sales Used for Pricing
2C	1995	7.58	996,874	1.14	6,629,554	315
	1996	9.13	681,056	1.37	4,539,813	289
	1997	11.37	517,715	1.92	3,057,477	211
	1998	10.14	220,894	1.79	1,253,771	106
3A	1995	7.37	1,792,912	0.79	16,658,196	355
	1996	8.40	1,582,609	0.90	14,724,748	352
	1997	9.78	1,276,525	1.32	9,443,198	294
	1998	8.55	666,649	1.20	4,743,875	157
3B	1995	6.53	225,912	0.44	3,323,670	88
	1996	7.88	323,160	0.53	4,760,536	165
	1997	8.58	605,744	1.43	3,634,335	157
	1998	7.92	169,833	1.62	832,225	49
4A	1995	5.64	114,616	0.74	873,519	56
	1996	6.68	160,899	0.87	1,230,691	65
	1997	6.67	383,112	1.35	1,889,914	90
	1998	6.39	71,280	1.54	295,358	29
4B	1995	6.14	34,716	1.23	173,523	5
	1996	5.03	51,769	1.00	260,336	7
	1997	5.15	294,051	1.54	980,663	30
	1998	7.24	94,579	2.18	313,790	11
4C	1997	6.29	48,681	0.91	336,313	8
	1998	5.67	33,902	1.14	169,265	7
4D	1996	C	27,358	C	237,858	3
	1997	5.85	82,294	0.99	485,517	11
	1998	6.07	49,986	1.39	218,677	11

Estimates of QS prices are based upon analyses of sales transactions where price information was available. Table 5 provides these estimated prices for QS sold with the associated current year IFQ. The main report document also provides the results of a statistical model used to project a more detailed breakdown of 1995 - 1998 QS prices. The model estimates prices by management area, vessel category, block size, and annual quarter for each year from 1995 through 1998.

Table 5 indicates that average halibut prices in dollars per IFQ tended to increase each year from 1995 to 1997, then drop in 1998. In some areas very few transactions occurred.

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 their QS. During the first four years of the IFQ program, holders of catcher vessel QS could lease up to 10% of their QS. However, the regulations allowing for leasing of catcher vessel QS expired in 1998 and have not been renewed.

There were 187 halibut lease transactions over the first four years of the IFQ program. All but ten of the leases occurred in Areas 2C through 4A. In areas where leases occurred, lease rates were low, ranging from 0.6% in Area 2C to 3.5% in Area 4D over the 1995-1998 period. QS holder lease rates were also low.

Leasing of halibut QS was largely confined to freezer processor vessels. 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 8.8% in Area 4B to 41.3% on Area 4D over the four years from 1995 to 1998.

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 four years of the IFQ program.

The small number of catcher vessel QS leases may have been due partially to the interaction of the blocking rules and the 10% leasing restriction for catcher vessel QS during most of the first two years of the IFQ program. Blocked QS could not be broken up to allow some of the QS to be leased.

Regulations changed in September, 1996 allowing persons to lease up to 10% of the IFQ associated with their blocked QS. However, this change did not appear to impact catcher vessel QS lease rates during the 1997 and 1998 seasons.

The use of a hired skipper may have been a better alternative than leasing for some initial QS recipients. The NPFMC adopted regulations in 1997 that further constrain this practice.

Price information was available for some leases. Over all areas, the average lease price of freezer vessel QS

was \$.84 per pound of IFQ in 1995, \$.99 per pound of IFQ in 1996, \$.67 per pound of IFQ in 1997, and \$.36 per pound of IFQ in 1998.

Table 6. Halibut QS and QS Holder Lease Rates Over the 1995 to 1998 Period

Area	Year	Total Leased QS	QS Lease Rate(%)	Total Unique Lessors	Lessor Rate(%)
2C	1995	170,260	0.3	7	0.3
	1996	268,393	0.5	12	0.6
	1997	425,965	0.7	15	0.9
	1998	518,925	0.9	14	0.8
	ALL YRS	1,383,543	0.6	48	0.6
3A	1995	1,401,793	0.8	12	0.4
	1996	1,892,265	1.0	25	1.0
	1997	1,365,302	0.7	19	0.8
	1998	1,513,511	0.8	14	0.6
	ALL YRS	6,172,871	0.8	70	0.7
3B	1995	491,569	0.9	5	0.5
	1996	744,933	1.4	13	1.6
	1997	439,227	0.8	9	1.3
	1998	500,535	0.9	7	1.0
	ALL YRS	2,176,264	1.0	34	1.1
4A	1995	228,184	1.6	3	0.6
	1996	163,133	1.1	10	2.3
	1997	144,378	1.0	4	1.0
	1998	186,537	1.3	5	1.4
	ALL YRS	722,232	1.3	22	1.3
4B	1995	224,317	2.5	3	2.1
	1996	0	0.0	0	0.0
	1997	0	0.0	0	0.0
	1998	0	0.0	0	0.0
	ALL YRS	224,317	0.6	3	0.6
4C	1995	0	0.0	0	0.0
	1996	0	0.0	0	0.0
	1997	0	0.0	0	0.0
	1998	0	0.0	0	0.0
	ALL YRS	0	0.0	0	0.0
4D	1995	0	0.0	0	0.0
	1996	0	0.0	0	0.0
	1997	390,361	8.1	3	4.9
	1998	268,572	5.7	3	5.4
	ALL YRS	658,933	3.5	6	2.4
4E	1995	0	0.0	0	0.0
	1996	0	0.0	0	0.0
	1997	0	0.0	0	0.0
	1998	0	0.0	0	0.0
	ALL YRS	0	0.0	0	0.0

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

Persons who transfer QS must complete a transfer application form. Information on the form includes the type of transfer (sale, gift, trades, or other), the relationship between the transferor and transfer recipient (family, friend, business partner, or “no relationship”), and the type of financing used. Information on the use of brokers is also collected.

Through 1998, “priced sales” (price information reported) were the predominant transfer type. Apart from Area 4E, where there was only 1 transfer of a very small amount of QS, the percentage of QS transferred as priced sales ranged from 41.9% in Area 4C to 74.8% in Area 2C. The percentage of QS transferred as “other sales” (a sale with no price information reported), “gifts,” and “trades” was relatively small in most areas.

Brokers were utilized in a high percentage of halibut QS transfers. Brokers were involved in 44.8% of the transactions in 1995, 51.4% in 1996, 50.4% in 1997, and 47.6% of the transactions in 1998.

In most areas, the majority of the QS that was transferred between parties indicated “no relationship.” Apart from Area 4E, the percentage of QS transferred where there was no relationship between the transferor and transfer recipient ranged from 48.9% in Area 4C to 72.6% in Area 4D over the four period.

Apart from Area 4E, the percentage of QS that was transferred between family members ranged from 11.8% in Area 4D to 25.6% in Area 4C over the four year period.

The percentage of QS that was transferred between friends ranged from 4.9% in Area 4D to 18.2% in Area 4A over the four 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 39.3% in Area 4C to 72.5% in Area 4B over the four year period.

The percentage of QS transferred in priced sale transactions that indicated “bank” as a finance source ranged from 10.8% in Area 4B to 32.4% in Area 4C over the four year period.

