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UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

SEP 22 1997

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Environmental Assessment of Fishery Management Plan Amendments that would implement the Alaska License Limitation Program (LLP) and the Multispecies Community Development Quota (CDQ) Program

LOCATION: Exclusive Economic Zone (EEZ) off Alaska

SUMMARY: Amendment 39 to the Fishery Management Plan (FMP) for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area, Amendment 41 to the FMP for Groundfish of the Gulf of Alaska, and Amendment 5 to the FMP for Commercial King and Tanner Crab Fisheries in the Bering Sea/Aleutian Islands Area would implement a license limitation program and a multispecies CDQ program.

The LLP would limit access to the commercial groundfish fisheries in the EEZ off Alaska and to the commercial crab fisheries in the Bering Sea/Aleutian Islands Area managed under an FMP. The demersal shelf rockfish fishery east of 140° W. longitude and sablefish managed under the Individual Fishing Quota program are excluded from the LLP. Licenses would be issued to eligible applicants based on fishing during a general qualification period and in endorsement areas. Groundfish and crab species licenses would represent a transferable harvest privilege authorizing directed fishing in specific areas designated on each license.

The Multispecies CDQ Program would be an addition to the current program and includes allocations of 7.5 percent from the groundfish fisheries and 3.5 percent of crab fisheries that are not allocated from the existing programs. CDQ programs are intended to assist certain western Alaska communities to develop commercial fisheries.

Trawl fishing would be prohibited east of 140° W. longitude in the Gulf of Alaska to prevent conflicts between gear types, prevent fixed gear loss, and provide for the needs of local fishing communities dependent on the fisheries of that area.

RESPONSIBLE OFFICIAL: Steven Pennoyer
Administrator, Alaska Region
National Marine Fisheries Service
709 West 9th Street
Juneau, AK 99802
Telephone: 907-586-7221

The environmental review process led us to conclude that this action will not have a significant impact on the environment. Therefore, an environmental impact statement was not prepared. A copy of the finding of no significant impact, including the environmental assessment, is enclosed for your information. Also, please send one copy of your comment to me in Room 5805, PSP, U.S. Department of Commerce, Washington, D.C. 20230

Sincerely,

Susan Fruchter

Acting NEPA Coordinator

Enclosure

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW

FOR

LICENSE LIMITATION ALTERNATIVES

FOR THE

GROUNDFISH AND CRAB FISHERIES

IN THE

GULF OF ALASKA AND BERING SEA/ALEUTIAN ISLANDS

Prepared for the North Pacific Fishery Management Council
By the Staff of the NPFMC
(A full list of preparers is in Chapter 8)

September 9, 1997

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EXECUTIVE SUMMARY

of

LICENSE LIMITATION ALTERNATIVES

for

GROUNDFISH AND CRAB FISHERIES OF THE NORTH PACIFIC

Introduction

This section of the analysis summarizes the action contemplated and the need for such action, including the sequence of events in the Comprehensive Rationalization Plan (CRP) initiative which have led to the consideration of License Limitation as the primary alternative for Council consideration at this time. This approach is viewed as a necessary first step by the Council towards further development of longer-term CAP management regimes, including further development of IFQ alternatives.

The document contains two primary alternatives for consideration: (1) the 'No Action' alternative and (2) some form of License Limitation system. The possible configurations of the License Limitation alternative cover a broad range and are shown below (the numbering scheme is explained later):

GROUNDFISH LICENSES
COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING INITIAL ASSIGNMENT
ANALYSIS FORMAT

Nature of Licenses	Numbering Scheme
Single license for all species and areas	100000
Licenses for FMP areas (i.e., GOA and BSAI)	200000
Licenses for FMP sub-areas (i.e., EG, CG, WG, BS, AI)	300000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries	400000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries by FMP areas	500000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries by FMP sub-areas	600000
Licenses for fisheries (see box) by FMP sub-areas	700000
Licenses for fisheries (see box) by the following areas: EG, CG, WG, BSAI	800000

Fisheries Specified Under Options 700,000 and 800,000	
BSAI Fishery Licenses:	GOA Fishery Licenses:
Pollock, Pacific Cod, Atka Mackerel, Yellowfin Sole, Other Flatfish, Rockfish, Squid (Fixed Gear), Rocksole, Turbots	Pollock, Pacific Cod, Deep Water Flats, Shallow Water Flatfish, Atka Mackerel

License Recipients	
Current owners	10000
Current owner, then owner at the time of landing, then permit holders (no duplicate)	20000
Current owners, then permit holders (no duplicates)	30000
Current owners, owners at the time of landing, and permit holders (duplicates allowed)	40000

License Designations	
No restrictions	1000
Catcher vessels & Catcher/processors	2000
Vessel length	3000
Inshore & Offshore	4000
Catcher vessels & Catcher/processors and vessel length	5000
Catcher vessels & Catcher/processors and Inshore & Offshore	6000

Inshore & Offshore and vessel length 7000
Catcher vessels & Catcher/processors, Inshore & Offshore, and vessel length 8000

Qualifying Periods
Jan. 1, 1978 - Dec. 31, 1993 100
Jun. 28, 1989 - Jun. 27, 1992 200
Jun. 28, 1989 - date of final action 300
Jan. 1, 1990 - Dec. 31, 1993 400
The three years prior to the date of final action 500
Jun. 28, 1989 - Jun. 27, 1992 & the three years prior to the date of final action 600
Each of the three calendar years from 1/1/90 - 6/27/92 & the 365 days prior to final action, except for fixed gear P. cod use 6/23/91 - 6/27/92 rather than 1/1/90 - 6/27/92 700

Landings Requirements For General License Qualification
One Landing 10
Two landings 20
5,000 pounds 30
10,000 pounds 40
20,000 pounds 50

Landings Requirements for Endorsement Qualification
One landing in qualifying period 1
Two landings in qualifying period 2
Three landings in qualifying period 3
Four landings in qualifying period 4
One landing in year prior to council action 5
Two landings in year prior to council action 6
Three landings in year prior to council action 7
Four landings in year prior to council action 8

In addition to options affecting the assignment of licenses, the Council has included options affecting the transferability, ownership, and use of licenses. These are independent from the initial assignment of licenses and includes Who May Purchase Licenses, Vessel/License Linkages, License Separability, Vessel Replacement and Upgrades, License Ownership Caps, Vessel License Use Caps, Vessel Designation Limits, Buy-back/Retirement Program, Skipper Program, Community Development Quotas, Community Development Licenses, and Other Provisions.

In developing a preferred alternative, the Council will need to choose one element from each component set, with the exception of "Other Provisions," from which the Council may choose none, or any number of the options listed. The numbering scheme used above is not employed for these components because of the independent nature of the components.

GROUNDFISH LICENSES
COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING THE OWNERSHIP, USE AND TRANSFER LICENSES

Who May Purchase Licenses
1. Licenses could be transferred only to "persons" defined under Title 46 U.S.C.
2. Licenses could be transferred to "persons" with 76% or more U.S. ownership, with "grandfather" rights for license recipients with 75% or less U.S. ownership (Title 46 U.S.C.).

Vessel/License Linkages
1. Vessel must be transferred with license
2. Licenses may be transferred without a vessel, i.e., licenses may be applied to vessels other than that to which the license initially was issued.

Options Regarding the Separability of Species and/or Area Designations
1. Species and/or Area designations are not separable, and shall remain as a single license with those initial designations.
2. Species and/or Area designations shall be treated as separable licenses and may be transferred as such.
3. Species and/or Area designations shall be regarded as separable endorsements which require the owner to also own a general license before use or purchase.

Vessel Replacement and Upgrades

1. No restrictions on vessel replacement or upgrades, except that the vessel must meet the "License Designations" defined by the initial allocation.
2. Vessel may not be replaced or upgraded.
3. Vessel may be replaced or upgraded within the bounds of the 20% Rule as defined under the moratorium proposed rule.

License Ownership Caps

1. No limit on the number of licenses or endorsements which may be owned by a "person."
2. No more than 5 area licenses per person with grandfather provisions.
3. No more than 10 area licenses per person with grandfather provisions.
4. No more than 15 area licenses per person with grandfather provisions.
5. No more than 5 fishery/area endorsements per person with grandfather provisions.
6. No more than 10 fishery/area endorsements per person with grandfather provisions.
7. No more than 15 fishery/area endorsements per person with grandfather provisions.

Vessel License Use Caps

1. No limit on the number of licenses (or endorsements) which may be used on a vessel.
2. No more than 1 area license (endorsement) may be used on a vessel in a given year.
3. No more than 2 area licenses (endorsements) may be used on a vessel in a given year.
4. No more than 3 area licenses (endorsements) may be used on a vessel in a given year.
5. No more than 4 area licenses (endorsements) may be used on a vessel in a given year.
6. No more than 5 area licenses (endorsements) may be used on a vessel in a given year.

Vessel Designation Limits

1. A vessel which qualifies for multiple designations (i.e., both as a CV and as a CP or as both inshore and offshore) under the use restriction component will be able to participate under any designation for which it qualifies.
2. A vessel which qualifies for multiple designations under the use restriction component must choose one of the designations for use.

Buy-back/Retirement Program

1. No buy-back/retirement program.
2. Fractional license system. (Fractional licenses may be issued to vessel owners at the time of landing and/or permit holders.)
3. Industry Funded Buy-back Program with right of first refusal on all transfers of licenses.

Two-Tiered Skipper License Program

1. Do not implement a Two-Tiered Skipper License Program.
2. Implement a Two-Tiered Skipper License Program.

Community Development Quotas.

1. No CDQ allocations
2. 3% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
3. 7.5% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
4. 10% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
5. 15% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.

Community Development Licenses.

1. No Community Development Licenses.
2. Grant an additional 3% non-transferable licenses to CDQs communities.
3. Grant an additional 7.5% non-transferable licenses to CDQs communities.
4. Grant an additional 10% non-transferable licenses to CDQs communities.
5. Grant an additional 15% non-transferable licenses to CDQs communities.

Other Provisions (Choose any or none of the following)

1. Licenses represent a use privilege. The Council may convert the license program to an IFQ program or otherwise alter or rescind the program without compensation to license holders.
2. Severe penalties may be invoked for failure to comply with conditions of the license.
3. Licenses may be suspended or revoked for multiple violations.
4. Implement a Skipper Reporting System which requires groundfish license holders to report skipper names, address, and service records to NMFS.
5. Develop and implement mechanisms to collect management, enforcement costs and/or rents from the industry, including taxes and fees on the industry.

Crab License Limitation Alternatives

The components and alternative elements and options for a crab license limitation program are set forth in the same format as for groundfish. These were developed concurrently with the groundfish alternatives and are similar in some cases, but tailored to the specific nature of the crab fisheries. They are also divided into two sections: (1) those elements which affect the initial assignment of crab licenses, and are numbered, and (2) those elements and options which affect the ownership, use, and transfer of crab licenses. These elements and options are as follows:

Components and Alternative Elements	**Numbering Scheme**
Nature of License	
Single license for all species and areas	10000
Licenses for species (e.g., *C. opilio*, *C. bairdi*, Red, Blue and Brown King Crab)	20000
‡Licenses for each species/area combination	30000
License Recipients	
‡Current owners	1000
Current owners and permit holders	2000
License Designations	
No restrictions	100
Catcher vessels & Catcher/processors	200
Vessel length	300
‡Catcher vessels & Catcher/processors and vessel length	400
Qualifying Period	
Jan. 1, 1978 - Dec. 31, 1993	10
‡6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for D.H. Red & 6/29/85 - 6/25/1988 for Prib. Blue)	20
Minimum landings	
‡No minimum	1
1 landing for Red & Blue King, 3 landings for Brown King, *C. opilio*, & *C. bairdi*	2

In addition to the elements affecting the initial assignment of licenses, alternatives exist which affect the ownership, use and transfer of licenses once they have been issued. These are shown below. In developing their preferred alternative the Council would choose one element from each component set (component headings are shown in **bold text**.)

COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING OWNERSHIP, USE AND TRANSFER OF CRAB LICENSES

Who May Purchase Licenses

1. Licenses could be transferred only to "persons" defined under Title 46 CFR 67.03.
2. Licenses could be transferred to "persons" with 76% or more U.S. ownership, with "grandfather" rights for license recipients with 75% or less U.S. ownership (Title 46 CFR 802).
3. Licenses are non-transferable.

Vessel/License Linkages

1. Vessel must be transferred with license
2. Licenses may be transferred without a vessel, i.e., licenses may be applied to vessels other than that to which the license was initially was issued.

Options Regarding the Separability of Species and/or Area Designations

1. Species and/or Area designations are not separable, and shall remain grouped as in the initial allocation.
2. Species or Area designations shall be treated as separable licenses and may be transferred as such.
3. Species or Area designations shall be regarded as separable endorsements which require the owner to also own a more general license before use or purchase.

Vessel Replacement and Upgrades

1. No restrictions on vessel replacement or upgrades, except that the vessel must meet the "License Designations" defined by the initial allocation.
2. Vessel may not be replaced or upgraded.
3. Vessel may be replaced or upgraded within the bounds of the 20% Rule as defined under the moratorium proposed rule.

Buy-back/Retirement Program

1. No buy-back/retirement program.
2. Fractional license system. (Fractional licenses may be issued to permit holders.)

3. Industry Funded Buy-back Program with right of first refusal on all transfers of licenses.

Two-Tiered Skipper License Program
1. Do not implement a Two-Tiered Skipper License Program.
2. Implement a Two-Tiered Skipper License Program.

Community Development Quotas.
1. No CDQ allocations.
2. Set aside 3% of crab fisheries with GHLs for CDQs patterned after current program w/o sunset provision.
3. Set aside 7.5% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.
4. Set aside 10% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.
5. Set aside 15% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.

Community Development Licenses.
1. No Community Development Licenses.
2. Grant an additional 3% non-transferable licenses to CDQs communities.
3. Grant an additional 7.5% non-transferable licenses to CDQs communities.
4. Grant an additional 10% non-transferable licenses to CDQs communities.
5. Grant an additional 15% non-transferable licenses to CDQs communities.

Other Provisions (Choose any or none of the following)
1. Licenses represent a use privilege. The Council may convert the license program to an IFQ program or otherwise alter or rescind the program without compensation to license holders.
2. Severe penalties may be invoked for failure to comply with conditions of the license.
3. Licenses may be suspended or revoked for multiple violations.
4. Implement a Skipper Reporting System which requires groundfish license holders to report skipper names, address, and service records to NMFS.
5. Develop and implement mechanisms to collect management, enforcement costs and/or rents from the industry, including taxes and fees on the industry.
6. No Future Super-exclusive Area will be proposed.

Individual Transferable Pot Quota System

In addition to the components above, an Individual Transferable Pot Quota (ITPQ) System Alternative has been proposed in concept only. Under this option, the components affecting the initial assignment of crab licenses will remain unchanged. However, once it is decided which persons qualify for which vessel size and processing designations, licenses would be linked to a limited number of pots. Pots could be transferred to meet individual vessel requirements. Many of the component sets regarding the use and transferability of licenses may not apply under a ITPQ system. The Council will have to specify in more detail if additional analysis of the ITPQ system is desired.

Current Status of the Fisheries

Chapter 2 of the document is devoted to summarizing the current status of the groundfish and crab fisheries, with information on the current levels of catch, value, and participation for various groundfish and crab fisheries off Alaska. This is further developed in the form of 'Representative Vessel and Processor Profiles', which summarize catch information across operations within each industry sector. This information is used as a backdrop for comparison of both the 'No Action' and the License Limitation alternatives. Appendix IV to this document contains further information on current status of the fisheries, with more specificity be vessel categories within various sectors, and includes this information over a time series of 1990-1992. Data from 1993 were only recently compiled and are not provided in the same detail; however, summary data from 1993 are included in the analyses in Chapter 3, and is used as a proxy for status quo when comparing impacts of the various license limitation alternatives.