The percentage of QS transferred in priced sale transactions that indicated “seller” as a finance source ranged from 4.6% in Area 4C to 14.0% in Area 4B over the four 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.

**Tables 7 and 8.
Nature of QS Transfers and
Relationships Between Transfer Parties:
Percent of QS Transferred, 1995-1998**

Area	Priced Sales	Other Sales	Trades	Gifts	Unknown
2C	74.8	0.9	2.9	9.5	11.8
3A	73.6	3.0	2.5	7.2	13.7
3B	67.8	4.8	4.8	7.0	15.5
4A	68.6	5.8	4.3	8.2	13.1
4B	65.6	3.5	4.4	16.8	9.8
4C	41.9	0.0	15.3	4.8	38.1
4D	64.5	14.9	5.9	2.7	12.1
4E	0.0	0.0	0.0	0.0	100.0

Area	Family	Friends	Partners	No Relation	Missing
2C	16.7	13.1	1.2	63.3	5.7
3A	14.6	8.8	5.0	64.0	7.6
3B	18.4	8.1	7.5	58.1	7.8
4A	14.7	18.2	3.5	57.2	6.4
4B	13.8	11.4	8.8	62.5	3.6
4C	25.6	11.9	5.5	48.9	8.1
4D	11.8	4.9	5.8	72.6	4.9
4E	100.0	0.0	0.0	0.0	0.0

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 initial QS allocations that were worth less than 20,000 pounds of a hypothetical IFQ 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 can hold in an area. Within an area, if a person holds any unblocked QS they can hold only one block of QS. If the person does not hold unblocked QS for an area then the person can hold up to two blocks for that area. The objective of these blocking rules is to preserve a portion of the QS for smaller part-time 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 to make QS holders in all areas share proportionally in this reduction 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.”

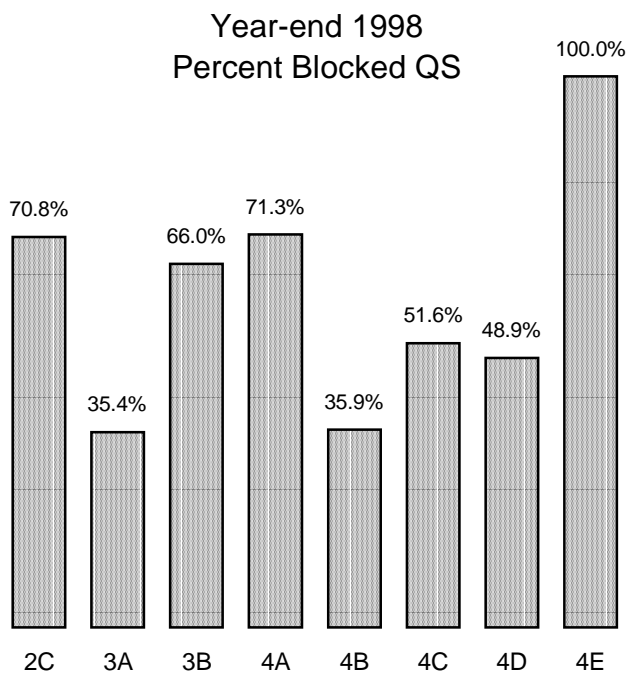
Regulations state that if a person is issued CDQ compensation QS for an area where the person already has regular QS, then their CDQ compensation QS is combined with their existing QS and is either “blocked” or “unblocked” depending on the sum total of the person’s QS.

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

The report examined the distribution of QS by block status at initial issuance and at year-end 1998. 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. In Area 4E, where all the TAC is allocated to CDQs, 100% of the QS was issued in blocks. In other areas the percentage of blocked QS at the end of 1998 varied from 35.4% in Area 3A to 71.3% in Area 4A.

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 its



first transfer. At year-end 1998, 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 most of these areas.

As can be seen in Table 9, the amount of swappable CDQ compensation QS had declined sharply between initial issuance and year-end 1998. 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 54.2% in Area 4A to 93.7% in Area 3A over the 1995-1998 period.

The highest number of “swaps” occurred in Area 2C where by year-end 1998 there had been 101 swaps to different vessel categories. During the same time period, there were 92 swaps to different vessel categories in Area 3B, 73 in Area 3A, and 61 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.

Table 9. Net Changes in Swappable QS and Number of Persons Holding Swappable QS From Initial Issuance Through 1998, by Area

Area	Block Status	Initial Amount of QS	1998 Amount of QS	Change In Total QS	Percent Change in QS	Initial Number of QS Holders	1998 Number of QS Holders	Change in QS Holders	Percent Change in QS Holders
2C	CDQ Swappable	1,092,333	320,550	-771,783	-70.7	273	97	-176	-64.5
3A	CDQ Swappable	805,606	50,941	-754,665	-93.7	146	50	-96	-65.8
3B	CDQ Swappable	222,760	17,524	-205,236	-92.1	157	57	-100	-63.7
4A	CDQ Swappable	89,061	40,762	-48,299	-54.2	170	97	-73	-42.9

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.

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

Table 10 shows the percentage of QS in small, “sweepable” blocks ranged from 3.6% in Area 4B to 16.1% in Area 3B at year-end 1998.

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 32.3% of all QS holders in Area 4B to 59.9% of all QS holders in Area 3A at year-end 1998.

In 1997, the number of sweep-up transactions increased substantially over previous years. In 1998 the number decreased to levels closer to those similar to 1995 and 1996. The increase in 1997 may have been related to the higher sweep-up limits that went into effect in late 1996.

Table 10. Persons Holding Sweepable Halibut QS Blocks, Number of Sweepable Blocks, and Total Sweepable QS Holdings at Year-end 1998

Area	Total Amount of QS	Total Number of QS Holders	Total Blocked QS	Total Persons Holding Blocked QS	Total Sweepable QS	Percent of Total QS	Percent of Blocked QS	Persons Holding Sweepable QS	Percent of Total Persons	Percent of Persons Holding Blocked QS
2C	59,551,257	1,685	42,189,794	1,506	8,244,799	13.8	19.5	987	58.6	65.5
3A	184,723,476	2,247	65,352,057	1,921	13,822,963	7.5	21.2	1,345	59.9	70.0
3B	53,840,588	669	35,508,084	572	8,661,261	16.1	24.4	398	59.5	69.6
4A	14,503,009	359	10,335,518	225	1,787,797	12.3	17.3	127	35.4	56.4
4B	9,284,774	124	3,332,789	101	329,867	3.6	9.9	40	32.3	39.6
4C	3,969,186	72	2,048,067	63	556,328	14.0	27.2	38	52.8	60.3
4D	4,746,318	56	2,319,818	48	327,075	6.9	14.1	21	37.5	43.8
4E	139,999	104	139,999	104	0	0	0	0	0	0

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.

Table 11 shows, 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 1998.

Individuals, meaning natural persons who were initial QS recipients, held the highest percentage of any person-type in all areas except 4D and 4E, both at initial issuance and at the end of 1998. Apart from Areas 4D

and 4E, individuals held between 33.6% (Area 4D) and 82.1% (Area 2C) at the end of 1998.

Crew persons, meaning individuals (natural persons) who were not initial QS recipients, acquired QS in all areas except Area 4E.

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 2.0% and 8.3% of the respective QS was held by corporations at the end of 1998. In contrast, the percentage of QS held by all corporations in other areas varied from 20.1% in Area 4C to 43.8% in Area 4B.

The percentage of QS held by partnerships was relatively small, ranging from 0.6% in Area 2C to 12.1% in Area 4D at end of 1998.

Table 11. Halibut QS by Area and Type of QS Holder

Area	Person Type	Initial Total QS Holdings	1998 Total QS Holdings	Initial Total QS Holders	1998 Total QS Holders
2C	corporate	1,798,314	1,142,046	98	49
	partnership	620,192	378,977	30	13
	restricted	1,330	3,067	1	1
	estates	776,062	223,491	42	16
	individual	56,344,011	48,891,646	2,215	1,311
	one owner corp crew	19,481 0	23,207 8,888,823	1 0	1 294
3A	new corporation	0	494,596	0	2
	corporate	39,088,880	40,808,669	199	137
	partnership	9,736,939	5,102,441	62	34
	restricted	32,752	9,467	2	1
	estates	1,755,680	742,875	29	19
	individual	133,768,163	115,838,421	2,776	1,679
one owner corp crew	938,514 0	0 21,727,007	2 0	0 375	
3B	new corporation	0	8,498	0	1
	corporate	17,659,383	17,585,454	124	85
	partnership	2,753,649	2,067,155	30	15
	restricted	2,967	2,766	1	1
	estates	799,477	379,544	13	8
	individual	32,653,510	26,608,744	885	440
one owner corp crew	302,907 0	111,297 7,077,130	2 0	1 118	
4A	new corporation	0	4,191	0	2
	corporate	5,261,927	4,821,770	82	61
	partnership	752,974	553,976	20	10
	restricted	0	734	0	1
	estates	215,469	87,522	7	2
individual	8,191,141	6,622,271	418	219	
4A con't	one owner corp	129,825	0	2	0
	crew	0	2,412,545	0	64
4B	new corporation	0	370,314	0	1
	corporate	4,255,511	3,698,296	43	30
	partnership	511,167	294,142	8	2
	estates	43,456	43,456	1	1
	individual	4,268,720	4,001,665	98	73
one owner corp crew	208,526 6,011	0 876,901	1 1	0 17	
4C	corporate	1,090,973	798,337	18	14
	partnership	339,545	96,089	2	1
	estates	67,578	0	1	0
	individual	2,427,340	2,487,087	58	49
	one owner corp crew	43,750 0	0 587,673	1 0	0 8
4D	new corporation	0	276,899	0	2
	corporate	2,797,965	1,761,341	31	20
	partnership	556,399	572,254	5	4
	restricted	0	58,618	0	1
	estates	39,715	0	1	0
	individual	1,323,762	1,592,909	30	19
one owner corp crew	72,650 0	0 484,297	1 0	0 10	
4E	corporate	11,685	11,685	3	3
	restricted	0	1,856	0	1
	estates	1,882	1,882	2	2
	individual	126,432	124,576	99	98

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 move to holders outside of Alaska thereby reducing the economic impacts of the halibut fishery on Alaska.

Table 12 examines the distribution of QS and QS holders by state of residence (Alaska, Washington, Oregon, and other). The table provides a broad overview of how these distributions have changed in the first four 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.

From initial issuance through 1998, persons from Alaska showed slight increases in QS holdings in Areas 2C, 3A, 4A, 4B, 4C and 4D and slight decreases in QS holdings in Areas 3B and 4E.

Persons from Washington held the majority of the QS in Areas 4B and 4D both at initial issuance and at year-end 1998. The percentage of the QS held by persons from Washington varied from 9.3% in Area 4E to 64.2% in Area 4D at year-end 1998.

The average QS holdings of persons from Washington were considerably higher than the average QS holdings of persons from Alaska in most areas.

Table 12. 1998 Year-end Halibut QS and QS Holders, by State of Residence

Area	State	Initial Amount of QS	1998 Amount of Area QS	Initial Number of QS Holders	1998 Number of QS Holders	1998 Average Holdings
2C	Alaska	49,265,458	50,143,611	1,971	1,405	35,689
	Washington	7,935,513	7,190,877	321	217	33,138
	Oregon	1,043,596	940,112	45	23	40,874
	Other	1,314,823	1,276,657	51	40	31,916
			59,559,390	59,551,257	2,388	1,685
3A	Alaska	118,477,479	120,993,340	2,436	1,796	67,368
	Washington	42,609,089	43,245,147	391	275	157,255
	Oregon	15,232,359	13,641,526	121	94	145,123
	Other	9,002,001	6,843,463	124	82	83,457
			185,320,928	184,723,476	3,072	2,247
3B	Alaska	28,012,423	26,461,055	780	473	55,943
	Washington	19,018,346	20,070,312	173	127	158,034
	Oregon	4,990,415	4,222,155	62	38	111,109
	Other	2,150,709	3,087,066	42	31	99,583
			54,171,893	53,840,588	1,057	669
4A	Alaska	7,065,931	7,121,113	376	247	28,830
	Washington	5,426,055	4,869,509	108	82	59,384
	Oregon	1,342,610	1,342,815	31	18	74,601
	Other	716,740	1,169,572	16	12	97,464
			14,551,336	14,503,009	531	359

Area	State	Initial Amount of QS	1998 Amount of Area QS	Initial Number of QS Holders	1998 Number of QS Holders	1998 Average Holdings
4B	Alaska	3,242,733	3,273,680	80	68	48,142
	Washington	5,365,129	5,322,540	52	44	120,967
	Oregon	466,964	339,137	14	9	37,682
	Other	218,565	349,417	7	3	116,472
			9,293,391	9,284,774	153	124
4C	Alaska	2,199,603	2,595,908	48	46	56,433
	Washington	1,180,825	984,070	24	20	49,204
	Oregon	498,399	367,689	5	4	91,922
	Other	90,359	21,519	3	2	10,760
			3,969,186	3,969,186	80	72
4D	Alaska	621,683	972,713	22	18	54,040
	Washington	3,482,437	3,048,636	38	30	101,621
	Oregon	612,624	724,969	6	8	90,621
	Other	73,747	0	2	0	0
			4,790,491	4,746,318	68	56
4E	Alaska	127,392	126,870	98	97	1,308
	Washington	12,507	13,029	5	6	2,172
	Other	100	100	1	1	100
			139,999	139,999	104	104

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.

The report analyzed 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

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.

Alaska Rural Locals 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 1998, ARL holdings had declined in Areas 2C, 3B, and 4A and had risen in Areas 3A, 4C and 4E.

Alaska Urban Locals received an initial allocation of QS in Areas 2C (50.3%), 3A (43.1%), and 4A (2.5%) only. By year-end 1998 AULs also held a very small percentage of the QS in Area 4B. AUL holdings had increased in Area 2C and 4A and declined in Area 3A.

Alaska Rural Nonlocals 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 1998, ARN holdings had declined in Areas 2C, 3A, 3B, and 4A and risen in Areas 4B, and 4D.

Alaska Urban Nonlocals 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, and 4D and declined in the other areas by year-end 1998.

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 1998, nonresident QS holdings had increased slightly in Areas 3B and 4E and declined in all other areas. The net result of transfer activity lowered Nonresident QS holdings in all areas except Area 4E.