Analysis of the Alternatives

Chapter 3 is the meat of the analysis and contains general assessments of the No Action alternative and the generic License Limitation alternative. It also contains the detailed assessments, primarily distributional in nature, of the various potential elements and options for the license limitation alternative. A summary by section follows:

Alternative 1: No Action

This alternative is termed No Action, as opposed to status quo, because it attempts to reflect the potential evolution of the status quo situation, if No Action is taken by the Council on the License Limitation alternative.

The analysis of the moratorium indicates that there are 20 to 25 percent more trawl vessels in the groundfish fishery than can be justified based on financial break-even criteria. Very few vessels have entered the groundfish and crab fisheries since February 9, 1992. It may be that the threat of the moratorium kept new vessels out of the industry, or, perhaps investors have decided their money is better spent elsewhere. Nonetheless, there does not appear to be any changes in the financial benefit of entering the fishery, particularly if the moratorium is resubmitted for approval.

If the moratorium is resubmitted and no action is taken on license limitation, the fleet could draw from up to about 13,500 vessels that are qualified. If the Council revises the moratorium to eliminate halibut and sablefish longline vessels that will participate in the IFQ fishery, then the moratorium fleet would have about 4,000 vessels to draw from. This potential fleet is much larger than the 1600 to 1700 vessels that participated in 1993. Regardless of the size of the fleet, because most of the catching power is tied up in fewer than 500 vessels, the problems of excess capacity that contribute to the problems listed in the problem statement still will exist.

The final part of this section summarizes the expected evolution of the status quo, in the event the Council takes No Action on License Limitation. Critical to this expected evolution is resolution of the moratorium issue. With the moratorium disapproved, continued entry into the fisheries is possible, and even likely despite the economic disincentives to do so. This is due to expectations of future limited entry, particularly IFQs. Those already in the fisheries may attempt to maximize their catch histories in anticipation of IFQs, also exacerbating the race for fish and its attendant problems. If a moratorium is resubmitted and implemented, these fears would be at least partially mitigated.

The break-even analyses that have been conducted in analyzing inshore-offshore and the moratorium demonstrate this overcapitalization. The moratorium analysis showed that there were 20-25% more trawl vessels in the groundfish fishery than could be justified by the economics. Break-even analyses based on the fleet as modelled in the inshore-offshore analysis, and testing sensitivity by varying input variables such as ex-vessel prices, product prices, catches, amortization schedule, desired return on investment, and vessel and permit purchase price, showed that the break-even fleet varies between 280 and 440 vessels, which contrasts to the current 1993 fleet of 435 vessels over 60 ft and 1,245 vessels less than 60 ft.

Despite the poor economic picture generated by the above break-even analyses, the industry may continue to invest capital in the fishery in an attempt to garner a greater share of the harvest. This could happen if potential fishery participants expect an eventual IFQ allocation based on recent catch histories. This is the downside of the no-action alternative. And this could happen whether or not a moratorium is implemented. The downside of not resubmitting some form of moratorium is that the industry may perceive this to be one last chance to get in "under the wire" regardless of cost, to establish some standing in the fishery. A slight advantage of pursuing the no action alternative, is that if all efforts are dropped on license limitation, more attention could be directed, more quickly, to developing a more comprehensive solution to the overcapitalization problem.

Under the No Action alternative, other current initiatives by the Council could go forward. These include analysis of a continuation of the inshore/offhsore/CDQ program scheduled to sunset the end of 1995; requirements for total weight measurement in the fisheries; a full retention/utilization mandate to address bycatch, discards, and waste; and, further development of IFQ alternatives.

Alternative 2: License Limitation

General Discussion of License Limitation

This section 3.2 provides a generalized discussion of license limitation, including (1) a discussion of how license limitation may provide short term, and even long term, economic benefits under certain conditions, (2) examples of various license limitation and fleet reduction programs previously attempted or currently in existence, and (3) a more detailed examination of basic economics of license limitation programs.

Section 3.2.1.1 describes literature and theoretical analyses which suggest that license limitation programs, under certain conditions, may generate, and even sustain, economic benefits in subject fisheries. Conditions necessary for this to occur include (1) a heterogenous fleet where all vessels are basically alike in their operations, (2) strict limitations on the fleet's ability to substitute costly inputs which increase efficiency, (3) minimal economic pressure to exploit the resource, and (4) lack of 'rent seeking' behavior by fishery participants attempting to change the rules of the game in their favor. None of these conditions appears to exist in the fisheries for which license limitation is being considered.

Section 3.2.1.2 summarizes various limited entry programs and attempted vessel buyback programs in existence, noting the mixed successes of such programs. Some success is evident in programs which actually reduced units of effort or gear and adequately controlled the growth of additional inputs in the fisheries. In particular the evaluation concludes that gear restrictions in many cases are more successful than vessel restrictions, and that buyback program success will be severely hindered if there is any expectation by participants of increased value of the license or of the license evolving into more specific fishing privileges ~~(value)~~ such as IFQ allocations.

This section also addresses other mechanisms for fleet/capacity reduction, including the fractional licensing concept. A fractional licensing program is one way to achieve fleet/capacity reduction, without the imposition of government run buyback programs and the attendant administrative complexities. However, a fractional licensing program would likely involve a reduction in use-rights for at least some, if not all, license holders. Initial allocation decisions under this concept would likely be very contentious and would involve extensive appeals procedures.

Section 3.2.1.3 discusses the basic economic tenants surrounding license limitation programs, including mathematical models which were developed to compare profit functions of status quo and limited entry. Due to the capital stuffing phenomenon associated with both open access and license limitation, any short term economic gains associated with a license limitation program will likely be dissipated over the longer term. A license limitation program which does not reduce or constrain the fleet to current levels would not generate economic gains even in the short term.

Analysis of Groundfish License Limitation Alternatives

Section 3.2.2 represents a major focus of the analysis, and provides the distributional results of the various license limitation alternatives under consideration. This section also discusses the relative effectiveness of various alternatives, primarily in terms of numbers of vessels receiving licenses and the nature of these licenses. Administrative and enforcement implications of various alternatives are also addressed where possible.

Six main components, each having from four to eight options, significantly influence the ultimate composition of the license program. The six components are nature of licenses, license recipients, license designations, qualifying period, landings requirements for general license qualification and landings requirements for endorsement qualification. The Council's choice of specific options within the six components will determine the overall configuration of the license system. The components and options can be combined into almost 72,000 different configurations. Three main or reference configurations have been examined for this analysis. The CURRENT reference configuration is a snapshot of the 1993 fisheries. The UNIVERSAL reference configuration is a "core" alternative at one end of the spectrum of complexity represented in the 72,000 configurations. The Universal configuration would issue a single license to fish all species in any area once a current owner has qualified by making one landing anytime between June 28, 1989 and June 27, 1992, the ending date being intended to reflect the control date established by the Council in its final consideration of the moratorium. The Universal configuration mirrors most closely the conditions of the moratorium, though the qualifying period is much shorter than in the moratorium.

The third reference configuration is the EXPLICIT configuration. It is emphasized because it embodies much of the State of Alaska proposal and can be considered to be a "core" alternative at the other end of the spectrum of complexity. It differs from the Universal configuration in two major ways. Each license or endorsement is species an area specific. Secondly, instead of qualifying on the basis of landing in any of three years, a vessel must have made a landing in each area in each of the three calendar years 1990,1991, and 1992 (through June 27, 1992), and sometime in the 365 days before final Council action, assumed for analytical purposes to be

January 1995. The exception to this is for fixed gear Pacific cod wherein one year, June 23, 1991 - June 27, 1992, is used instead of January 1, 1990 through June 27, 1992.

Identifying these three reference configurations has several purposes. First, they provide a point of departure for discussing each of the six main components of the license system and the effects of each option within each component on five different attributes: initial fleet size, potential for increases in capacity, mobility of the fleet, complexity of program implementation and administration, and enforceability. Secondly, by systematically varying each option within each component for each of the three reference configurations, distributive impacts on fleet composition can be assessed. This also provides an opportunity to isolate the effects of each of the major components on the overall results.

These are compiled in a series of tables in a special Table Appendix - one for groundfish and one for crab. Each set of tables presents information on residency of vessels, size categories, whether they are catcher vessels or catcher processors, and how many will qualify for endorsements or licenses in various areas and fisheries. Trends shown within those tables are used to summarize the effects of selecting a specific option within each of the size components. Then the reference configurations are examined in detail to describe impacts of choosing one or the other.

Nature of Licenses

There are eight options within this component, ranging from a very general license covering all fisheries to a highly specific license for a particular fishery and subarea. This component's major influence is on potential increased capacity, mobility, complexity and enforcement. It does not by itself have great impact on the initial fleet size though there is some interplay between this component and qualifying period if landings performance is required in individual fisheries and sub areas to qualify. This is fully discussed in the analysis. In general, the benefits of an umbrella license are that it allows the fleet maximum flexibility to move between fisheries and areas, the licenses would be uniquely associated with particular vessels and thus would cap overall fleet growth, and would be less complex to implement and administer.

Choosing a highly specific program such as the State of Alaska proposes would be highly complex to administer, very difficult to enforce if fishery specific licenses are issued, and several fisheries such as rockfish would not be allowed in a directed fishery. The State of Alaska proposal, represented here in the Explicit configuration, would strictly limit the mobility of the fleet to enter different fisheries and areas. The benefit of that is that it would better control fleet movement and thus slow overcapitalization of a specific area and fishery, thus reducing preemption problems and crowding. A liability is that if many highly specific licenses are issued initially, even though the initial fleet size is unaffected, if the licenses are transferred to new vessels, potential fleet size could be much greater and thus exacerbate the already existing overcapacity problem. An alternative which would eliminate this possibility is the endorsement concept, whereby species/area endorsements would be attached to an overall umbrella license. This would maintain the desirable aspects of the specific 'licenses', while capping the total number of vessels potentially operating in the fisheries. The level of the umbrella could be placed at the North Pacific level, the FMP area level, or at the level of FMP subareas. The choice of the level represents a trade-off between possible capacity increase and flexibility for fishermen.

The loss of the directed rockfish fishery under the State program equates to a $14- $20 million loss in revenues. If a fishery specific system is chosen, considerable work will need to be done before implementation to align it with some form of directed fishing standards. NMFS has noted that fishery specific licenses would be extremely difficult to enforce.

License Recipients

Four options are available under this component ranging from issuing licenses just to current owners, to issuing multiple licenses to current owners, permit holders, and owners of past landings, if all qualified on the basis of a particular vessel's landings. Issuing to more than current owners would result in the potential for immediate expansion of the fleet, and would lead to major increased capacity in the long term. More licenses lead to greater complexity. Mobility and enforcement would not be affected by this component as much as by other particular components. The total number of owners fishing in 1993 was 1,679, while 2,954 would qualify under the 'UNIVERSAL' configuration (any landings in the three-year period prior to June 24,1992). Issuing licenses to unique permit holders and landings owners increases the license pool to about 4,500 licenses. Issuing licenses to all three groups and allowing duplication on the basis of one vessel increases the pool to over 9,000. Any choice other than current owners will rapidly and significantly degrade the effectiveness of the license program to address the overcapacity problem. In addition, the complexity of the program will increase significantly, both in implementation and administration, if significantly more records have to be matched and more licenses and transfers have to be tracked.

License Designations

There are eight different options under this component. They govern use restrictions for catcher vessels and catcher processors, inshore and offshore vessels, vessels of different lengths, and combinations of all three types of designations. Choice of designations will not impact initial fleet size so much as its potential for capacity expansion, mobility, and access to different fisheries. The three size categories will not be as effective in deterring capacity increases unless they are coupled with a limitation on maximum increase such as in the 20% upgrade rule in the proposed moratorium. However, overlaying upgrade rules on the size categories will limit the availability of licenses for those owners wanting to buy licenses, especially if they have vessels in the upper end of their size range, and if licenses are assigned on a very area or fishery specific basis. Complexity of implementation and administration, and enforcement will increase if a variety of license designations are used, however this is believed to be minor. The composition of fleets, by each of the sector and size designations, is described in detail for each of the major alternatives under consideration.

Qualifying Period

Seven options are presented ranging from a landing any time in 16 years to a landing in each of several specific periods after January 1, 1990, and the year before final Council action. Choice of options here will play a defining role in setting the initial fleet size. For example, in 1993 there were 1,679 vessels of all types participating in the groundfish fisheries. Using the option that recognizes 16 years (back to 1978) would allow over 6,200 vessels to have licenses initially. The mid-range alternative, requiring participation in the three years prior to June 24, 1992, would allow 2,954 vessels in the fisheries initially. At the other end of the spectrum, the more specific proposal offered by the State of Alaska would produce an initial fleet size of 1,501, 178 fewer than fished in 1993.

Not all sectors would share the gain or pain equally. The net loss in vessels for Alaska residents under the State's proposal would be 157 vessels, mostly small catcher vessels. Many of the remaining vessels would be extremely limited in the species endorsements they receive. For non-Alaskans, the net loss would be 45 vessels. That net change would include a loss of 53 small catchers and 10 catcher processors, and a gain of 18 catchers over 60 ft.

Landings Requirements for General Licenses or Endorsements

There are five options for licenses and ten for endorsements. Choice of minimum landing requirements (MLR) options under a general license system has a major impact on the initial size of the fleet but minor or neutral impacts on the other attributes. As minimum landings standards increase, the initial fleet size decreases significantly. For example, requiring at least two landings pares over 250 vessels from the fleet, as compared to vessels which fished in 1993, and over 500 when compared to the universal configuration, which requires only a single landing. Almost all reductions come from the small Alaskan owned vessels. An MLR based on a minimum poundage (either 5,000, 10,000 or 20,000 pounds) has even more dramatic effects, removing an even greater number of vessels from eligibility. Again, those vessels cut out by this requirement are mostly small, Alaska based catcher vessels.

Endorsement options apply only to license programs that would issue fisheries or area-specific endorsements. Thus, MLR options for endorsements do not influence initial fleet size (in absolute numbers of qualified vessels), but they do affect the number of species-areas opportunities for fishermen, and therefore there is a direct effect on the overall fishing effort which qualifies. Because some of the endorsement options introduce multiple year qualification criteria to vessels which qualified because of the differential qualifying standard for fixed gear Pacific cod vessels, these do have a significant impact on fleet effort reduction.

Alternative Ownership, Transfer, and Use Provisions

Various provisions such as who may purchase licenses, separability of species and area designations, vessel replacements and upgrades, ownership and use caps, buy back programs, skipper licenses and community development initiatives are discussed here.

The section describing who may purchase licenses dwells mainly on foreign ownership restrictions, noting that little information is available to describe foreign ownership now.

The section on vessel and license linkage discusses options for transferring licenses with or without the vessel. Only being able to transfer licenses with the vessel assumes an emphasis on issuing licenses only to current owners and closely associating each license with a specific vessel. This would be the most restrictive of the options and no new vessels would be allowed into the fleet unless a provision was made for transferring licenses for vessels that were destroyed or sunk. The end result of this option would be an aging of the fleet with attendant problems relative to safety and efficiency. Allowing licenses to trade independently would allow more flexibility for vessel owners and license holders to tune their operations. Allowing freely transferable licenses also could lead to a substantial increase in fleet size.

The section on vessel upgrades and replacements describes three options which address potential expansion of capacity: (1) no restrictions, (2) a complete prohibition, and (3) limited upgrade ability subject vessel size categories and/or to the moratorium 20% rule. The first option would be least restrictive and would allow for increases in harvest capacity in each of the length designations. Option two would be most restrictive and the third option would allow for limited upgrades. Allowing transfer and upgrades subject to vessel category restrictions and the 20% rule may provide the greatest flexibility while still maintaining a lid on total capacity expansion. As noted earlier under license designation however, choice of these upgrade and transfer options has significant impacts on the availability of licenses to specific types of license holders, such as those with very large boats and/or near the upper part of the size designation range.