Table 13. Net Result of Halibut QS Transfers, Migrations, and Revocations From Initial Issuance Through Year-end 1998, by Management Area and Resident Type

Area	Resident Type	Initial Amount of QS	Net Change Transfers	Pct. of Initial Issuance	Net Change Migrations	Pct. of Initial Issuance	Net Change Revoked	Pct. of Initial Issuance	Total Net Change In QS
2C	AK Rural Local	17,932,755	-2,026,430	-11.3	-790,624	-4.4	0	0.0	-2,817,054
	AK Rural Non-Loc	362,838	-301,302	-83.0	21,649	6.0	0	0.0	-279,653
	AK Urban Local	29,974,773	4,818,928	16.1	-287,914	-1.0	-549	0.0	4,530,465
	AK Urban Non-Loc	995,092	-518,416	-52.1	-35,051	-3.5	-2,138	-0.2	-555,605
	Nonresident	10,293,932	-1,972,780	-19.2	1,091,940	10.6	-5,446	-0.1	-886,286
		59,559,390							-8,133
3A	AK Rural Local	14,928,786	1,514,520	10.1	235,063	1.6	0	0.0	1,749,583
	AK Rural Non-Loc	4,206,395	-219,105	-5.2	-386,820	-9.2	0	0.0	-605,925
	AK Urban Local	79,834,467	-5,611,578	-7.0	821,343	1.0	-339,284	-0.4	-5,129,519
	AK Urban Non-Loc	19,507,831	7,104,256	36.4	-591,633	-3.0	-10,901	-0.1	6,501,722
	Nonresident	66,843,449	-2,788,093	-4.2	-77,953	-0.1	-247,267	-0.4	-3,113,313
		185,320,928							-597,452
3B	AK Rural Local	5,563,706	-652,294	-11.7	-221,276	-4.0	0	0.0	-873,570
	AK Rural Non-Loc	2,075,980	-554,586	-26.7	-79,327	-3.8	0	0.0	-633,913
	AK Urban Local	20,372,737	1,249,406	6.1	-1,067,691	-5.2	-225,600	-1.1	-43,885
	AK Urban Non-Loc	26,159,470	-42,526	-0.2	1,368,294	5.2	-105,705	-0.4	1,220,063
	Nonresident								
		54,171,893							-331,305
4A	AK Rural Local	50,264	13,939	27.7	-64,203	-127.7	0	0.0	-50,264
	AK Rural Non-Loc	907,184	-632,730	-69.7	8,859	1.0	0	0.0	-623,871
	AK Urban Local	364,612	159,083	43.6	70,872	19.4	0	0.0	229,955
	AK Urban Non-Loc	5,743,871	656,991	11.4	-157,629	-2.7	0	0.0	499,362
	Nonresident	7,485,405	-197,283	-2.6	142,101	1.9	-48,327	-0.6	-103,509
		14,551,336							-48,327
4B	AK Rural Local	160,045	0	0.0	0	0.0	0	0.0	0
	AK Rural Non-Loc	207,969	231,980	111.5	0	0.0	0	0.0	231,980
	AK Urban Local	0	0	n.a.	340	n.a.	0	n.a.	340
	AK Urban Non-Loc	2,874,719	-81,878	-2.8	-119,495	-4.2	0	0.0	-201,373
	Nonresident	6,050,658	-150,102	-2.5	119,155	2.0	-8,617	-0.1	-39,564
		9,293,391							-8,617
4C	AK Rural Local	1,350,336	418,661	31.0	0	0.0	0	0.0	418,661
	AK Rural Non-Loc	23,170	0	0.0	0	0.0	0	0.0	0
	AK Urban Non-Loc	826,097	-26,618	-3.2	4,262	0.5	0	0.0	-22,356
	Nonresident	1,769,583	-392,043	-22.2	-4,262	-0.2	0	0.0	-396,305
			3,969,186						
4D	AK Rural Non-Loc	29,451	179,421	609.2	-15,333	-52.1	0	0.0	164,088
	AK Urban Non-Loc	592,232	214,291	36.2	16,824	2.8	-44,173	-7.5	186,942
	Nonresident	4,168,808	-393,712	-9.4	-1,491	0.0	0	0.0	-395,203
		4,790,491							-44,173
4E	AK Rural Local	82,993	0	0.0	1,760	2.1	0	0.0	1,760
	AK Rural Non-Loc	4,937	0	0.0	0	0.0	0	0.0	0
	AK Urban Non-Loc	39,462	0	0.0	-2,282	-5.8	0	0.0	-2,282
	Nonresident	12,607	0	0.0	522	4.1	0	0.0	522
		139,999							0

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. Table 14 provides another view of the changes that have occurred in the geographic distribution of QS holdings since initial issuance.

In this section, 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 1998.

Census areas where Alaskans hold relatively high percentages of QS (10% or more of the area QS at year-end 1998) are: Juneau, Petersburg/Wrangell, and Sitka (Area 2C); Kodiak (Areas 3A, 3B, 4A, 4B, and 4C),

Kenai Peninsula (Areas 3A, 3B, and 4A); Aleutian Islands West (Area 4C); and Bethel (Area 4E).

Persons who reside outside of Alaska held substantial portions of the QS in all areas except 4E, ranging from 15.8% in Area 2C to 79.5% in Area 4D by the end of 1998. They held more than 50% of the QS in areas 4A, 4B, and 4D at both initial issuance and year-end 1998.

The number of persons who held QS declined in most census areas. This parallels the overall decline in QS holders due to transfers and QS 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.

Table 14. Initial Allocation and Year-end 1998 QS Holdings and QS Holders, By Management Area and Census Area

Area	Census Area	Initial Amount of QS	1998 Amount of QS	Initial Number of QS Holders	1998 Number of QS Holders
2C	Aleutians East	4,175	568	2	1
	Aleutians West	171,048	18,550	48	6
	Anchorage Borough	380,243	162,452	32	21
	Bethel	74,586	2,535	43	2
	Bristol Bay	4,589	2,970	10	6
	Dillingham	5,207	4,821	22	20
	Fairbanks\N. Star	135,026	56,316	10	3
	Haines	2,221,074	1,851,781	84	64
	Juneau	5,781,122	6,659,683	256	203
	Kenai Peninsula	261,476	177,181	34	16
	Ketchikan	3,296,194	3,951,101	147	113
	Kodiak Borough	146,856	42,641	32	14
	Lake and Peninsula	1,275	3,047	4	4
	MatSu Borough	56,261	8,683	8	3
	Nome	57	57	1	1
	Prince of Wales	4,551,549	3,234,831	221	141
	Sitka	9,936,267	9,992,393	328	263
	Skgway\Yakt\Angoon	4,717,537	3,209,713	223	141
	Valdez\Cordova	19,219	3,456	7	2
	Pburg\Wrangell	17,498,696	20,760,832	459	381
Yukon\Koyuk	3,001	0	1	0	
Outside Alaska	10,293,932	9,407,646	417	280	
		59,559,390	59,551,257	2,389	1,685
3A	Aleutians East	248,743	13,666	7	2
	Aleutians West	608,367	205,403	54	15
3A con't	Anchorage Borough	7,414,783	7,448,621	270	214
	Bethel	211,899	191,775	42	3
	Bristol Bay	17,218	12,219	11	7
	Dillingham	10,292	461,546	21	20
	Fairbanks\N. Star	310,882	251,289	29	26
	Haines	484,623	557,890	18	17
	Juneau	3,126,721	5,397,818	82	74
	Kenai Peninsula	35,932,979	32,514,443	841	592
	Ketchikan	1,201,311	1,774,295	20	18
	Kodiak Borough	43,718,157	41,881,471	457	339
	Lake and Peninsula	55,577	16,899	10	7
	MatSu Borough	1,818,439	1,740,549	65	54
	NW Arctic	149	60,065	1	1
	Prince of Wales	462,841	71,607	24	7
	Sitka	5,930,471	7,093,925	130	108
	Skgway\Yakt\Angoon	3,837,390	3,564,848	108	82
	SE Fairbanks	1,987	4,983	2	3
	Valdez\Cordova	3,408,866	5,614,960	156	124
	Wade Hampton	0	9,228	0	1
	Pburg\Wrangell	9,673,870	12,104,424	86	79
Yukon\Koyuk	1,914	1,416	4	3	
Outside Alaska	66,843,449	63,730,136	636	451	
		185,320,928	184,723,476	3,074	2,247
3B	Aleutians East	4,474,522	4,010,375	104	75
	Aleutians West	251,080	16,201	50	7