Vessel license and endorsement caps are discussed in the analysis. The options range from no limit to a limit of 15 area licenses and/or 15 fishery/area endorsements per person. Each option has a grandfather clause. Any particular option may or may not be restrictive depending on how many vessels a person has and how may areas he normally fishes. The choice of where to place caps on ownership will likely depend on the type of licenses/endorsements adopted by the Council; i.e., at what level the umbrella license requirement is placed.

Buy Back Programs and Fractional License Systems

Buy back programs have been developed to reduce the number of vessels or licenses once a license limitation program is implemented. Neither would be necessary if the initial allocation of licenses is restrictive enough to effectively limit the capacity in the fisheries. The track record of buy back programs is fairly poor. In a program envisioned as a first step toward a more comprehensive, market-based system (such as IFQs) the likelihood of creating an effective buyback program is very small. Fractional licensing may hold more promise, particularly if the license program is envisioned as a long term solution.

Community Development Programs

Two types of programs are discussed, one that would set aside a percentage of the harvest quota, and one that would establish special license. A set aside of the harvest quota would have the most direct benefit, but would also reduce the amount of fish available to the remaining non-CDQ fleet and exacerbate capacity problems in those fisheries. Creating additional licenses does not appear to be consistent with either the goals of the CDQ proposals or the goals of the Council for addressing problems in the remaining commercial fleet.

Two Tier Skipper License Option

This is discussed in Section 3.4 of this document.

General Conclusions Regarding The Social and Economic Impacts of the Reference Configurations

In general it appears that the universal configuration is less of everything in a license program. It is less limiting than other options, and therefore less effective. It is also less disruptive and would appear to have fewer negative impacts on Alaskan residents. The same cannot be said of the explicit configuration, which appears to have some of the necessary ingredients for an effective license program, particularly in the GOA, where the fleet and harvesting capacity is cut back substantially. These cut-backs could prove to have negative social impacts, particularly in Alaska coastal communities.

Any license program will produce winners and losers. The winners will gain access to fishing opportunities given up by the losers. If the same amount of fish is harvested, it is likely that the overall benefits to the nation will remain largely unaffected. If however, the reduction in harvesting capacity falls below that necessary needed to harvest the OY, a loss to the nation may be seen. This will very likely result in new capital flowing into the fishery. Because existing capital in the form of unlicensed vessels would be idled, a new influx of harvesting capacity would be of questionable merit to the nation. This is the catch-22 of license programs. In order to be effective, a license limitation program needs to cut back the fleet and the participants in the fisheries. Once the hard cuts are made however, the remaining fleet will still be locked in a race to harvest the resource.

Potential benefits from any license program have to be weighed against other costs and standards as well. Management and enforcement of a fishery specific license program as developed in the explicit configuration, could well prove more costly, than any gains to the nation from the license limitation program. These will be discussed in Chapter 4 of this document. The last section of this chapter will discuss other issues which have been linked to the license limitation program.

Linkages to Future Actions

As with the No Action alternative, the potential impacts of a License Limitation program must be viewed <u>not</u> in a vacuum, but rather in the context of other potential actions which may be taken by the Council either concurrently or at some point in the future. Under the No Action alternative, we discussed some of the other potential actions which may be taken which would affect the evolution of status quo, including a vessel moratorium (may be resubmitted), inshore/offshore/CDQ extensions, total weight measurement, full utilization or harvest priority programs, and IFQ programs for groundfish and crab. In the case of the License Limitation alternatives, some of the specific proposals include direct linkages to future concurrent programs. These linkages are discussed in this section.

For example, the State of Alaska's original proposal for a groundfish license program (GLS) contained, in addition to specific license provisions, the following provisions: (1) full retention of all species for which a TAC exists, except PSCs, with a minimum requirement for food grade utilization, (2) total catch measurement for all vessels participating in the license program, (3) a phased-in transition to an IFQ program, and (4) an explicit inshore/offshore allocation based on 1993-1994 averages for each species/area. Each of these proposals represents a significant action, in and of itself, aside from the provisions of the license limitation program chosen by the Council (if chosen). As such, they have been bifurcated from the license limitation analysis and are being analyzed and considered on separate, but concurrent, tracks.

The concept of imposing a Full Retention/Utilization mandate adds further complexity to the enforcement functions required. In addition to enforcing directed fishing standards on an individual basis, this requirement will create 'instant bandits' of a significant number of vessels who catch, and are forced to retain, species for which they have no license. This will depend, of course, on the strictness of the allowable catch percentage for species for which a vessel has no license. These concerns would also be mitigated to the extent that vessels are able to alter their behavior to avoid species for which they have no license, one of the intents of the proposal. This proposal is being analyzed and considered on a separate, but concurrent, track and the more fully developed cost and benefit implications of the proposal will be available when that study is completed. Such a program should be judged on its own merits, even though it is explicitly linked to license limitation in the State of Alaska GLS proposal, because it could be implemented in the absence of a license limitation program.

The proposal also contains an explicit transition from the GLS to an IFQ program, where the IFQ program is based on, and would replace, the GLS system. QS/IFQ would only be awarded to GLS license holders and, the eventual QS/IFQ allocation would be at least partially based on a license holders' performance under the GLS program. This performance under the IFQ program would be based partly on catch history and partly on bycatch performance, with a penalty for 'dirty fishing,' via the Harvest Priority Multiplier. One aspect of this transition period, basing IFQ allocations on catch history during the GLS program, could tend to exacerbate the current race for fish, and all the attendant problems, as license holders attempt to maximize their landings. On the other hand, the Harvest Priority Multiplier envisioned in this proposal may counteract this tendency, as fishermen alter fishing behavior to lower bycatch of PSC species. One of the intents of the proposal is to rectify bycatch/waste problems in the fisheries prior to allocating IFQs, as opposed to basing IFQ allocations entirely on historical fishing practices.

One of the advantages of implementing the license program as a first step in a phase-in approach would be to provide some stability for qualified participants, in terms of knowing who is in and who is out in future limited entry development. They would also have a good indication of the species for which they would be eligible, via their license designations during the transition. Controversial decisions regarding IFQ recipients, and how much they would receive, may be mitigated by this approach as it defines early on what the rules of the game will be. These types of decisions have been a crucial stumbling block for the industry and Council in previous IFQ discussions. However, some hard allocational decisions will have to be made in the more immediate context of the license limitation alternatives.

The inshore/offshore issue is also a potential linkage issue as the Council proceeds with development of a CRP program, whether it be a license program, IFQs, or some phase-in approach. With the current split scheduled to expire at the end of 1995 (along with the pollock CDQ program), the Council has initiated an analysis of continuing the current allocations for 1996 and beyond. As with the other proposals discussed in this section, this amendment could be pursued regardless of action on license limitation.

One other item of note when discussing linkages is the proposal for a Mandatory Skipper Reporting System. As a link to eventual IFQs, this mechanism offers an opportunity to rectify data deficiencies which have, in the past, plagued any attempt to evaluate 'skipper crew member options' in IFQ analyses. Regardless of action taken by the Council on specific license limitation options contained in this amendment, this proposal would be easily implemented and would provide data for more meaningful evaluations in the future.

Analysis of Crab License Limitation Alternatives

As with groundfish, the proposed crab license limitation program, analyzed in Section 3.2.3, consists of five major components which will define the initial recipients and ultimate configuration of the program: Nature of Licenses, License Recipients, License Designations, Qualifying Period, and Landing Requirements. The options within each of these are fewer, simpler, and more straightforward than for groundfish and are summarized below along with a summary of the Transferability, Ownership, and Use provisions.

The analysts developed two reference configurations for crab around which to structure the analysis, the 'CRAB" reference configuration and the "CURRENT" reference configuration. The "CRAB" configuration consists of a species/area specific license issued to current owners, designations by CV/CP and vessel size category, a qualification period of 6/28/89 - 6/27/92 (except for Dutch Harbor red king and Pribilof blue king crab), and a single landing requirement. For comparison, the "CURRENT" configuration is basically the same except that it examines participants from the 1993 fisheries.

Nature of Licenses

Three options exist for crab: (1) a single license good for all species and areas, (2) species specific licenses, and (3) species/area specific licenses. As with groundfish, the choice here will not affect the total number of initially licensed vessels, which is most defined by the choice of qualification period described below. Rather, the implications rest in flexibility, mobility, and potential fleet expansion. If an umbrella license is required, with separable and transferable endorsements, then the total number of vessels is capped, with endorsement transfers allowed. The species specific nature of crab licenses does not likely hold the types of enforcement complications as a species specific groundfish license due to the nature of the crab fisheries and the fact that they are already managed on a species/area basis.

License Recipients

Along with allocations to current vessel owners, there is an option to allocate licenses to permit holders in the crab license limitation program. The choice under this component has major implications for initial and future numbers of vessels (capacity) operating in the fisheries. The information in the analysis shows that a total of 354 vessels made crab landings in 1993, compared to 551 licenses which would be issued to current vessel owners under the "CRAB" reference configuration, which requires a landing between 6/28,89 and 6/27/92. Adding permit holders to the initial allocation could create double, or more, the number of initial licenses. If these additional licenses can be applied to new vessels, the implications to the already overcapitalized fisheries are significant and detrimental.

License Designations

Regardless of the initial number of licenses granted, and the nature of such licenses, the license designations which affect upgrades and transfers will significantly affect the future growth in capacity. As with groundfish, potential designations include CV/CP and/or vessel length categories, along with the 20% rule associated with the moratorium. The Council may choose any or all of these designations, with the CV/CP designation and the 20% rule being the most effective at limiting future capacity increases.

Qualification Period

Two options are included for crab: (1) 1/1/78 to 12/31/93 and (2) 6/28/89 to 6/27/92. Reaching back in time to 1978 will grant many more licenses than currently participate in the crab fisheries, likely exacerbating the problems the Council is attempting to address. This option would allocate 707 total vessel licenses, compared to 551 under the more restrictive qualification window. In 1993, 354 vessels participated in these fisheries.

Minimum Landing Requirements (MLR)

The first option requires only a single landing for each species, while the second option requires a single landing for red and blue king crab, with a 3 landing minimum for brown king, opilio, and bairdi crab. The only difference will be the number of vessels qualifying for these latter three fisheries, if species or species/area licenses are adopted. Using the species/area license (or endorsement) concept, the first option creates 1,811 such licenses while the second option reduces this number to 1,615. Under the endorsement concept, the total number of vessels would remain the same, 551 under the "CRAB" reference alternative. If the Council adopts only a species designated license (endorsement), the number drops to 1,375, again noting that the total number of vessels is still 551, again assuming the more restrictive qualification window.

Transferability, Ownership, and Use Provisions

All of the principle findings associated with transferability and use for groundfish hold true for crab. An additional consideration for crab is the concept of an Individual Transferable Pot Quota (ITPQ) for the crab fisheries. This concept is discussed in detail in Appendix V; in summary, it offers the potential for an effective means of capping capacity, while allowing for the greatest flexibility in fishing operations, noting that these attributes exist with or without the imposition of a limited license.

Conclusions Regarding Crab License Limitation

Compared to the various alternatives under consideration for groundfish, the potential crab license program configurations are relatively simple. As seen in the collection of tables, the alternatives under the crab license limitation program would create more licenses than participated in the current fishery. Under the "CRAB" reference configuration, some current participants would be cut from the fishery, but only those which entered the fisheries after the Council's June 24, 1992 Control Date. Many vessels and owners would receive licenses who are not current participants, as exhibited by the 551 licenses which would be allocated, compared to the 354 which fished in 1993. Reaching back to 1978 for inclusion would allocate 707 licenses, many to persons no longer active in the fisheries, and likely a number which far exceeds that necessary to economically harvest the available resource, particularly considering recent closures and harvest reductions in two of the most important crab fisheries.

Because none of the configurations under consideration actually reduce the numbers of vessels (capacity), and because the qualification windows are fairly liberal to recent participants, they cannot be expected to have any major distributional impacts or cost-benefit impacts. None of the options would cause perturbations to the 'status quo', either in total or within any geographic or regional perspective. As such, no major economic or social impacts are expected to occur with implementation of any of these options. Additional administrative and enforcement costs may be the most significant economic impact of a crab license limitation program. An ITPQ program would have the potential to generate some positive rents to the crab fisheries and provide a mechanism for market driven allocations of effort. Further refinement of the details of such a program need to be made if this is an avenue the Council wishes to pursue.

Social Impact Considerations

From the beginning of the CRP process in 1992, the industry and Council have expressed concern over the potential social ramifications of a comprehensive limited entry program of the scale being contemplated. This concern was particularly acute relevant to the prospect of an IFQ program which would cover all of the groundfish and crab fisheries, and would privatize these fisheries indefinitely, with specific assignment of harvest rights. In the summer of 1994, Council staff organized a group of leading experts in the fields of social science, with an emphasis on fisheries experience. This Social Science Steering Group played a key role in developing a Request for Proposals for a social impact study relevant to the major limited entry alternatives under consideration by the Council. Impact Assessment, Inc., was awarded the contract to conduct the study which will consist of detailed fleet sector profiles (as requested by the Council) and a limited impact assessment of the major limited entry alternatives.

Combined with the Community Profiles developed under separate contract, the Council will have comprehensive social information to aid in their decision making process for CRP. The Community Profiles cover 127 Alaskan coastal communities and a dozen Pacific Northwest communities, with an emphasis on describing each community's involvement in the fisheries. These Profiles are being finalized and will be available concurrently with public review of the license limitation analyses. The more detailed industry sector profiles and limited social impact assessment are also being finalized and will be available in October 1994 as well. When these studies were initiated, the Council was primarily concerned with the potential impacts of an IFQ program, but also wanted the analyses to cover simple license limitation. With IFQs on hold at this time, the studies will likely remain relevant to a decision on license limitation. Depending on the Council's timing for a public review package for license limitation, these studies should, as noted above, be available simultaneously for public review. They will constitute part of the overall amendment package for Secretarial review of any Council recommendations on limited entry alternatives.

In order to round out the social impact work being conducted, the results of the economic/distributional analyses contained in this document will be provided to IAI for additional work specific to the major license limitation alternatives under consideration. Distributional results of three to four core alternatives will be evaluated and tied together with information in the baseline study conducted already by IAI. This follow up study will be included in the license limitation analytical package under review in the fall of 1994.

Administration and Enforcement

Chapter 4 of the document is reserved for this part of the analysis.

Environmental Assessment

In general, a license limitation program is not expected to significantly affect any of the species under consideration, other non-target species, marine mammals, seabirds, endangered or threatened species, or the physical or human environment relative to continued status quo (No Action). The manner in which the fisheries are prosecuted and managed will not change under either alternative, rather it would define the participants eligible to engage in such fisheries.

When evaluating the potential configuration of a license limitation alternative, from among the various elements and options under consideration, the differences of concern are primarily in the numbers of licenses which are allocated and would be allowed to operate in the fisheries. Alternatives which increase the number of potential licenses (vessels), beyond those currently operating, have the most potential to increase environmental effects associated with the race for fish. Compared to status quo open access however, any alternative which caps the fleet is expected to lessen the effects of commercial fisheries on the environment. Alternatives which actually reduce the numbers of vessels will further lessen these effects. None of the alternatives under consideration is expected to result in significant impacts.

Summary and Conclusions

Economic Impacts

In summary, none of the proposed actions would have an annual effect on the economy of more than $100 million, nor would they trigger any other provisions of Executive Order 12866 which would invoke a finding of 'economic significance.' Continued status quo is likely to result in the continuation of the overriding problems in the fisheries identified in the Council's CRP problem statement. Overcapacity and overcapitalization of the industry will likely occur despite the current economic rent dissipation in the fisheries. The 14 specific problems which result from continued entry and capitalization will likely be exacerbated. A decrease in the net benefits to the nation derived from these fisheries will be the inevitable result.