Area	Census Area	Initial Amount of QS	1998 Amount of QS	Initial Number of QS Holders	1998 Number of QS Holders	
3B con't	Anchorage Borough	2,688,992	799,106	65	37	
	Bethel	61,923	1,956	42	1	
	Bristol Bay	7,835	2,680	11	6	
	Dillingham	3,007	11,156	21	20	
	Fairbanks\N. Star	23,646	149,287	2	2	
	Juneau	247,227	383,261	11	6	
	Kenai Peninsula	5,299,803	5,373,305	181	117	
	Ketchikan	170,192	211,759	5	3	
	Kodiak Borough	10,343,667	12,157,619	201	147	
	Lake and Peninsula	1,050,965	682,510	26	17	
	MatSu Borough	295,998	263,814	14	7	
	Prince of Wales	39,313	70	3	1	
	Sitka	1,523,669	1,123,825	21	13	
	Skgway\Yakt\Angoon	232,579	76,835	8	4	
	Valdez\Cordova	67,892	78,308	5	4	
	Pburg\Wrangell	1,230,113	1,118,988	11	6	
	Outside Alaska	26,159,470	27,379,533	277	196	
			54,171,893	53,840,588	1,058	669
	4A	Aleutians East	264,962	143,811	23	9
		Aleutians West	450,431	622,041	67	60
Anchorage Borough		526,816	390,911	21	16	
Bethel		16,439	519	42	1	
Bristol Bay		14,794	710	11	6	
Dillingham		799	2,963	21	20	
Fairbanks\N. Star		0	44,489	0	1	
Juneau		98,817	139,563	3	5	
Kenai Peninsula		1,941,229	1,850,811	75	46	
Ketchikan		80,293	146,806	4	3	
Kodiak Borough		2,573,135	3,076,914	63	56	
Lake and Peninsula		1,037	730	5	4	
MatSu Borough		152,125	54,529	9	5	
Prince of Wales		10,093	18	2	1	
Sitka		509,819	363,063	16	7	
Skgway\Yakt\Angoon		135,616	48,967	4	2	
Valdez\Cordova		6,067	732	3	1	
Pburg\Wrangell	283,459	233,536	8	4		
Outside Alaska	7,485,405	7,381,896	155	112		
		14,551,336	14,503,009	532	359	
4B	Aleutians West	217,591	210,322	16	16	
	Anchorage Borough	34,129	78,760	2	4	
	Dillingham	0	370,314	0	1	
	Haines	0	7,609	0	1	
	Juneau	110,956	103,198	3	2	
	Kenai Peninsula	569,966	673,891	16	13	
	Ketchikan	1,686	0	1	0	
	Kodiak Borough	1,538,104	1,196,739	27	22	
	MatSu Borough	33,685	45,322	2	2	
	Sitka	382,474	258,470	8	4	
	Skgway\Yakt\Angoon	41,459	41,459	1	1	
	Valdez\Cordova	56,991	0	1	0	
	Pburg\Wrangell	255,692	287,596	3	2	
	Outside Alaska	6,050,658	6,011,094	73	56	
		9,293,391	9,284,774	153	124	
4C	Aleutians West	1,478,344	1,897,005	32	35	
	Anchorage Borough	119,592	0	2	0	
	Juneau	8,747	8,747	1	1	
	Kenai Peninsula	97,629	101,792	3	2	
	Kodiak Borough	469,828	582,973	8	7	
	MatSu Borough	0	5,391	0	1	
	Sitka	25,463	0	2	0	
	Outside Alaska	1,769,583	1,373,278	32	26	
		3,969,186	3,969,186	80	72	

Area	Census Area	Initial Amount of QS	1998 Amount of QS	Initial Number of QS Holders	1998 Number of QS Holders	
4D	Aleutians West	67,584	67,584	1	1	
	Anchorage Borough	84,640	0	1	0	
	Dillingham	0	122,473	0	1	
	Juneau	24,235	154,426	1	1	
	Kenai Peninsula	76,708	65,254	2	1	
	Kodiak Borough	207,837	432,355	10	10	
	MatSu Borough	40,479	17,588	2	1	
	Sitka	14,118	14,118	1	1	
	Skgway\Yakt\Angoon	0	56,948	0	1	
	Wade Hampton	106,082	41,967	4	1	
	Pburg\Wrangell	4,168,808	3,773,605	46	38	
	Outside Alaska					
			4,790,491	4,746,318	68	56
	4E	Aleutians East	3,878	3,878	1	1
Aleutians West		4,184	4,184	1	1	
Anchorage Borough		5,090	10,976	9	10	
Bethel		73,808	73,808	42	42	
Bristol Bay		4,934	4,934	10	10	
Dillingham		3,585	3,440	21	20	
Kenai Peninsula		638	638	2	2	
Kodiak Borough		6,791	6,791	2	2	
Lake and Peninsula		1,372	3,277	4	4	
MatSu Borough		20,324	12,156	2	1	
Prince of Wales		83	83	1	1	
Valdez\Cordova		489	489	1	1	
Pburg\Wrangell		2,216	2,216	2	2	
Outside Alaska	12,607	13,129	6	7		
		139,999	139,999	104	104	

Chapter 13 New Entrants in the Fishery

New persons may enter the halibut fishery by obtaining QS through transfer. Any person from the United States can acquire harvester-processor (category A) QS; however, 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 persons may also enter the fishery by regulations which allow an individual to transfer QS to the individual's solely owned corporation (a new entity).

New persons might also enter the fishery 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. The principal report examines the distribution of QS ownership between initial QS recipients and new entrants at year-end 1998. New entrants to the management area, new entrants to the halibut fishery, and new entrants to the IFQ program are all differentiated.

It is important to note that a new entrant to a management area may have been an initial QS recipient in some other management area(s). Correspondingly, a new entrant to the halibut IFQ program may have been an initial QS recipient in the sablefish fishery.