Relative to the status quo, the license limitation alternative has the potential to prevent further deterioration of economic benefits, or to generate additional economic rents, depending on the options chosen within that alternative. For these benefits to occur, a license limitation program would have to be adopted which caps the fleet at somewhere near its current levels. These net benefits can be characterized as short term benefits, which will likely be dissipated over the long term as incentives are created to increase individual vessel catching capacity. This is the fundamental shortcoming of license limitation programs, though Section 3.2.1.2 describes some conditions under which additional rents could be sustained over the longer term. These conditions include effective capacity limitations, license buy-back programs, fractional licensing systems, or some combinations thereof, though it is not expected that a viable buy-back program could be implemented when there is a perception that this license limitation program is an interim step towards eventual IFQ allocations.

Any configuration of a license program which qualifies significantly more vessels than currently participate will not result in net benefits, even over the short term, and may actually exacerbate the fundamental problems in these fisheries. In the absence of additional regulatory programs, any license limitation program (based on the current suite of elements and options) will not significantly address the overall CRP problem statement, but may partially address some of the problems, under certain conditions (these are discussed below). A license limitation program could also provide some stabilization for the industry as a whole, relative to open access, in terms of identifying the field of participants while more comprehensive management solutions are being developed. In this sense, the effects of a license limitation alternative can also be viewed in the context of being an interim step towards a more comprehensive management solution.

The analysis focuses largely on the distributional impacts of various license limitation sub-alternatives. The choices in designing a license limitation program will figure heavily in the overall success of such a program, and in the program's ability to achieve specific management objectives. The potential for limited, short term benefits must be weighed against the expected administrative and enforcement burdens placed on the implementing agencies. The license program will take on greater importance in capping growth if the proposed moratorium is not implemented.

Section 3.2.2.8 of the analysis delves into some of the impacts of the distributional results, with an emphasis on implications to various industry sectors and geographic regions. One of the key findings of this section is that the total numbers of licenses, by either sector or region, must be viewed with some caution when assessing potential impacts to these industry sectors or regions. Although the total number of licenses allocated to a specific region may be fairly consistent with recent participation patterns, these licenses will not necessarily grant the allocant the fishing opportunities or flexibility to which they are accustomed. An example rests in the species endorsement concept for groundfish, where many vessels qualify for some area licenses, but not all, and for the areas in which they do qualify, their species endorsements may be very limited.

Addressing the Problem Statement

The alternatives under consideration include continued status quo (no action) or implementation of some form of License Limitation program. There currently exists an extremely wide range of possibilities for the specific elements and provisions of a License Limitation program. Selection of a Preferred Alternative will aid in a more definitive evaluation of how the program addresses the 14 problems outlined in the Council's CRP Problem Statement. A preliminary evaluation is provided below. The numbering of the problems is not intended to reflect any prioritization.

Problem 1: Harvesting capacity in excess of that required to harvest the available resource.

Under status quo, without a vessel moratorium, this problem will not likely go away and will be exacerbated as additional vessels are allowed to enter the fisheries. A License Limitation program could address this problem, at least in the short term, if a restrictive window of participation is required for qualification. Some of the options under consideration achieve reductions in vessels, particularly in combination with minimum landings requirements. Any of the options which do not reduce the current numbers of vessels will not address Problem #1. A Full Retention mandate, being considered separately, may also positively address this problem by effectively reducing harvesting capacity (in order to match processing capacity).

However, even if short term gains are derived by a reduction of effective harvest capacity, they will likely be quickly diffused by capacity increases, as has been exhibited by virtually all License Limitation programs in existence. An effective License Buy-back Program would be one method which would tend to maintain the benefits beyond merely the short term. Again, an effective buy-back program has not been developed, and would be unlikely under a License Limitation program which is viewed as an interim step towards eventual IFQs, and which defines the 'players' to be included in such allocations.

Problem #2: Allocation and preemption conflicts between and within industry sectors, such as with inshore and offshore components.

Status quo fisheries management is predominately driven by allocation and preemption conflicts between industry sectors striving for raw fish product, PSC bycatch apportionments, or rights to processing. None of the alternatives contained herein will, in and of themselves, address these allocational issues. Inshore/offshore processing allocations, for example, are being addressed separately, and similar issues would continue to arise under either the status quo or license limitation alternatives. There are certainly allocational decisions which could be made within the context of this amendment; however, some of the primary driving forces in fisheries allocational disputes, such as bycatch apportionments, would remain unresolved. The option to designate licenses by inshore or offshore would restrict transfers between those sectors, but do little to alleviate overcapitalization problems within sectors or allocational problems between sectors, if a separate inshore/offshore allocation is not implemented.

Problem #3: Preemption conflicts between gear types.

During the development of the License Limitation alternatives, license designations by gear type were explicitly excluded from further consideration. Such designations may have reduced future preemption conflicts to some degree, depending on transferability and use provisions. However, even gear designations would not have necessarily solved many of the preemption issues facing the industry and the Council. Unless specific allocations of TAC and PSC bycatch are made up front, as has been done with BSAI Pacific cod, such preemption conflicts would likely continue to face fisheries managers. Current alternatives under consideration do not directly address this problem.

Problem #4: Gear conflicts within fisheries where there is overcrowding of fishing gear due to excessive participation and surplus fishing effort on limited grounds.

This problem is primarily a function of excess capacity and as such is subject to the same findings as in Problem #1 - that is, if a program is adopted which reduces, or at least effectively caps, fishing capacity, then it may address Problem #4. A License Limitation program, for example, will define the field of participants, but contains no inherent incentives to reduce or alter the race for fish and the attendant gear crowding problems. The proposals for a crab License Limitation program include a potential Individual Transferable Pot Program (ITP), which could directly address this problem by effectively capping capacity and allowing a market based allocational mechanism. However, it may be worth noting that it is the ITP, not the License, which is the mechanism for addressing this problem.

Problem #5: Dead loss such as with ghost fishing by lost or discarded gear.

None of the alternatives directly addresses this problem in the groundfish and crab fisheries under consideration. The fixed gear halibut and sablefish fisheries are scheduled to operate under an IFQ program beginning in 1995 which is expected to directly address this problem. Much of the lost gear problem is a function of the race for fish and overcapacity. A License Limitation program which effectively reduces fishing capacity, and slows down the race for fish, may mitigate this problem.

Problem #6: Bycatch loss of groundfish, crab, herring, salmon, and other non-target species, including bycatch which is not landed for regulatory reasons.

As with other problems associated with the race for fish, bycatch loss of groundfish, crab, and other non-target species may be reduced by a management regime which alleviates the race for fish. None of the alternatives herein directly address this problem, though a License Limitation program which reducescapacity could conceivably constrain the derby nature of the fishery. Bycatch loss of non-target groundfish and crab species may be alleviated by a full retention mandate, an alternative which is available under either status quo or License Limitation. However, the full retention proposal does not include a mechanism for addressing bycatch and waste of PSC species such as halibut, salmon, and crab, which are not landed for regulatory reasons.

A 'Harvest Priority Multiplier,' as contained in the GLS proposal offered by the State of Alaska does offer an incentive to reduce bycatch of PSC species by tying a vessel's performance under the License program to future IFQ accrual. Because this particular proposal would affect future IFQ allocations, it will be more fully analyzed when detailed IFQ analyses are undertaken. Similar to a VIP program, the 'multiplier' concept could be implemented under status quo as well as a License Limitation program. Similarly, the original 'Harvest Priority' proposal from the Alaska Marine Conservation Council (AMCC) is designed to address the issues contained under Problem #6 (and Problem #7), and could be implemented separately from any proposed action contained herein.

Problem #7: Economic loss and waste associated with discard mortality of target species harvested but not retained for economic reasons.

As with #6 above, the alternatives contained in this document directly address this problem only if combined with some other action such as a Full Retention, Harvest Priority, or other program which relies on individual accountability.

Problem #8: Concerns regarding vessel and crew safety which are often compromised in the race for fish.

Although a License Limitation program does have some ability to reduce effective fishing capacity, at least in the short term, it will not eliminate the basic derby nature of the fisheries and, therefore, is not expected to address this problem to any significant degree.

Problem #9: Economic instability within various sectors of the fishing industry, and in fishing communities caused by short and unpredictable fishing seasons, or preemption which denies access to fisheries resources.

Economic instability caused by short seasons and preemptions will not be significantly addressed by any of the alternatives contained herein. However, some economic stability in industry sectors, and even communities, may be achieved under a License Limitation alternative by virtue of defining the field of participants in the fisheries, and reducing the fleet to a level which lengthens the fishing seasons. Defining the players alone may provide stability to industry participants who now know where they stand in terms of present and future fishing privileges. Future discussions and development of more comprehensive programs, including IFQs, may be facilitated by adoption of an interim License Limitation program.

Problem #10: Inability to provide for a long-term, stable fisheries-based economy in small economically disadvantaged adjacent coastal communities.

As part of the original inshore/offshore amendment and the sablefish/halibut IFQ amendment, the Council has, through the allocation of CDQs, addressed this problem to a significant degree in the BSAI. The current License Limitation proposal also contain options for additional set asides of CDQs for the same groups of communities involved in the existing CDQ program. The pollock CDQ program established in 1992 is scheduled to sunset after 1995, unless rolled over by Council action. Any additional set asides established as part of this amendment would likely increase the benefits to these communities relative to Problem #10. This action could be taken by the Council independent of approving a License Limitation program. Some of the License Limitation alternatives may actually diminish the prospects for some communities, not necessarily involved in CDQ programs.

Problem #11: Reduction in ability to provide a quality product to consumers at a competitive price, and thus maintain the competitiveness of seafood products from the EEZ off Alaska on the world market.

Many of the problems associated with marketing aspects of the fisheries are a result of the race for fish and the attendant inability of fishermen and processors to tailor their operations to optimal markets. Neither continued status quo nor license limitation is expected to significantly change this situation.

Problem #12: Possible impacts on marine mammals, seabirds, and marine habitat.

As described in the EA section of this document, none of the alternatives under consideration is expected to significantly affect marine mammals, seabirds, endangered species, or the marine or human environment. Fishing practices under any of the License Limitation alternatives is likely to be similar in nature to current open access fisheries. However, any alternative which reduces fishing capacity and the race for fish may have the effect, though not likely significant, of reducing potential impacts. Moreover, the Full Retention mandate proposed separately could complement any such positive effects by slowing down the race for fish and reducing catch of non-target or undesirable fish. The overall effect of such a program on total removals from the nutrient flow of the ecosystem is, however, undetermined.

Problem #13: Inability to achieve long-term sustainable economic benefits to the nation.

As noted earlier, any of the potential economic benefits of a License Limitation program, even a fairly restrictive program, are likely to be short-lived. Long-term, sustainable economic benefits may be attributed to a License Limitation program only from the perspective that such a program is a necessary first step in a sequential decision-making process for the overall CRP initiative. The License Limitation program itself is not expected to provide these types of benefits.

Problem #14: A complex enforcement regime for fishermen and management alike which inhibits achievement of the Council's comprehensive goals.

Under the status quo (no action) alternative, the current enforcement regime will continue to be in place as modified by other action taken by the Council and NMFS. The License Limitation alternatives, even in the simplest form, have little or no capacity to reduce the complexity of this enforcement regime. Enforcement mechanisms under License Limitation will be similar to those under status quo. Some of the License Limitation alternatives do have the capacity to increase the complexity of the enforcement regime, particularly those that assign species specific licenses (see discussion in chapter 4). If combined with other, concurrent actions such as the Harvest Priority Multiplier, the complexity would likely be further increased. For example, the multiplier concept would function in many ways like an expanded VIP program, coupled with monitoring and enforcement of specific license endorsements.

In addition to the 14 specific problems identified, the Council's Problem Statement refers to an "overriding concern to maintain the health of the marine ecosystem to ensure the long-term abundance of the groundfish and crab resources." To this end, there does not appear to be significant differences between the major alternatives under consideration: Status Quo and License Limitation. Under either alternative, fisheries would continue to be managed similarly, from the environmental perspective. Though there are proposals, such as Harvest Priority and Full Retention, which are aimed at minimizing the ecosystem impacts of commercial fisheries, these programs could be implemented under either a License Limitation program or under continued Status Quo. Many of the issues for which the CRP process was initiated involve economic allocations of the resource.

Other Applicable Laws

Magnuson Act (Executive Order 12866) and NEPA requirements for actions contemplated by the Council (and SOC) are addressed in Chapter 3 and 5 respectively, where we evaluate the expected economic and environmental consequences of the alternatives under consideration. Proposed action is also required to be consistent with seven National Standards, and Section 303(b)(6) of the Magnuson Act, which outlines criteria for limited access programs by the Council. Additionally, a fisheries impact statement is required which addresses the potential impacts on participants in both affected, and adjacent, fisheries.

Consistency with the National Standards

A definitive evaluation of the proposed action's consistency with the National Standards is difficult to complete at this time due to the large array of alternatives under consideration. At this time, we will attempt a generic evaluation, which includes the range of potential license limitations program configurations. A supplement to this section will likely need to be completed at a point when the Council determines a Preferred Alternative; i.e., the specific form of License Limitation it will be forwarding to the SOC. A preliminary evaluation for each National Standard is included below:

National Standard 1: Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry.

Optimum yield (OY) is defined as the amount of fish which will provide the greatest overall benefit to the Nation including maximum sustainable yield (MSY) as modified by any relevant economic, social, or ecological factors. Under either the status quo (No Action) or License Limitation alternative, the overall way in which the fisheries are managed will not change significantly. Annual TACs will still be specified as they are currently, and achievement of species TACs and PSC caps will be monitored by NMFS. Within the alternatives under consideration, there are, however, sub-alternatives which could effect the attainment of OY. For example, one option under consideration is to, in effect, prohibit directed fisheries for rockfish in the GOA, by not issuing licenses for that species. Arrowtooth flounder is also omitted from the list of species for which licenses would be issued (under this particular alternative), but arrowtooth is not a species of relevance in OY considerations at this time.

In the case of rockfish in the GOA, the annual estimated value of this fishery is in the neighborhood of $14-$20 million, an amount which represents potentially foregone value to the Nation if fisheries for rockfish are prohibited. It is possible that some of these rockfish, and therefore some of the value, will still be captured as bycatch while prosecuting other fisheries. However, it is possible that a substantial amount of these species would remain uncaught, depending on how restrictive the allowable retention rates are set. The Council and SOC have recently implemented an explicit stock rebuilding schedule for POP rockfish in the GOA, which recognizes surplus amounts of fish available for commercial harvest. Recent trends in the status of stocks for these species indicate an increased abundance over levels seen in the last few years. Factoring in this increased abundance would increase the potential 'loss' of OY if licenses are not issued for this species.

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

In developing this analysis, numerous current data sources were utilized in order to obtain the best information available. Under implementation of any of the alternatives under consideration, the Council and NMFS would continue to manage the fisheries using the best information available.

National Standard 3: To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

Nothing contained in these proposed actions will alter the way in which fish stocks are managed relative to National Standard 3. Current management practice is consistent with this standard.

National Standard 4: Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to assign fishing privileges among various U.S. fishermen, such allocation shall be: (1) fair and equitable to all fishermen, (2) reasonably calculated to promote conservation, and (3) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

The greatest test of equity in allocating fishing privileges is in determining which group of people are included and excluded. None of the alternatives included in this document base qualification on state residency; rather, the primary test of inclusion rests with participation history in the subject fisheries. Decisions still need to be made by the Council regarding who would receive licenses based on participation history from among the following major groups: current vessel owners, past vessel owners, and permit holders (skipper and crew members, for example).

In regards to Community Development Quotas (CDQs) under consideration, these are not considered to differentiate between residents of different states because not all residents of any state are eligible to receive such allocations. Although they are restricted to western Alaska, a relatively small percentage of Alaskans will receive the benefits of such allocations. Furthermore, CDQ experiences to date indicate that the benefits of such a program accrue to vessels not directly included in the CDQ allocations, through cooperative fishery business arrangements. Many of the vessels participating in these arrangements are from states other than Alaska.

The alternatives under consideration also contain provisions for limiting the amount of fishing privileges which may be allocated, or subsequently acquired, by fishing entities.

National Standard 5: Conservation and management measures shall, where practicable, promote efficient utilization of fishery resources, except that no such measure shall have economic allocation as its sole purpose.

Utilization of the fisheries resources will not be directly affected by any of the alternatives under consideration. License Limitation will only define the eligible players of the game, but will not necessarily affect the utilization patterns in the fisheries. If a full retention program is implemented in conjunction with either the License Limitation program or the status quo, this could result in more efficient utilization of the resource. Again, such a proposal is being developed and analyzed separately from this proposed amendment.

Though the results of a License Limitation program will undoubtedly include economic allocations, the primary purpose of the proposal is to limit further entry in the fisheries and to provide a more stable operating environment for fishermen. Further, this program is seen as a potential bridge to further, market based management systems. As such, the program will define the field of players, making future development of broader CRP initiatives easier.

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

Though a License Limitation program would assign specific fishing privileges in North Pacific fisheries, transferability and use provisions being considered allow for a significant degree of flexibility for fishermen to respond to changes encountered in the fisheries in the future.

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

Compared to the status quo, implementation of a License Limitation program will result in an increase in administrative and enforcement costs to the implementing agencies. These costs increase proportionately to the degree of complexity of the program. For example, a program which assigns species-specific fisheries licenses will require monitoring and enforcement on a level comparable to an IFQ program (these issues are discussed in detail in Chapter 4). This may be particularly true if coupled to some type of full retention/utilization mandate. To the extent that this program is seen as a bridge to IFQs, for some interim time period, it may result in unnecessarily high and duplicative costs, especially if the costs and infrastructures associated with an eventual IFQ program are different in nature. If, however, similar administrative and enforcement infrastructures are practicable, then duplication of costs may be minimal.

In a more immediate sense, costs associated with implementation of a complex License Limitation program may be seen as unnecessarily high and duplicative to the vessel moratorium passed by the Council. This is particularly true if the License Limitation program is viewed as only an interim measure in a step-wise CRP process, one of the stated intents of the moratorium. At the time of this writing, the resolution of the moratorium is still pending, stemming from the August 5 disapproval by the SOC. It is possible that the moratorium will be revised and resubmitted by the Council.

Section 303 (b)(6)

Under Section 303 (b)(6) of the Magnuson Act, the Council and SOC are required to take into account the following factors when developing a limited access system: (A) present participation in the fisheries, (B) historical fishing practices in, and dependence on, the fisheries, (C) the economics of the fisheries, (D) the capability of fishing vessels used in the fisheries to engage in other fisheries, (E) the cultural and social framework of the fisheries, and (F) any other relevant considerations.

Included in the broad range of alternatives under consideration (within the overall license limitation concept) are various options for qualification criteria covering a broad range of present and past participation. These options are evaluated for a wide range of fishery participants who depend on the fisheries, including current vessel owners, past vessel owners, permit holders, and skippers involved in the fisheries.

Much of the document is devoted to examination of the basic economic principles and theory concerning limited entry, and in particular, license limitation. An even greater emphasis is placed on the distributional aspects of the various alternatives as they relate to past, current, and future fishing privileges.

Treatment of social and cultural concerns is described in Section 3.5. The Council and analysts have devoted considerable time and expense to capturing the social context of the subject fisheries through community profiles, industry sector profiles, and current and scheduled impact assessments on fishery participants. A more definitive assessment of the program's consistency with 303 (b)(6) will depend on selection of a Preferred Alternative by the Council.

Section 303 (a)(9)

Section 303 (a)(9) of the Magnuson Act requires that any plan or plan amendment submitted by the Council include a description of the potential impact of such plan (amendment) on the participants in the fisheries and on the participants in fisheries managed by adjacent Councils. The intent of the proposed license limitation program is to stabilize the size and capitalization of the fleet operating in Council-managed fisheries while allowing the industry and Council to further develop potential IFQ systems which more directly address the underlying problems facing the fisheries . As such, the license limitation alterative does not resolve the underlying problems of existing overcapitalization and excess effort in the fisheries, unless an effective buy-back program is developed, but may prevent these problems from worsening while more comprehensive solutions are being developed. The effectiveness of a license limitation program and the status quo have been analyzed as to their respective abilities to achieve this objective.

Impacts to Participants in Affected Fisheries

The license limitation alternative would deny access to new vessels, but would not restrict the entry of vessel owners or operators. Depending on the qualification window chosen, it is likely that any current participants in the fisheries, or at least any participants through the Council's June 24, 1992, control date would qualify for a vessel license. Options for license designations would also restrict the ability of vessel owners to significantly increase the capacity of their vessels. As a result, fishermen are not denied the opportunity to enter the fishery, or to upgrade their vessels, so long as they draw from the existing capitalized fleet of qualifying vessels. Similar provisions would allow for the replacement of lost or damaged vessels. Those vessels which have fished in the past, but not in recent years, could be denied access under some of the license limitation options. Similarly, vessels which have entered the fishery in the most recent year, or which may enter between now and implementation of a license program, could also be denied access.

The consequences of still further capitalization of the fleet will contribute to existing conditions of instability and financial risk for the industry, and will likely aggravate allocation problems throughout the fishery. In the face of constant prices and catch quotas over the next few years, additional vessels and effort portend declining average net returns, decreasing efficiency, and further reductions in season length. Associated problems attributed to overcapacity and excess effort including discard and bycatch waste, high-grading, poor product quality, and unsafe operations are perpetuated under the status quo alternative. Vessels remaining in the affected fisheries would likely be impacted positively, relative to status quo, open access, under a license limitation alternative.

Impacts to Participants in Adjacent Fisheries

Under a license limitation alternative, it is expected that some vessels and their owners who are restricted from participating in Council-managed fisheries will turn elsewhere. The effect could be to increase pressure on a declining number of unrestricted fisheries, aggravating management problems in these areas. The entry rate of first-time participating vessels in the Alaska EEZ fisheries over the past 15 years has averaged nearly 900 vessels per year. Under the proposed license limitation alternative, some of these new entrants may simply redirect their vessel acquisition to the pool of available boats that qualify, particularly in the case of a new participant whose primary motivation is to fish the Alaska EEZ. Alternatively, new entrants also include fishermen whose motivation is to utilize an existing vessel, and open access fisheries are the solution. Under license limitation, they will likely redirect their efforts to other open access fisheries.

Under the last scenario described above, the consequence of limited entry in one fishery is to transfer the overcapitalization problem to another. Potential new entrants denied entry into the Alaska EEZ fisheries have an increasingly small or number of open access alternatives available along the West coast. Within Alaska, many of the commercially important state-managed fisheries such as salmon, sablefish, herring, and GOA crab are already operating under a limited entry program, affording protection from an influx of vessels unable to participate in the EEZ. The federally managed sablefish and halibut fixed gear fisheries are scheduled to come under IFQ management in 1995. There are certain niche fisheries that could come under pressure, however, including minor groundfish species in Alaska state waters, or fisheries within the EEZ not presently covered by a Council or state FMP.

Outside Alaska, the availability of open access fisheries is being reduced significantly due to the recent imposition of limited entry in other areas, for example, the likely adoption of a vessel limited entry program in the Pacific Council groundfish FMP off the coast of Washington, Oregon and California. As a result, it appears unlikely that the limited entry alternatives proposed for the Alaska EEZ will lead to an unexpected surge in participation in these fisheries. To the contrary, these alternatives may prevent a surge in unanticipated new entrants displaced from these adjacent fisheries.

The combined impact of the limited entry management programs either in effect or being considered off the West coast may slow the unneeded flow of new capital and catching capacity into these fisheries. Capital investment shifted out of the commercial fishing industry can be redirected to countless other productive ventures in the economy. Less fortunate are those vessel owners who find themselves or their boats denied access to the fisheries. Owners of non-qualifying vessels may have the ability to purchase rights to operate in certain limited entry fisheries, or sell their boats to other fishermen who possess these rights. However, recognizing that the industry is overcapitalized with excess fishing capacity, it is inevitable that owners of some excluded vessels will incur losses on their investment.

Impacts on Small Entities (Regulatory Flexibility Act)

The principal impact on small fishing enterprises due to this proposal will be a limitation on the entry of new vessels. This may restrict the ability of new, small entities to enter the fishery, although access is not denied since there is expected to be some pool of eligible qualifying boats available to new entrants. Premiums may develop for certain types of vessels, owing to shortages of these classes, which would increase the cost to prospective vessel owners. Alternatively, small fishing firms owning non-qualifying vessels may experience a decrease in the value of their investment to the extent that the vessel's opportunities have been limited. Based on projections from the moratorium analysis, it is estimated that from 450-900 small vessels may enter the fisheries in any given year.

The small vessel category has been documented to account for a proportionately small share of the total catch tonnage and revenues generated in the Council-managed fisheries. Nonetheless, the incomes earned by small vessel owners may represent an important part of annual income to the affected fishermen. Five thousand dollars of income from a halibut fishery may be vitally important to these small fishing operations. Access to the fishery is not a trivial concern to many of these small scale fishermen, to the extent that they have few alternative means outside of fishing for earning income. The impact of license limitation is to restrict the opportunities of some small vessel owners, yet offer a stabilized economic environment for the majority of the affected small businesses. The benefits accrue from preventing a further erosion of per vessel net returns and operating efficiency.

Compliance costs for small business entities are expected to be minor, since the existing procedures for application and issuance of fishing permits will be used to verify participation. In summary, the proposed license limitation program is not expected to have a significant impact on small business entities. The flexibility of open access will be reduced, possibly limiting economic opportunities for some non-qualifying fishermen, but this should be offset by increased stability and financial security for the existing participants in the Council-managed fisheries.

Coastal Zone Management Act

The alternatives in this proposed amendment are consistent, to the maximum extent practicable, with the provisions of the CZMA of 1972 and would not conflict with State of Alaska laws or regulations.

Administrative and Enforcement Costs

The license limitation alternative poses several issues that will impact administrative costs, including: (1) the determination of eligibility; (2) the appellate procedure; and (3) enforcement. Determining eligibility will require the verification of a vessel's status based on the participation criteria adopted. The vessel participation file generated as a part of this analysis may provide a basis for such a standard, but further refinement of the vessel file, and automation of the application process will initially require the work of at least one technical analyst.

The cost of operating an appeals board depends on the size of its membership, and the length and location of its meetings. The extent of appeals will also be affected by the qualifying criteria chosen by the Council; for example, a minimum landings requirement would add to the potential numbers of appeals when compared to a simple participation criteria. The cost and administrative requirements of the appellate procedure will be influenced, in large, by the eligibility criteria employed. Given the size of the fleet involved, and the lack of prior experience with such regulations, the appellate process might easily require the part time services of a two or three person staff during the initial allocation period.

The procedure for enforcement of the license limitation system is presumably no different than the present permit system. The issuance of a permit constitutes the right to operate in the affected fisheries, and vessels operating in these fisheries without permits would be violators. Careful screening of applicants in the initial issuance of permits is thus crucial to an effective enforcement program. However, to the extent that a license limitation system might lead to greater violations, some change in permit procedures or increased enforcement personnel may be required. Enforcement costs may also be affected significantly be the nature of the license issued under this alternative. A species-specific license, for example, may require much higher enforcement efforts than a general license which is good for all species. Enforcement costs associated with the proposed alternatives will likely represent the most significant costs to the implementing agencies.

Administrative costs in general will be influenced by the qualification criteria adopted. Highly restrictive eligibility criteria, while supporting the goals of limited entry, may entail proportionately greater administrative costs. In this regard, the expected benefits to be gained through specific license limitation provisions need to be weighed against the potential differences in administrative and enforcement costs.

1.0 INTRODUCTION

The Magnuson Fishery Conservation and Management Act (MFCMA) established management authority over all living resources within the United States Exclusive Economic Zone (EEZ) from 3 to 200 nautical miles offshore. The MFCMA created eight Regional Fishery Management Councils, one of which is the North Pacific Fishery Management Council (Council), to provide local and regional input into fisheries management. The Council has authority over the fisheries of the EEZ of the Arctic Ocean, Bering and Chukchi Seas, and the Pacific Ocean seaward of Alaska.

Two major functions of the Council include development and maintenance of fishery management plans for those fisheries under its authority in need of conservation and management. There are nearly 50 important marine species in the waters off Alaska, although not all require Council attention either because they are managed by the State of Alaska or an international convention, or industry interest is insufficient to warrant a management plan. The Council has developed fishery management plans (FMPs) for Bering Sea/Aleutian Islands (BSAI) Groundfish, Gulf of Alaska (GOA) Groundfish, BSAI king and Tanner Crab, Southeast Alaska Troll Salmon, and Scallops. The Council also has authority under the 1982 North Pacific Halibut Act to develop regulations, including limiting access, for participants in the Alaska halibut fisheries. Council actions affecting halibut may augment, but cannot conflict with regulations adopted by the International Pacific Halibut Commission.

A thorough analysis of proposed actions, covering the environmental, social, and economic aspects of the resource and the fishery participants is required of all FMPs. Fisheries regulations developed by the Council are required to meet numerous regulatory standards, and must be approved by the Secretary of Commerce (Secretary). Changes to existing FMPs may require formal amendments to the affected plans, including appropriate regulatory analysis.

The action analyzed in this proposed amendment is the implementation of a license limitation system covering vessels in the designated crab and groundfish fisheries under the Council's authority. Such action will require an amendment to the BSAI king and Tanner Crab FMP, the GOA Groundfish FMP, and the BSAI Groundfish FMP.

1.1 Action Contemplated

This analysis addresses the Council's proposal for a License Limitation Program in the groundfish and crab fisheries off Alaska. Action by the Council, and subsequent approval by the Secretary of Commerce (Secretary), would result in a limited entry system consisting of issuance of a limited number of licenses to fish for groundfish and crab off Alaska. This program may be a first step toward a more comprehensive, market-based management program such as individual fishing quotas (IFQs).

The goals adopted and actions taken by the Council must be framed within the general scope of the Magnuson Act. Under the Magnuson Act, license limitation is considered to be a form of limited access management. Section 303(b)(6) of the Magnuson Act provides authority to limit access to a fishery " . . . to achieve optimum yield if, in developing such a system, the Council and Secretary take into account:

A. present participation in the fishery,
B. historical fishing practices in, and dependence on, the fishery,
C. the economics of the fishery,
D. the capability of fishing vessels used in the fishery to engage in other fisheries,
E. the cultural and social framework relevant to the fishery, and
F. any other relevant considerations."

Other considerations bearing on the development of access control programs include the distribution of economic and social benefits, transferability of fishing privileges, enforcement and monitoring costs, and simplicity of the program which can enhance public understanding and compliance.

The Magnuson Act (Section 3(21)) further defines ". . . The term 'optimum' with respect to the yield from a fishery, [as] the amount of fish—(A) which will provide the greatest overall benefit to the Nation, with particular reference to food production and recreational opportunities; and (B) which is prescribed as such on the basis of the maximum sustainable yield from such fishery, as modified by any relevant economic, social, or ecological factor."

1.2 Purpose and Need for Action

When approving inshore-offshore allocations (Amendment 18/23) in 1992, the Council made a commitment to develop and implement a "comprehensive and rational management program for the fisheries by January 1, 1996," at which time, the inshore-offshore allocation and the attendant CDQ program for pollock would be scheduled to expire. The Comprehensive Rationalization Plan (CRP) would be a priority issue for Council consideration and would examine, initially, the following alternatives to the status quo:

1. Exclusive Registration: Require vessels to register to fish in a specific geographic area, while giving up the right to fish in other areas.