Table 15 indicates the amount and percentage of halibut QS which was held by new entrants *to the area* at the end of each year. It also shows the number of QS holders (persons) who were new entrants to the area, and their average QS holdings.

By the end of 1998, 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 14.0% in Area 3A to 25.0% in Area 4A

Other tables in the detailed report indicate that the percentage of QS holders represented by new entrants to either the halibut or the sablefish IFQ programs also ranged from 12.5% in Area 4C to 25.0% in Area 4D at the end of 1998.

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 1995-1998 period.

Table 15. New Entrants to the Management Area: Amount of QS Held and Number of QS Holders

Area	Year	Total QS Held By New Entrants	% of QS Held By New Entrants	Avg. QS Held By New Entrants	New Entrants For Area	Percent Who Are New Entrants
2C	1995	3,814,780	6.5	28,050	136	6.4
	1996	7,113,974	12.1	28,230	252	13.1
	1997	8,740,811	14.7	30,778	284	16.3
	1998	10,050,780	16.9	31,311	321	19.1
3A	1995	10,359,550	5.7	61,664	168	6.1
	1996	19,574,594	10.6	56,249	348	13.7
	1997	23,306,263	12.6	57,264	407	17.4
	1998	25,936,743	14.0	61,172	424	18.9
3B	1995	3,052,648	5.7	63,597	48	5.0
	1996	7,105,067	13.2	55,078	129	15.4
	1997	9,274,451	17.2	63,092	147	20.6
	1998	9,997,912	18.6	66,211	151	22.6
4A	1995	1,236,540	8.7	42,639	29	6.1
	1996	2,606,473	18.1	42,040	62	14.3
	1997	3,610,691	24.9	40,570	89	23.3
	1998	3,625,246	25.0	40,733	89	24.8
4B	1995	229,965	2.5	32,852	7	4.8
	1996	430,691	4.6	30,764	14	9.9
	1997	1,473,252	15.9	52,616	28	21.2
	1998	1,733,512	18.7	61,911	28	22.6
4C	1995	86,454	2.2	43,227	2	2.5
	1996	475,032	12.0	95,006	5	6.3
	1997	624,289	15.7	69,365	9	11.7
	1998	655,251	16.5	72,806	9	12.5
4D	1995	109,563	2.3	54,782	2	3.0
	1996	477,053	10.0	79,509	6	8.8
	1997	964,153	20.1	64,277	15	24.6
	1998	1,165,906	24.6	64,773	18	32.1
4E	1995	0	0.0	0	0	0.0
	1996	0	0.0	0	0	0.0
	1997	1,856	1.3	1,856	1	1.0
	1998	1,856	1.3	1,856	1	1.0

Chapter 14 Changes in Harvest and Delivery Patterns

Chapter 14 presents information on halibut harvests and deliveries, both before and after the IFQ program was implemented. There are time series data comparing deliveries that occurred from 1990 through 1998. There are also tables that show the number of persons who recorded landings, comparing the seasons before and after implementation of the IFQ program. Other tables show quarterly harvest data, the harvest by state of residence of the QS holder, and finally, a table comparing harvests by QS owners with harvests by hired skippers.

The percentages of the Alaska halibut harvest delivered to Alaska, Washington, and other states have not changed substantially in the first four years of the IFQ program, as Figure 3 illustrates.

The Kodiak Island Borough census area and the Kenai Peninsula/Anchorage aggregated area received the highest percentages of the halibut pounds delivered in Alaska, respectively averaging 22.7% and 26.7% of the statewide halibut deliveries over the 1995-1998 period.

Some areas have shown changes in the percentage of Alaska deliveries since inception of the IFQ program in 1995. For example, 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 four years of the program over 1990 to 1994 levels, whereas the percentage of halibut pounds delivered to the Valdez-Cordova census area and the Ketchikan/Prince of Wales aggregated area has decreased from 1990 to 1994 levels. Other census areas show 1995-1998 percentages that fluctuate within the ranges of 1990 to 1994 levels.

In many areas, the number of persons who recorded landings from 1995 through 1998 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.

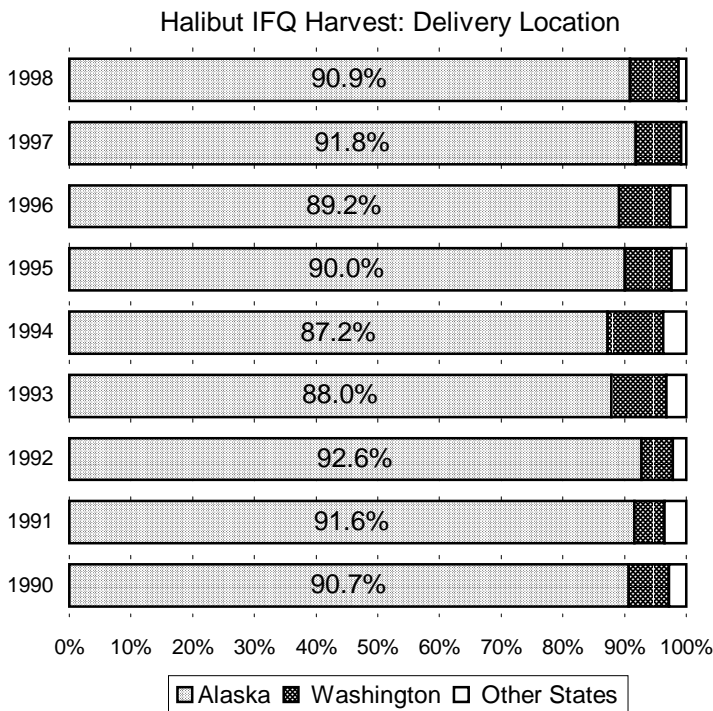
The vast majority of the halibut harvest in the first four years of the IFQ program occurred in the second and third quarters of each year in all management areas.

From 1995 to 1998 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 1995-1998 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 four years of the program. The use of hired skippers increased in all areas over the 1995-1998 time period. In 1998, the percentage of the harvest attributed to hired skippers was only 2.5% in Area 2C, but in other areas it ranged from 35.0% in Area 3A to 66.8% 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.



Note that more restrictive rules in Area 2C likely kept the number of operations with hired skippers much lower than other areas.

In all management areas except Area 2C, an individual who received an initial QS allocation in the catcher vessel categories B, C, or D does not have to be on board the vessel and sign IFQ landing reports if that individual owns at least a 20% interest in the vessel on which the IFQ are harvested, and the individual is represented on the vessel by a hired skipper. Because this exemption is confined to initial QS recipients only, the number of fishing operations where hired skippers are allowed should decrease over time as initial QS recipients transfer their QS holdings.

Note that persons who hold freezer vessel QS may use hired skippers to operate the vessels and sign IFQ

landing reports in any management area, and they do not have to own the vessel that is used in the fishing operation. Corporations or partnerships may also use hired skippers, but they are also restricted to owning at least a 20% interest in the vessel on which the QS is fished. In Area 2C corporations or partnerships are restricted to using hired skippers only for the QS they were initially issued.

Some “hired skippers,” as identified herein, may have actually been *de facto* QS lease arrangements. Ostensibly using a hired skipper was one way QS holders could circumvent IFQ program regulations that limited catcher vessel QS leases to 10% of a person’s QS holding. The NPFMC addressed this by passing the 20% minimum vessel ownership percentages that were implemented in 1998.

Table 16. Alaska Halibut Harvests by QS Owners and Hired Skippers, 1995-1998

Area	Year	QS Owners With Landings	Harvest by QS Owners	Owner Harvest % of Total	Hired Skippers With Landings	Harvest by Hired Skipper	Skipper Harvest % of Total	Total Harvest
2C	1995	1,307	7,646,188	99.2	19	62,226	0.8	7,708,414
	1996	1,301	8,323,774	98.8	28	100,644	1.2	8,424,418
	1997	1,253	9,384,833	98.2	32	172,432	1.8	9,557,265
	1998	1,091	9,288,212	97.5	38	240,666	2.5	9,528,878
3A	1995	1,457	15,214,222	85.7	115	2,532,904	14.3	17,747,126
	1996	1,456	15,462,551	80.1	151	3,842,811	19.9	19,305,362
	1997	1,356	16,671,796	68.9	202	7,513,367	31.1	24,185,163
	1998	1,163	15,943,600	65.0	213	8,575,452	35.0	24,519,052
3B	1995	379	2,462,537	78.2	67	684,763	21.8	3,147,300
	1996	404	2,395,549	68.6	87	1,097,674	31.4	3,493,223
	1997	383	4,864,069	55.6	126	3,890,024	44.4	8,754,093
	1998	336	5,150,471	48.7	132	5,417,610	51.3	10,568,081
4A	1995	146	1,062,404	67.6	38	508,494	32.4	1,570,898
	1996	145	1,035,775	59.7	58	698,426	40.3	1,734,201
	1997	139	1,366,130	49.4	60	1,396,598	50.6	2,762,728
	1998	121	1,519,992	47.5	62	1,680,618	52.5	3,200,610
4B	1995	44	1,021,688	81.9	17	225,635	18.1	1,247,323
	1996	40	890,954	54.1	36	754,978	45.9	1,645,932
	1997	47	994,477	38.6	41	1,580,511	61.4	2,574,988
	1998	32	801,741	38.7	33	1,270,138	61.3	2,071,879
4C	1995	32	212,589	70.9	5	87,053	29.1	299,642
	1996	33	208,371	70.3	11	88,068	29.7	296,439
	1997	38	356,128	70.6	14	148,440	29.4	504,568
	1998	22	199,052	42.1	14	274,068	57.9	473,120
4D	1995	20	288,224	66.9	10	142,591	33.1	430,815
	1996	18	213,344	43.8	23	273,796	56.2	487,140
	1997	13	230,420	30.4	27	526,560	69.6	756,980
	1998	10	280,109	33.2	17	562,703	66.8	842,812

Chapter 15 Overharvest and Underharvest of IFQs and TACS

The principal report compares actual harvests with the TAC for each management area and year from 1990 through 1998. The report 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 four years of the IFQ program, the TAC was underharvested in all areas. From 1995 through 1997, the amount of unharvested TAC decreased in each year in six of the seven areas where an IFQ fishery occurred. However, in 1998 the amount of unharvested TAC increased over 1997 levels in all areas.

In 1998, the percentage of the TAC that was harvested ranged from 59.5% in Area 4C to 96.1% in Area 3B.

By 1998, the percentage of initial QS recipients who had not transferred, leased, or otherwise altered their QS holdings ranged from 36.4% of the initial QS holders in Area 3B to 56.3% of the initial QS holders in Area 4C.

Of the persons who had not yet altered their QS holdings, some also did not fish their IFQ. In 1998 this percentage ranged from 17.3% of the initial QS holders in Area 3B to 33.8% in Area 4C. On average, these persons held relatively small amounts of QS.

Table 17. Comparison of Halibut TACs and Harvests, by Management Area, 1990 to 1998

Area	Year	Total Allowable Catch (TAC)	Total Area Harvest	Difference TAC (-) Harvest	Percent of TAC Harvested
2C	1990	9,500,000	9,705,514	-205,514	102.2
	1991	7,400,000	8,686,934	-1,286,934	117.4
	1992	10,000,000	9,816,892	183,108	98.2
	1993	10,000,000	11,289,516	-1,289,516	112.9
	1994	11,000,000	10,378,542	621,458	94.4
	1995	9,000,000	7,708,414	1,291,586	85.6
	1996	9,000,000	8,424,418	575,582	93.6
	1997	10,000,000	9,557,265	442,735	95.6
	1998	10,500,000	9,528,878	971,122	90.8
	3A	1990	31,000,000	28,844,296	2,155,704
1991		26,600,000	22,926,430	3,673,570	86.2
1992		26,600,000	26,781,876	-181,876	100.7
1993		20,700,000	22,737,512	-2,037,512	109.8
1994		26,000,000	24,843,824	1,156,176	95.6
1995		20,000,000	17,747,126	2,252,874	88.7
1996		20,000,000	19,305,362	694,638	96.5
1997		25,000,000	24,185,163	814,837	96.7
1998		26,000,000	24,519,052	1,480,948	94.3
3B		1990	8,500,000	8,694,295	-194,295
	1991	8,800,000	11,934,312	-3,134,312	135.6
	1992	8,800,000	8,622,283	177,717	98.0
	1993	6,500,000	7,855,357	-1,355,357	120.9
	1994	4,000,000	3,860,240	139,760	96.5
	1995	3,700,000	3,147,300	552,700	85.1
	1996	3,700,000	3,493,223	206,777	94.4
	1997	9,000,000	8,754,093	245,907	97.3
	1998	11,000,000	10,568,081	431,919	96.1
	4A	1990	1,800,000	2,503,281	-703,281
1991		1,700,000	2,254,990	-554,990	132.6
1992		2,300,000	2,699,027	-399,027	117.3
1993		2,020,000	2,560,741	-540,741	126.8
1994		1,800,000	1,803,462	-3,462	100.2
1995		1,950,000	1,570,898	379,102	80.6
1996		1,950,000	1,734,201	215,799	88.9
1997		2,940,000	2,762,728	177,272	94.0
1998		3,500,000	3,200,610	299,390	91.4
4B		1990	1,900,000	1,332,988	567,012
	1991	1,700,000	1,513,422	186,578	89.0
	1992	2,300,000	2,317,361	-17,361	100.8
	1993	2,300,000	1,962,364	337,636	85.3
	1994	2,100,000	2,017,108	82,892	96.1
	1995	1,848,000	1,247,323	600,677	67.5
	1996	1,848,000	1,645,932	202,068	89.1
	1997	2,784,000	2,574,988	209,012	92.5
	1998	2,800,000	2,071,879	728,121	74.0
	4C	1990	600,000	529,481	70,519
1991		600,000	678,093	-78,093	113.0
1992		800,000	792,925	7,075	99.1
1993		800,000	831,018	-31,018	103.9
1994		700,000	714,882	-14,882	102.1
1995		385,000	299,642	85,358	77.8
1996		385,000	296,439	88,561	77.0
1997		580,000	504,568	75,432	87.0
1998		795,000	473,120	321,880	59.5
4D		1990	600,000	1,005,291	-405,291
	1991	600,000	1,436,533	-836,533	239.4
	1992	800,000	727,423	72,577	90.9
	1993	800,000	836,160	-36,160	104.5
	1994	700,000	710,901	-10,901	101.6
	1995	539,000	430,815	108,185	79.9
	1996	539,000	487,140	51,860	90.4
	1997	812,000	756,980	55,020	93.2
	1998	1,113,000	842,812	270,188	75.7
	4E	1990	100,000	60,355	39,645
1991		100,000	104,297	-4,297	104.3
1992		130,000	66,818	63,182	51.4
1993		120,000	64,235	55,765	53.5
1994		100,000	120,226	-20,226	120.2

Note: TACs and harvests are for commercial harvests only. In years of IFQ fisheries, they exclude CDQ allocations and harvests.