2. Seasonal Allocations: Divide the TACs of specific fisheries into seasons.

3. License Limitation: Allocate a limited number of licenses. Participation without a license would be prohibited.

4. Gear Allocation: Allocate a percentage of the TAC of specific fisheries to specific gear groups.

5. Continue Inshore-Offshore Allocations: Continue the Inshore-Offshore allocation which sunsets after 1995.

6. Community Development Quotas: Allocate some portion of the TAC of specified fisheries to disadvantaged communities. The communities could use their quotas when and how they saw fit within existing regulations.

7. Trip Limits: Limit the catch of a given species in a given trip to less than a specified amount. The number of trips would remain unlimited.

8. Individual Fishing Quotas (IFQs) for Prohibited Species: Allocate some percentage of the PSC cap to each vessel. Vessels reaching their quota would have to suspend operations in fisheries where the prohibited species occur. The quotas would be transferable.

9. Non-transferable IFQs for All Species: Vessels would be allocated some percentage of the TAC of the various species. They could fish them when and how they desired, but once their quotas were met they would have to quit fishing. Transfers of quotas would not be permitted.

10. Transferable IFQs for All Species: Vessels would be allocated some percentage of the TAC of the various species. They could fish them when and how they desired, but once their quotas were met they would have to quit fishing. Transfers of quotas would be permitted.

11. Auctions: Specified amounts of each species would be auctioned for a set number of years. This alternative is not currently allowed under the Magnuson Act.

The first meeting to specifically consider CRP was in November 1992. Experts in the field of limited entry were invited by the Council to describe the applicability of IFQs to groundfish and crab fisheries off Alaska. At that meeting, initial CRP proposals from industry also were reviewed by the Council.

In December 1992, the Council approved a Problem Statement describing the need for and purpose of the CRP initiative. The Problem Statement consists of two introductory paragraphs followed by 14 symptoms of the underlying problems they believed needed to be addressed:

Problem Statement

Expansion of the domestic fleet harvesting fish within the EEZ off Alaska, in excess of that needed to harvest the optimum yield efficiently, has made compliance with the Magnuson Act's National Standards and achievement of the Council's comprehensive goals, adopted December 7, 1984, more difficult under current management regimes. In striving to achieve its comprehensive goals, the Council is committed to: " (1) assure the long-term health and productivity of fish stocks, and other living marine resources of the North Pacific and Bering Sea ecosystem, (2) support the stability, economic well-being and diversity of the seafood industry, and provide for the economic and social needs of the communities dependent upon that industry, and (3) efficiently manage the resources within its jurisdiction to reduce bycatch, minimize waste, and improve utilization of fish resources in order to provide the maximum benefit to the present and future generations of fishermen, associated fishing industry sectors, communities, consumers, and the nation as a whole."

The Council's overriding concern is to maintain the health of the marine ecosystem to ensure the long-term conservation and abundance of the groundfish and crab resources. In addition, the Council must address the competing and oftentimes conflicting needs of the domestic fisheries that have developed rapidly under open access, fisheries which have become over-capitalized and mismatched to the finite fishery resources available. Symptomatic of the intense pressures within the over-capitalized groundfish and crab fisheries under the Council jurisdiction off Alaska are the following problems:

1. Harvesting capacity in excess of that required to harvest the available resource.

2. Allocation and preemption conflicts between and within industry sectors, such as with inshore and offshore components.

3. Preemption conflicts between gear types.

4. Gear conflicts within fisheries where there is overcrowding of fishing gear due to excessive participation and surplus fishing effort on limited grounds.

5. Dead-loss such as with ghost fishing by lost or discarded gear.

6. Bycatch loss of groundfish, crab, herring, salmon, and other non-target species, including bycatch which is not landed for regulatory reasons.

7. Economic loss and waste associated with discard mortality of target species harvested but not retained for economic reasons.

8. Concerns regarding vessel and crew safety which are often compromised in the race for fish.

9. Economic instability within various sectors of the *fishing industry*, and in fishing communities caused by short and unpredictable fishing seasons, or preemption which denies access to fisheries resources.

10. Inability to provide for a long-term, stable fisheries based economy in small economically disadvantaged adjacent coastal communities.

11. Reduction in ability to provide a quality product to consumers at a competitive price, and thus maintain the competitiveness of seafood products from the EEZ off Alaska on the world market.

12. Possible impacts on marine mammals and seabirds, and marine habitat.

13. Inability to achieve long-term sustainable economic benefits to the Nation.

14. A complex enforcement regimen for fishermen and management alike which inhibits the achievement of the Council's comprehensive goals.

1.3 Management Background

After developing the Problem Statement and identifying an initial list of potential management alternatives, the Council's energies became largely devoted to narrowing the alternatives down to those most viable in light of the problems facing the fisheries. At the January 1993 meeting, the Council staff presented the list of problems and the list of alternative solutions to poll the Council, industry, and public in attendance with the intent of identifying their perceptions of the most viable alternatives. The results are shown in Table 1.1. For example, of the 47 respondents, 14 felt that Exclusive Registration positively addressed Problem 1 (Excess Harvesting Capacity), while 33 indicated it did not address the problem.

Table 1.1 Council, Industry and Public Poll Comparing Alternatives and Problems

		PROBLEMS													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Exclusive Registration	+	14	25	18	21	7	7	8	13	26	22	7	10	12	15
	-	33	22	29	26	40	40	39	34	21	25	40	37	35	32
Seasonal Allocations	+	18	18	19	14	9	22	20	20	22	14	27	39	19	14
	-	29	29	28	33	38	25	27	27	25	33	20	9	28	33
License Limitation	+	29	25	22	23	19	15	11	24	24	15	18	19	25	21
	-	18	22	25	24	28	32	37	23	23	32	29	28	22	26
Gear Allocations	+	13	23	37	18	21	22	19	12	22	11	16	27	16	9
	-	34	24	10	29	26	25	28	35	25	36	31	20	31	38
Inshore-Offshore	+	14	29	15	14	3	6	10	10	25	19	12	11	11	9
	-	33	18	32	33	44	41	37	37	22	28	35	36	36	38
CDQ Allocations	+	9	13	8	10	5	7	10	12	23	35	14	7	13	5
	-	38	34	39	37	42	40	37	35	24	12	33	40	34	42
Trip Limits	+	16	14	9	15	14	10	8	17	17	12	10	13	7	5
	-	31	33	38	32	33	37	39	30	30	35	37	34	40	42
IFQs for PSCs	+	26	24	24	20	15	36	19	23	27	14	23	22	27	16
	-	21	23	23	27	32	11	28	24	20	33	24	25	20	31
Non-Transferable IFQs	+	19	16	18	20	19	18	18	30	23	26	28	19	22	18
	-	28	31	29	27	28	29	29	17	24	21	19	28	25	29
Transferable IFQs	+	39	35	35	10	31	31	28	43	37	29	40	29	39	25
	-	9	12	12	37	16	16	19	4	10	18	7	18	8	22
Auctions	+	27	24	17	22	16	16	15	28	18	15	23	15	19	15
	-	20	23	30	25	31	31	34	19	29	32	24	32	28	32

At that meeting, the Council staff presented their conclusions of the effectiveness of each of the alternatives:

1. Exclusive registration essentially will divide the fishery into smaller races for fish. In the short term, exclusive registration could spread harvest and alleviate preemption, and could possibly address economic stability in fishing communities. Exclusive registration alternatives for Pacific cod and pollock fisheries were considered by the Council in 1992 and 1993, but never approved for Secretarial review.

2. Seasonal allocations could also lead to many shorter races for fish depending on the number of different seasons. Depending on the primary goals in the setting of the seasons they could reduce bycatch or economic discards, alleviate vessel safety concerns, increase product quality and prices, address marine mammal concerns and could protect stocks during biologically sensitive periods. Timing a season to address one symptom, however, would very likely exacerbate other symptoms.

3. License Limitation could alleviate excess capacity if the number of licenses was set to match the available resource. Licenses could be effective for species which do not operate under TACs such

as crab. Since the allocation of licenses is an "all or none" proposition, they could be very contentious. The Council studied and rejected license limitation for sablefish and halibut.

4. Gear allocations could address many of the symptoms including concerns over preemption, bycatch, gear loss, marine mammals and product quality. However, as with the allocation of Pacific cod in 1993 and sablefish in 1986, the allocation process is very contentious. As seen in the sablefish fishery, allocations can lead to multiple races for fish within the gear groups and, therefore, should be viewed as short-term solutions.

5. Continuing the inshore-offshore allocations could address the concern over preemption across the two sectors, but does little to address preemption concerns within each sector. It essentially creates two races for fish.

6. Community Development Quotas have proven very beneficial for the communities which received quotas under the inshore-offshore allocation. For the portion of the TAC set aside for these communities, the race for fish has been eliminated, and consequently the communities have reported improved quality and safety. CDQs improve the economic situation in the recipient communities, but reduce the amount of fish available to other fishers and likely intensify the race for the remaining TACs.

7. Trip Limits are generally viewed as forcing inefficiency on the fishing fleets. Unless the number of trips is limited, there are no incentives to reduce capacity. Those sectors of the fleet best suited to fish under the trip limit will likely be provided with some additional stability; other sectors, primarily those with greater capacity, will face increasing instability. If all catch is counted against the trip limit, this alternative could reduce economic discards, however, the monitoring and enforcement costs of such a system would be high.

8. Individual Fishing Quotas (IFQs) for prohibited species could alleviate excess capacity and preemption issues for those species for which PSC is a constraint. Because IFQs for PSCs will slow the race for fish they could result in reduced bycatch waste, improved vessel safety, higher product quality and prices and improved economic stability. In fisheries where PSC is not a constraint on the fishery, they will have little impact.

9. Non-transferable IFQs for all species could address most of the problems and symptoms identified by the Council, if the initial allocation were able to match the needs of each participant in the fleet. Given the great diversity with the industry, it is very likely that the initial allocation would be extremely contentious. If the allocation did not match the needs of the fleet, there could be increased bycatch, discards, and unfished quotas.

10. Transferable IFQs for all species appear to address all the identified problems with the possible exception of marine mammals and enforcement concerns. IFQs address the underlying problems caused by the common property nature of the resource and allows the market, rather than the government, to allocate resources to those who can use them most efficiently. IFQs are not a panacea, they are administratively complex and potentially very difficult to monitor and enforce, and they are viewed as a windfall profit for initial recipients. For individual and communities who do not receive sufficient IFQs initially, it may lead to greater economic instability.

11. Auctions, which are really a mechanism for allocating IFQs, could address most of the Council's identified problems. They would also eliminate the appearance of a windfall profit. Auctions could create some initial instability because of the immediacy of the transition to market-based allocations. Auctions are not currently allowed by the Magnuson Act and could make it difficult for the Council to achieve social objectives.

As Table 1.1 shows, the Council and public clearly indicated that transferable IFQs could solve the greatest number of problems facing the fishing industry. The Council then identified IFQs as the primary alternative for analysis, but did not eliminate License Limitations from consideration. Much of the analytical effort during 1993 was directed at building models to demonstrate economic impacts and potential net changes in benefits accruing to the industry under various forms of IFQs. Through the April and June 1993 Council meetings much of the efforts of industry and the Council were directed at identifying the possible elements and options within an IFQ or License Limitation program, noting that the preponderance of analytical resources should be spent on IFQ development, and that License Limitation should be discussed only qualitatively.

Although IFQs generally were viewed as the alternative with most potential for solving the greatest number of problems in the industry, an agreement as to who should receive the initial allocation of quotas and how much they should receive did not appear likely in the near term. Without industry consensus, development of an IFQ program was severely hindered. Nor had any experience been gained from the sablefish and halibut IFQ system because of delays in implementation. In September 1993, the Council put License Limitation back into the CRP analysis, equal in consideration to the IFQ alternative, and expanded the list of sub-alternatives for analysis in both management systems. In December 1993, the Council tabled discussion of CRP until the January 1994 meeting.

By January 1994, it was apparent that a comprehensive IFQ program likely would not be in place by the January 1, 1996 deadline set for CRP. This was because of the lack of industry consensus on the specific form of an IFQ program, the time required for analysis of the various IFQ (and license limitation) options, the time required for Secretarial review if approved by the Council, and the time necessary for implementation of the program once approved by the Secretary. At the January 1994 meeting, the Council, at the suggestion of their Advisory Panel (AP), voted to expedite a license limitation system, with an IFQ program as a potential second step in an overall, comprehensive rationalization program. One argument for this approach was to stabilize the industry while developing a potential IFQ program, and to define the participants for future IFQ allocations. Another argument was to allow for a period of time to observe the results of sablefish/halibut IFQ program scheduled to go into effect in 1995. The Council staff was instructed to dedicate the majority of their time to an analysis of the license limitation program and its various sub-alternatives.

The Council clearly had not ruled out IFQs, however, it appeared clear to them that they could not be implemented prior to 1996. Therefore, the license limitation program should be judged not only against the problems and symptom listed above, but also examined as a path potentially leading to the eventual allocation of IFQs.

1.4 Alternatives Considered

1.4.1 Alternative 1: No Action

The no action alternative leaves current regulations to manage the fisheries. This alternative also allows the Council to continue to examine limited entry alternatives including License Limitation or IFQs. Further, the no action alternative does not preclude the development of methods to improve the measurement and reporting of harvested fish on individual vessels (*total weight measurement*), the development of methods to improve the utilization of harvested fish (*full utilization*), or action on the Inshore-Offshore allocation which is due to sunset December 31, 1995. Also under the no-action alternative, a myriad of other, more traditional, management tools could be employed by the Council in the future.

1.4.2 Alternative 2: License Limitation

Limit the number of licenses (or vessels) operating in the groundfish and crab fisheries with the possibility that this would be a first step toward the goal of a comprehensive rationalization of the fisheries. The form of the *License Limitation program is being deliberated* by the industry and the Council, and analyzed in this document.

Groundfish Licenses. The suite of Groundfish License elements and options is separated into two sets. The first set deals with those elements that affect the initial assignment of licenses; the second deals with elements that affect the ownership, use and transfer of licenses.

The following components are defined for initial assignment of licenses: Nature of Licenses, License Recipients, License Designations, Qualifying Periods, Landings Requirements for General License Qualification, and Landings Requirements for Endorsement Qualification. These components are shown in **bold text** with their accompanying options listed below. In developing a preferred alternative for the initial assignment of groundfish licenses, the Council will need to choose one option from each component set.

The numbering scheme to the right of each option will allow alternatives and combinations of alternatives to be easily identified. This list of elements and options is derived from previous versions and presentations of the license alternative as shown in Appendix I. Only "decision items" are included in this format. Analytical directions incorporated into various motions, such as, the direction to analyze the management and enforcement costs, are not included because the Council will not face a decision 'choice' on this issue. Management and enforcement costs are nonetheless studied and included in this document.