Chapter 16 Consolidation of IFQ Permit Holders on Vessels

One way the IFQ program can reduce the number of fishing operations is the consolidation of QS holdings. Another way is when QS 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 1998. These data suggest the extent to which vessels have been used by more than one person, both before and after the IFQ program was implemented.

Table 18 provides time series data on harvests and participation in the halibut fishery from 1990 through 1998. 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.

Before the IFQ program in 1995, it was not uncommon for more than one CFEC permit holder to make landings off one vessel in the halibut fishery. After the IFQ fisheries were implemented, two or more IFQ permit holders might join together to fish their IFQ off one vessel. Table 18 indicates that in most areas the ratio of the number of unique persons with landings to the number of unique vessels has risen over the 1990-1994 average, which provides some evidence that the practice of multiple persons recording landings off a single vessel has increased under the IFQ program.

Table 18. Summary of 1990-1998 Halibut Harvest and Participation

Area	Year	Total Harvest (pounds)	Persons With Landings	Vessels With Landings	Person Landing Days	Vessel Landing Days	Pounds per Person	Pounds per Vessel	Persons per Vessel
2C	1990	9,705,514	1,525	1,489	2,638	2,605	6,364	6,518	1.02
	1991	8,686,934	1,831	1,805	2,967	2,927	4,744	4,813	1.01
	1992	9,816,892	1,786	1,775	3,273	3,255	5,497	5,531	1.01
	1993	11,289,516	1,563	1,562	2,586	2,575	7,223	7,228	1.00
	1994	10,378,542	1,468	1,461	2,386	2,373	7,070	7,104	1.00
	1995	7,708,414	1,319	1,105	3,210	2,922	5,844	6,976	1.19
	1996	8,424,418	1,321	1,024	3,602	3,248	6,377	8,227	1.29
	1997	9,557,265	1,275	989	3,956	3,557	7,496	9,664	1.29
	1998	9,528,878	1,116	826	3,398	3,039	8,538	11,536	1.35
3A	1990	28,844,296	2,457	2,348	4,415	4,349	11,740	12,285	1.05
	1991	22,926,430	2,306	2,231	3,443	3,393	9,942	10,276	1.03
	1992	26,781,876	1,985	1,924	3,291	3,263	13,492	13,920	1.03
	1993	22,737,512	1,554	1,529	2,308	2,292	14,632	14,871	1.02
	1994	24,843,824	1,735	1,712	2,699	2,693	14,319	14,512	1.01
	1995	17,747,126	1,537	1,145	3,122	2,730	11,547	15,500	1.34
	1996	19,305,362	1,553	1,101	3,322	2,882	12,431	17,534	1.41
	1997	24,185,163	1,501	1,072	3,666	3,215	16,113	22,561	1.40
	1998	24,519,052	1,314	891	3,275	2,838	18,660	27,519	1.47
3B	1990	8,694,295	406	383	546	537	21,415	22,701	1.06
	1991	11,934,312	624	602	882	874	19,126	19,824	1.04
	1992	8,622,283	485	478	642	642	17,778	18,038	1.01
	1993	7,855,357	406	401	537	535	19,348	19,589	1.01
	1994	3,860,240	328	320	499	499	11,769	12,063	1.03
	1995	3,147,300	436	332	553	464	7,219	9,480	1.31
	1996	3,493,223	467	349	599	490	7,480	10,009	1.34
	1997	8,754,093	479	355	839	711	18,276	24,659	1.35
	1998	10,568,081	438	325	814	700	24,128	32,517	1.35
4A	1990	2,503,281	155	153	189	188	16,150	16,361	1.01
	1991	2,254,990	237	237	257	257	9,515	9,515	1.00

Area	Year	Total Harvest (pounds)	Persons With Landings	Vessels With Landings	Person Landing Days	Vessel Landing Days	Pounds per Person	Pounds per Vessel	Persons per Vessel
4A con't	1992	2,699,027	197	190	326	326	13,701	14,205	1.04
	1993	2,560,741	166	165	196	196	15,426	15,520	1.01
	1994	1,803,462	178	176	230	229	10,132	10,247	1.01
	1995	1,570,898	180	140	246	210	8,727	11,221	1.29
	1996	1,734,201	192	147	280	239	9,032	11,797	1.31
	1997	2,762,728	185	141	318	277	14,934	19,594	1.31
	1998	3,200,610	166	120	255	217	19,281	26,672	1.38
4B	1990	1,332,988	65	61	136	133	20,508	21,852	1.07
	1991	1,513,422	84	81	182	182	18,017	18,684	1.04
	1992	2,317,361	85	82	261	261	27,263	28,261	1.04
	1993	1,962,364	67	65	132	132	29,289	30,190	1.03
	1994	2,017,108	75	74	229	229	26,895	27,258	1.01
	1995	1,247,323	60	57	79	77	20,789	21,883	1.05
	1996	1,645,932	73	64	85	81	22,547	25,718	1.14
	1997	2,574,988	82	69	129	120	31,402	37,319	1.19
	1998	2,071,879	61	47	85	71	33,965	44,083	1.30
4C	1990	529,481	54	51	160	158	9,805	10,382	1.06
	1991	678,093	53	51	165	165	12,794	13,296	1.04
	1992	792,925	68	62	329	315	11,661	12,789	1.10
	1993	831,018	63	58	368	344	13,191	14,328	1.09
	1994	714,882	66	64	329	320	10,832	11,170	1.03
	1995	299,642	37	35	130	127	8,098	8,561	1.06
	1996	296,439	43	41	137	136	6,894	7,230	1.05
	1997	504,568	48	46	152	151	10,512	10,969	1.04
	1998	473,120	33	30	94	89	14,337	15,771	1.10
4D	1990	1,005,291	24	24	25	25	41,887	41,887	1.00
	1991	1,436,533	48	48	49	49	29,928	29,928	1.00
	1992	727,423	26	26	27	27	27,978	27,978	1.00
	1993	836,160	19	19	22	22	44,008	44,008	1.00
	1994	710,901	40	39	118	117	17,773	18,228	1.03
	1995	430,815	30	27	30	28	14,361	15,956	1.11
	1996	487,140	38	33	40	36	12,819	14,762	1.15
	1997	756,980	38	33	40	36	19,921	22,939	1.15
	1998	842,812	24	22	26	24	35,117	38,310	1.09
4E	1990	60,355	133	129	276	273	454	468	1.03
	1991	104,297	64	64	156	156	1,630	1,630	1.00
	1992	66,818	41	41	146	146	1,630	1,630	1.00
	1993	64,235	47	47	223	223	1,367	1,367	1.00
	1994	120,226	75	74	453	451	1,603	1,625	1.01