GROUNDFISH LICENSES
COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING INITIAL ASSIGNMENT
ANALYSIS FORMAT

Nature of Licenses	Numbering Scheme
Single license for all species and areas	100000
Licenses for FMP areas (i.e., GOA and BSAI)	200000
Licenses for FMP sub-areas (i.e., EG, CG, WG, BS, AI)	300000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries	400000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries by FMP areas	500000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries by FMP sub-areas	600000
Licenses for fisheries (see box) by FMP sub-areas	700000
Licenses for fisheries (see box) by the following areas: EG, CG, WG, BSAI	800000

FisheriesSpecified Under Options 700,000 and 800,000

BSAI Fishery Licenses:	GOA Fishery Licenses:
Pollock, Pacific Cod, Atka Mackerel, Yellowfin Sole, Other Flatfish, Rockfish, Squid (Fixed Gear), Rocksole, Turbots	Pollock, Pacific Cod, Deep Water Flats, Shallow Water Flatfish Atka Mackerel

License Recipients	
Current owners	10000
Current owner, then owner at the time of landing, then permit holders (no duplicate)	20000
Current owners, then permit holders (no duplicates)	30000
Current owners, owners at the time of landing, and permit holders (duplicates allowed)	40000

License Designations	
No restrictions	1000
Catcher vessels & Catcher/processors	2000
Vessel length	3000
Inshore & Offshore	4000
Catcher vessels & Catcher/processors and vessel length	5000
Catcher vessels & Catcher/processors and Inshore & Offshore	6000
Inshore & Offshore and vessel length	7000
Catcher vessels & Catcher/processors, Inshore & Offshore, and vessel length	8000

Qualifying Periods	
Jan. 1, 1978 - Dec. 31, 1993	100
Jun. 28, 1989 - Jun. 27, 1992	200
Jun. 28, 1989 - date of final action	300
Jan. 1, 1990 - Dec. 31, 1993	400
The three years prior to the date of final action	500
Jun. 28, 1989 - Jun. 27, 1992 & the three years prior to the date of final action	600
Each of the three calendar years from 1/1/90 - 6/27/92 & the 365 days prior to final action, except for fixed gear P. cod use 6/23/91 - 6/27/92 rather than 1/1/90 - 6/27/92	700

Landings Requirements For General License Qualification	
One Landing	10
Two landings	20
5,000 pounds	30
10,000 pounds	40
20,000 pounds	50

Landings Requirements for Endorsement Qualification	
One landing in qualifying period	1
Two landings in qualifying period	2
Three landings in qualifying period	3
Four landings in qualifying period	4
One landing in year prior to council action	5
Two landings in year prior to council action	6
Three landings in year prior to council action	7
Four landings in year prior to council action	8

In addition to options affecting the assignment of licenses, the Council has included options affecting the transferability, ownership, and use of licenses. These are independent from the initial assignment of licenses and includes Who May Purchase Licenses, Vessel/License Linkages, License Separability, Vessel Replacement and Upgrades, License Ownership Caps, Vessel License Use Caps, Vessel Designation Limits, Buy-back/Retirement Program, Skipper Program, Community Development Quotas, Community Development Licenses, and Other Provisions.

In developing a preferred alternative, the Council will need to choose one element from each component set, with the exception of "Other Provisions," from which the Council may choose none, or any number of the options listed. The numbering scheme used above is not employed for these components because of the independent nature of the components.

GROUNDFISH LICENSES
COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING THE OWNERSHIP, USE AND TRANSFER LICENSES

Who May Purchase Licenses

1. Licenses could be transferred only to "persons" defined under Title 46 U.S.C.
2. Licenses could be transferred to "persons" with 76% or more U.S. ownership, with "grandfather" rights for license recipients with 75% or less U.S. ownership (Title 46 U.S.C.).

Vessel/License Linkages

1. Vessel must be transferred with license
2. Licenses may be transferred without a vessel, i.e., licenses may be applied to vessels other than that to which the license initially was issued.

Options Regarding the Separability of Species and/or Area Designations

1. Species and/or Area designations are not separable, and shall remain as a single license with those initial designations.
2. Species and/or Area designations shall be treated as separable licenses and may be transferred as such.
3. Species and/or Area designations shall be regarded as separable endorsements which require the owner to also own a general license before use or purchase.

Vessel Replacement and Upgrades

1. No restrictions on vessel replacement or upgrades, except that the vessel must meet the "License Designations" defined by the initial allocation.
2. Vessel may not be replaced or upgraded.
3. Vessel may be replaced or upgraded within the bounds of the 20% Rule as defined under the moratorium proposed rule.

License Ownership Caps

1. No limit on the number of licenses or endorsements which may be owned by a "person."
2. No more than 5 area licenses per person with grandfather provisions.
3. No more than 10 area licenses per person with grandfather provisions.
4. No more than 15 area licenses per person with grandfather provisions.
5. No more than 5 fishery/area endorsements per person with grandfather provisions.
6. No more than 10 fishery/area endorsements per person with grandfather provisions.
7. No more than 15 fishery/area endorsements per person with grandfather provisions.

Vessel License Use Caps

1. No limit on the number of licenses (or endorsements) which may be used on a vessel.
2. No more than 1 area license (endorsement) may be used on a vessel in a given year.
3. No more than 2 area licenses (endorsements) may be used on a vessel in a given year.
4. No more than 3 area licenses (endorsements) may be used on a vessel in a given year.
5. No more than 4 area licenses (endorsements) may be used on a vessel in a given year.
6. No more than 5 area licenses (endorsements) may be used on a vessel in a given year.

Vessel Designation Limits

1. A vessel which qualifies for multiple designations (i.e., both as a CV and as a CP or as both inshore and offshore) under the use restriction component will be able to participate under any designation for which it qualifies.
2. A vessel which qualifies for multiple designations under the use restriction component must choose one of the designations for use.

Buy-back/Retirement Program

1. No buy-back/retirement program.
2. Fractional license system. (Fractional licenses may be issued to vessel owners at the time of landing and/or permit holders.)
3. Industry Funded Buy-back Program with right of first refusal on all transfers of licenses.

Two-Tiered Skipper License Program

1. Do not implement a Two-Tiered Skipper License Program.
2. Implement a Two-Tiered Skipper License Program.

Community Development Quotas.

1. No CDQ allocations
2. 3% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
3. 7.5% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
4. 10% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
5. 15% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.

Community Development Licenses.

1. No Community Development Licenses.
2. Grant an additional 3% non-transferable licenses to CDQs communities.
3. Grant an additional 7.5% non-transferable licenses to CDQs communities.
4. Grant an additional 10% non-transferable licenses to CDQs communities.
5. Grant an additional 15% non-transferable licenses to CDQs communities.

Other Provisions (Choose any or none of the following)

1. Licenses represent a use privilege. The Council may convert the license program to an IFQ program or otherwise alter or rescind the program without compensation to license holders.
2. Severe penalties may be invoked for failure to comply with conditions of the license.
3. Licenses may be suspended or revoked for multiple violations.
4. Implement a Skipper Reporting System which requires groundfish license holders to report skipper names, address, and service records to NMFS.
5. Develop and implement mechanisms to collect management, enforcement costs and/or rents from the industry, including taxes and fees on the industry.

Crab Licenses. The components and alternative elements and options for a crab license limitation program are set forth below in the same format as for groundfish. These were developed concurrently with the groundfish alternatives and are similar in some cases, but tailored to the specific nature of the crab fisheries. They are also divided into two sections: (1) those elements which affect the initial assignment of crab licenses, and are numbered, and (2) those elements and options which affect the ownership, use, and transfer of crab licenses. These elements and options are as follows:

CRAB LICENSES
COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING INITIAL ASSIGNMENTS OF LICENSES

	Numbering Scheme
Nature of Licenses	
Single license for all species and areas	10000
Licenses for species (e.g., *C. opilio*, *C. bairdi*, Red, Blue and Brown King Crab)	20000
‡Licenses for each species/area combination	30000
License Recipients	
‡Current owners	1000
Current owners and permit holders	2000
License Designations	
No restrictions	100
Catcher vessels & Catcher/processors	200
Vessel length	300
‡Catcher vessels & Catcher/processors and vessel length	400
Qualifying Period	
Jan. 1, 1978 - Dec. 31, 1993	10
‡6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for D.H. Red & 6/29/85 - 6/25/1988 for Prib. Blue)	20
Minimum landings	
‡No minimum	1
1 landing for Red & Blue King, 3 landings for Brown King, *C. opilio*, & *C. bairdi*	2

In addition to the elements affecting the initial assignment of licenses, alternatives exist which affect the ownership, use, and transfer of licenses once they have been issued. These are shown below. In developing a preferred alternative, the Council should choose one element from each component set (component headings are shown in **bold text**.)

CRAB LICENSES

COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING OWNERSHIP, USE AND TRANSFER OF LICENSES

Who May Purchase Licenses

1. Licenses could be transferred only to "persons" defined under Title 46 U.S.C.
2. Licenses could be transferred to "persons" with 76% or more U.S. ownership, with "grandfather" rights for license recipients with 75% or less U.S. ownership (Title 46 U.S.C.).
3. Licenses are non-transferable.

Vessel/License Linkages

1. Vessel must be transferred with license
2. Licenses may be transferred without a vessel, i.e., licenses may be applied to vessels other than that to which the license was initially was issued.

Options Regarding the Separability of Species and/or Area Designations

1. Species and/or Area designations are not separable, and shall remain grouped as in the initial allocation.
2. Species or Area designations shall be treated as separable licenses and may be transferred as such.
3. Species or Area designations shall be regarded as separable endorsements which require the owner to also own a more general license before use or purchase.

Vessel Replacement and Upgrades

1. No restrictions on vessel replacement or upgrades, except that the vessel must meet the "License Designations" defined by the initial allocation.
2. Vessel may not be replaced or upgraded.
3. Vessel may be replaced or upgraded within the bounds of the 20% Rule as defined under the moratorium proposed rule.

Buy-back/Retirement Program

1. No buy-back/retirement program.
2. Fractional license system. (Fractional licenses may be issued to permit holders.)
3. Industry Funded Buy-back Program with right of first refusal on all transfers of licenses.

Two-Tiered Skipper License Program

1. Do not implement a Two-Tiered Skipper License Program.
2. Implement a Two-Tiered Skipper License Program.

Community Development Quotas.

1. No CDQ allocations.
2. Set aside 3% of crab fisheries with GHLs for CDQs patterned after current program w/o sunset provision.
3. Set aside 7.5% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.
4. Set aside 10% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.
5. Set aside 15% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.

Community Development Licenses.

1. No Community Development Licenses.
2. Grant an additional 3% non-transferable licenses to CDQs communities.
3. Grant an additional 7.5% non-transferable licenses to CDQs communities.
4. Grant an additional 10% non-transferable licenses to CDQs communities.
5. Grant an additional 15% non-transferable licenses to CDQs communities.

Other Provisions (Choose any or none of the following)

1. Licenses represent a use privilege. The Council may convert the license program to an IFQ program or otherwise alter or rescind the program without compensation to license holders.
2. Severe penalties may be invoked for failure to comply with conditions of the license.
3. Licenses may be suspended or revoked for multiple violations.
4. Implement a Skipper Reporting System which requires groundfish license holders to report skipper names, address, and service records to NMFS.
5. Develop and implement mechanisms to collect management, enforcement costs and/or rents from the industry, including taxes and fees on the industry.
6. No Future Super-exclusive Area will be proposed.

Individual Transferable Pot Quota System

In addition to the components above, an Individual Transferable Pot Quota (ITPQ) System Alternative has been proposed in concept only. Under this option, the components affecting the initial assignment of crab licenses will remain unchanged. However, once it is decided which persons qualify for which vessel size and processing designations, licenses would be linked to a limited number of pots. Pots could be transferred to meet individual vessel requirements. Many of the component sets regarding the use and transferability of licenses may not apply under a ITPQ system. The Council will have to specify in more detail if additional analysis of the ITPQ system is desired.

2.0 Current Status of Fisheries

This Chapter describes the current fisheries for which License Limitation is being considered. Detailed information only is available through 1992, but some additional information for 1993 are provided in Chapter 3 where the alternatives are examined. The 1993 information is provided as a 'proxy' for the status quo situation; i.e., it allows the reviewer to compare the distributional aspects of license limitation alternatives with the current fisheries. Appendix II of this document also contains additional information on the current status of the fisheries for groundfish and crab, more specific by vessel categories. The Appendix also contains the information over a three-year time series (1990-1992) which captures some of the trends of the fisheries.

After describing the current fisheries, this chapter then presents a description of representative vessel and processor profiles in Section 2.2. These will be used later in the analysis to help describe the impacts of various license alternatives on sectors of the industry.

The final section of this chapter, Section 2.3, presents a general discussion of fishery economics. This will aid the reader in understanding economic impact conclusions later in the document.

This Chapter is not intended to capture the potential effects of the 'Status Quo' or No Action Alternative. Rather, it is intended to describe the current situation in the fisheries, as a backdrop for either a No Action or License Limitation choice by the Council and Secretary of Commerce. Potential effects of taking no action (rejecting a License Limitation alternative) are discussed further in Chapter 3.

2.1 Current Fleet Description

Summary statistics of the groundfish fisheries in the North Pacific are reported annually in the "Economic Status of the Groundfish Fisheries Off Alaska" (ESG). The document is prepared by analysts at the NMFS/Alaska Fishery Science Center and reports catches, vessels, gears, and prices for the fishery. Some of the more relevant information is reproduced below.

The 1991 and 1992, GOA groundfish fisheries are summarized in Table 2.1 and show that just over 284,000 mt of groundfish was harvested in 1992 compared to 276,000 mt in 1991, for a 3% gain. This gain was shared evenly by all gear types. Longline vessels increased their harvest by 38%, pots remained roughly the same, and trawlers decreased by 1-2%. Only 82% of the overall TAC was harvested in 1991, but there was a 0.8% overrun in 1992.

Table 2.2 shows the 1991 and 1992 BSAI fisheries. Overall harvest decreased by nearly 160,000 mt or 7%. The longline fishery gained 25,400 mt or 26%. The catch by pot vessels more than doubled over the two years. Trawlers lost 192,000 mt or about 9%. Overall catch in the BSAI was 0.12% less than the overall TAC in 1992. In 1991, the TAC was exceeded by over 155,000 mt, an overrun of nearly 8%.

Table 2.3 shows the number of vessels landing groundfish by year and gear group and that pot vessels and trawlers are equally numerous. This table also shows that hook and line vessels are the most numerous of any gear group. The number of vessels in all gear groups increased significantly over the 7-year period.

Table 2.4 combines the information in Tables 2.1 - 2.3 to estimate the average catch per vessel by gear group for 1991 and 1992. It shows that the catch per vessel in the longline fleet is much smaller than the catch per vessel in the trawl fleet. Over all areas, however, only the longline fleet increased their catch per vessel from 1991 to 1992.

Table 2.5 shows the estimated ex-vessel value of the commercial fisheries off Alaska for shellfish, salmon, herring, halibut and groundfish. Groundfish ex-vessel values generally have increased the past ten years with a particularly big jump from 1991 to 1992. Salmon values were high in 1988, very low in 1991, and increased again in 1992. Crab values have been relatively stronger in recent years. Halibut values, though very high in 1991, fell by nearly half in 1992. Overall ex-vessel values have shown a steady increase in the 10-year period from 1982-1992. Since 1987, the overall value has shown fairly dramatic swings as shown by the nearly 33% increase between 1991 and 1992.

Table 2.6 combines Tables 2.3 and 2.5 to estimate the average ex-vessel value per groundfish vessel for 1986-1992. This is a crude measure of the ability of vessels to make payments on vessels and fixed costs.

Table 2.7 shows the season lengths of the pollock fisheries by area for 1986-1992. The tendency toward shorter seasons shows that capacity is greater than is necessary to harvest the available resources, and that many vessels will be idle during the fishing year unless they can participate in other fisheries. In general, the groundfish fisheries in the last 10 years have been the mainstay in a general upturn in the fishing industry off the coast of Alaska. The large increases in numbers of vessels represent a significant increase in the amount of capital invested in fishing vessels.

Table 2.1 Blend estimate of the Gulf of Alaska groundfish catch by species and target fishery, 1991-92 (metric tons).

Target Fishery	Pollock	Sablefish	Pacific Cod	Arrow-tooth	Flatfish deep	Flatfish shallow	Rockfish	Other	Total
1991									
Longline target									
Sablefish	11	20,399	778	1,093	85	32	1,339	706	24,442
Pacific cod	32	24	7,324	13	5	4	79	116	7598
Rockfish	2	24	48	5	8	21	525	9	643
Longline total	44	20,448	8,151	1,112	99	56	1,943	831	32,683
Pot target									
Pacific cod	95	.	10,487	1	.	3	3	133	10,721
Other	.	.	0	.	.	.	.	1	2
Pot total	95	.	10,488	1	.	3	3	134	10,723
Trawl target									
Pollock									
Bottom	13,966	212	993	1,315	815	699	244	142	18,387
Pelagic	80,497	6	205	153	7	39	95	45	81,047
Sablefish	9	64	9	73	64	4	29	3	255
Pacific cod	9,202	111	54,832	2,211	1,325	4,898	607	1,897	75,082
Arrowtooth	382	85	103	1,595	336	23	367	42	2,933
Flatfish									
Deep	1,666	812	971	10,679	6,602	1,520	1,064	592	23,907
Shallow	194	50	186	327	216	568	74	56	1672
Rockfish	1,389	1,317	659	3,985	729	221	15,999	302	24,601
Other	77	22	271	120	41	235	372	3,071	4,209
Trawl Total	107,381	2,681	58,230	20,457	10,136	8,207	18,852	6,150	232,092
1991 Total	107,521	23,135	76,981	21,570	10,234	8,266	21,200	7,115	276,022

Table 2.1 Gulf of Alaska (continued)

Target Fishery	Pollock	Sablefish	Pacific Cod	Arrow-tooth	Flatfish deep	Flatfish shallow	Rockfish	Other	Total
1992									
Longline target									
Sablefish	13	20,477	510	1,266	61	3,181	1,707	815	28,029
Pacific cod	60	138	14,893	209	3	26	119	619	16,066
Flat shallow	.	0	1	.	.	3	.	.	4
Rockfish	0	44	55	3	0	0	739	4	844
Other	1	8	7	2	0	0	0	3	22
Longline total	73	20,666	15,466	1,479	64	3,211	2,565	1,441	44,965
Pot target									
Pacific cod	2	0	10,009	1	0	2	2	174	10,190
Rockfish	.	.	0	.	.	.	1	.	1
Other	.	.	1	.	.	.	.	4	5
Pot total	2	0	10,009	1	0	2	3	178	10,195
Trawl target									
Pollock									
Bottom	11,588	67	765	729	259	527	139	207	14,282
Pelagic	71,305	11	279	257	11	105	15	303	72,285
Sablefish	13	9	2	15	2	0	1	3	42
Pacific cod	7,922	76	49,470	2,334	427	4,348	403	1,284	66,263
Arrowtooth	55	52	38	96	14	2	14	3	274
Flatfish deep	1,403	617	1,099	9,324	6,394	1,257	999	672	21,764
Flatfish shallow	709	123	1,113	1,650	473	4,331	168	569	9,137
Rockfish	545	1,717	580	4,176	418	132	18,780	508	26,855
Other	230	36	972	960	300	248	1,500	13,492	17,737
Trawl Total	93,769	2,708	54,319	19,541	8,298	10,950	22,018	17,038	228,640
1992 Total	93,851	23,376	80,120	21,021	8,363	14,162	24,926	18,657	284,477

Source: NMFS Alaska Region blend estimates.

Table 2.2 Blend estimate of the Bering Sea and Aleutian Islands groundfish catch by species and target fishery, 1991-92 (metric tons).

Target Fishery	Pollock	Sablefish	Pacific Cod	Arrow-tooth	Rock sole	Turbot	Yellow fin	Flat Other	Rock fish	Atka mackerel	Other	Total
1991												
Longline target												
Sablefish	8	2,528	283	196	0	1,300	.	26	279	0	125	4,745
Pacific cod	2,542	358	78,617	2,139	22	574	3	322	288	3	7,132	92,002
Arrowtooth	.	3	.	5	.	1	.	.	0	.	0	8
Turbot	.	6	0	1	.	12	.	1	1	.	2	23
Rockfish	.	9	2	1	.	3	.	3	13	.	0	30
Other	0	.	25	1	.	.	.	0	.	.	35	61
Longline total	2,584	2,905	79,697	2,358	22	1,890	3	357	581	4	7,386	97,787
Pot target												
Sablefish	.	0	.	0	.	0	.	.	.	.	.	0
Pacific cod	3	0	6,673	1	0	0	39	1	2	2	224	6,943
Other	.	.	.	.	.	.	.	.	.	.	0	0
Pot total	3	0	6,673	1	0	0	39	1	2	2	224	6,944
Trawl target												
Pollock												
Bottom	327,528	28	21,908	7,792	2,581	208	856	5,744	645	562	4,165	372,016
Pelagic	1,224,008	1	4,725	598	238	125	52	1,425	289	8	1,492	1,232,962
Sablefish	28	97	12	155	.	189	.	19	29	.	23	551
Pacific cod	41,060	17	90,141	3,466	6,560	190	592	4,509	2,648	897	4,799	154,879
Arrowtooth	171	30	25	1,463	2	403	0	126	99	2	113	2,434
Rock sole	20,040	8	6,365	712	36,283	1	7,231	6,157	88	1	2,830	79,715
Turbot	221	257	115	1,995	9	5,060	0	152	106	70	213	8,196
Yellowfin sole	8,062	1	3,994	175	9,665	0	104,596	13,410	29	1	3,802	143,735
Flatfish, other	3,112	2	957	602	1,235	9	4,276	4,027	19	.	891	15,129
Rockfish	809	47	1,028	1,497	106	127	6	361	5,270	215	603	10,069
Atka mackerel	926	55	2,411	172	122	46	.	56	814	24,975	884	30,459
Other	2	1	2	45	0	0	.	5	0	.	20	76
Trawl Total	1,625,966	543	131,682	18,671	56,800	6,357	117,609	35,991	10,035	26,732	19,834	2,050,222
1991 Total	1,628,897	3,448	218,052	21,030	56,823	8,248	117,651	36,349	10,617	26,737	27,445	2,155,298

Table 2.2 Bering Sea/Aleutian Islands (continued)

Target Fishery	Pollock	Sablefish	Pacific Cod	Arrow-tooth	Rock sole	Turbot	Yellow fin	Flat Other	Rock fish	Atka mackerel	Other	Total
1992												
Longline target												
Sablefish	1	1,807	139	268	.	1,445	.	6	304	.	146	4116
Pacific cod	3,188	179	100,903	1,655	28	576	91	275	838	57	11,166	118,957
Turbot	0	28	12	4	.	75	.	0	4	.	10	134
Rockfish	.	0	.	1	.	2	.	0	1	.	0	4
Longline total	3,190	2,015	101,055	1,928	28	2,099	91	281	1,147	57	11,322	123,211
Pot target												
Sablefish	0	0	0	0	.	.	.	.	0	.	0	1
Pacific cod	7	13	13,680	3	2	9	24	1	3	12	669	14,423
Other	.	.	.	.	.	.	.	.	.	.	15	15
Pot total	7	13	13,680	4	2	9	24	1	3	12	684	14,439
Trawl target												
Pollock												
Bottom	631,294	6	19,620	3,751	6,650	173	818	7,391	507	291	4,553	675,053
Pelagic	760,781	2	3,653	318	444	135	23	1,220	132	49	1,370	768,127
Sablefish	.	26	.	1	.	2	.	.	2	.	1	31
Pacific cod	16,679	10	47,885	2,865	3,502	81	277	2,487	1,176	3,073	3,007	81,042
Arrowtooth	127	1	24	108	13	10	0	44	11	11	24	374
Rock sole	10,073	.	5,292	526	26,094	0	6,636	4,845	0	8	1,974	55,448
Yellowfin sole	12,815	0	8,533	437	14,413	1	137,384	17,033	0	1	7,915	198,533
Flatfish, other	1,200	0	424	243	686	4	1,527	1,298	22	2	1,559	6,964
Rockfish	1,338	25	1,232	1,556	61	220	0	243	11,936	2,164	552	19,328
Atka mackerel	683	5	3,404	205	44	34	0	39	3,494	44,358	193	52,460
Other	4	.	193	7	0	0	.	1	33	.	650	888
Trawl Total	1,434,995	75	90,261	10,017	51,907	661	146,664	34,601	17,314	49,957	21,797	1,858,248
1992 Total	1,438,197	2,104	205,175	11,950	51,938	2,768	146,781	34,884	18,464	50,035	33,808	1,996,104

Source: NMFS Alaska Region blend estimates.

Table 2.3 Number of vessels that landed groundfish in the domestic fisheries off Alaska by area and gear, 1986-92.

Gear	1986	1987	1988	1989	1990	1991	1992
Gulf of Alaska							
Hook & Line	965	1,671	1,529	1,352	1,610	1,842	1,904
Pot	21	22	46	22	103	167	234
Trawl	61	113	122	135	174	215	234
Other	7	24	15	3	34	11	16
All	1,036	1,784	1,669	1,494	1,833	2,100	2,215
Bering Sea/Aleutian Islands							
Hook & Line	60	121	110	78	105	196	166
Pot	9	11	12	5	10	41	73
Trawl	45	74	101	129	135	169	191
Other	4	1	0	1	2	1	11
All	111	204	220	209	248	391	402
All Alaska							
Hook & Line	1,356	1,704	1,549	1,363	1,636	1,902	1,948
Pot	24	31	51	26	111	204	285
Trawl	80	153	184	205	225	262	296
Other	15	25	15	4	35	12	23
All	1,449	1,859	1,749	1,576	1,914	2,227	2,341

Note: Includes motherships, but does not include catcher boats delivering exclusively to motherships. Totals exclude duplication if vessel used more than one gear type or fished in more than one area.

Source: National Marine Fisheries Service groundfish fish ticket, weekly processor, and blend estimates data bases, 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Table 2.4 Catch Statistics and Vessel Totals by Gear Type for the Fisheries Off Alaska. 1991-1992.

GULF OF ALASKA

	1991			1992		
Gear	Catch(mt)	Vessel	Average Catch (mt)	Catch(mt)	Vessel	Average Catch (mt)
Longline	32,683	1,842	18	44,965	1,904	24
Pot	10,723	167	64	10,195	234	44
Trawl	232,092	215	1,079	228,640	234	977
TOTAL	276,022	2,100	131	284,477	2,215	128

BERING SEA/ALEUTIAN ISLANDS

	1991			1992		
Gear	Catch(mt)	Vessel	Average Catch (mt)	Catch(mt)	Vessel	Average Catch (mt)
Longline	97,787	196	499	123,211	166	742
Pot	6,944	41	169	14,439	73	198
Trawl	2,050,222	169	12,131	1,858,248	191	9,729
TOTAL	2,155,298	391	5,512	1,996,104	402	4,965

ALL ALASKA

	1991			1992		
Gear	Catch(mt)	Vessel	Average Catch (mt)	Catch(mt)	Vessel	Average Catch (mt)
Longline	130,470	2,038	64	168,176	2,070	81
Pot	17,667	208	85	24,634	307	80
Trawl	2,282,314	384	5,944	2,086,888	425	4,910
TOTAL	2,430,451	2,227	1,091	2,279,698	2,341	974

NOTE: 1. "TOTAL" will be less than sum of gear types because some vessels use mulitple gear types.
2. Average catch is the catch per vessel for each gear group and area .

Table 2.5 Ex-vessel value of the catch in the commercial fisheries off Alaska by species group, 1982-92 ($ millions and percentage of total).

Year	Shellfish	Salmon	Herring	Halibut	Groundfish	Total
Value ($ millions)						
1982	216.5	310.7	19.9	25.7	211.0	783.8
1983	147.7	320.6	29.8	43.0	188.0	729.1
1984	103.4	343.0	20.4	19.6	239.4	725.8
1985	106.9	389.6	36.9	37.5	260.1	831.0
1986	183.0	404.1	38.4	70.1	268.6	964.2
1987	215.2	473.0	41.7	76.3	336.7	1142.9
1988	235.6	744.9	56.0	66.1	444.6	1547.1
1989	279.2	506.7	18.7	84.4	425.3	1314.3
1990	355.1	546.7	24.0	86.9	474.9	1487.6
1991	301.1	300.1	28.6	91.6	478.4	1199.8
1992	335.1	544.5	27.0	48.0	675.1	1629.7
Percentage of Total						
1982	27.6	39.6	2.5	3.3	26.9	100.0
1983	20.3	44.0	4.1	5.9	25.8	100.0
1984	14.2	47.3	2.8	2.7	33.0	100.0
1985	12.9	46.9	4.4	4.5	31.3	100.0
1986	19.0	41.9	4.0	7.3	27.9	100.0
1987	18.8	41.4	3.6	6.7	29.5	100.0
1988	15.2	48.2	3.6	4.3	28.7	100.0
1989	21.2	38.6	1.4	6.4	32.4	100.0
1990	23.9	36.8	1.6	5.8	31.9	100.0
1991	25.1	25.0	2.4	7.6	39.9	100.0
1992	20.6	33.4	1.7	2.9	41.4	100.0

Note: The value added by at-sea processing is not included in these estimates of ex-vessel value. Includes joint venture and foreign groundfish catch.

Source: National Marine Fisheries Service, Alaska Region; National Marine Fisheries Service office of the Pacific Marine Fisheries Commission, Pacific Fisheries Information Network, 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Table 2.6 Groundfish Ex-vessel Value and the Number of Vessels Fishing Off Alaska

Year	Ex-vessel Value	Vessel Total	Average Ex-Vessel Value, Per Vessel
1986	268,600,000	1,449	185,369
1987	336,700,000	1,859	181,119
1988	444,600,000	1,749	254,202
1989	425,300,000	1,576	269,860
1990	474,900,000	1,914	248,119
1991	478,400,000	2,227	214,818
1992	675,100,000	2,341	288,381

Table 2.7 Pollock Fishery Seasons

Bering Sea DAP Pollock Season Lengths

Year	Days	Open	Closed
1986	365	1/1/86	12/31/86
1987	365	1/1/87	12/31/87
1988	366	1/1/88	12/31/88
1989	365	1/1/89	12/31/89
1990	180	1/1/90	6/30/90

		A-Season		B-Season	
Year	Days	Open	Closed	Open	Closed
1991	147	1/1/91	2/22/91	6/1/91	9/4/91
Ins. 1992	159	1/20/92	3/6/92	6/1/92	9/22/92
Off. 1992	103	1/20/92	3/6/92	6/1/92	7/28/92
Ins. 1993	112	1/20/93	3/24/93	8/15/93	10/3/93
Off. 1993	71	1/20/93	2/22/93	8/15/93	9/22/93

Crab Fisheries off Alaska

Current information on the status of the crab fisheries off Alaska is contained in several sources, including 'The Status of Living Marine Resources of Alaska, 1993,' the Economic SAFE documents, the ADF&G Westward Region Shellfish Reports, and Appendix II of this document which details recent levels of participation in these fisheries. Some of the information contained in these documents is summarized here for the major species of importance: red king crab, blue king crab, brown (golden) king crab, Tanner crab (bairdi), and snow crab (opilio).

King Crab

Four stocks of red king crab are identified for management purposes in the BSAI: the Bristol Bay, Norton Sound, Dutch Harbor, and Adak stocks. All stocks are at low levels of abundance compared to historic levels exhibited in the 1970s. The major fisheries occur on the Bristol Bay stocks. Recent catch trends in Bristol Bay, show that the 1991 catch decreased by 16% from 1990 (9,236 mt to 7,792 mt), substantially below record high production of 59,000 mt in 1980. Current stock levels remain low, to the extent that a 1993 fishery closure was considered, though later rejected when 1993 surveys indicated a stock level equal to that of 1992 and the fishery was opened with a GHL of 16.8 million pounds. Levels of participation in this fishery recently have ranged from 246 vessels in 1990 to 290 vessels in 1991 through 1993. Alaska Department of Fish and Game announced on September 6, 1994, that the Bristol Bay red king crab fishery would remain closed for the 1994/1995 season because of low abundance.

The other king crab stocks have significantly lower stock and vessel participation levels than Bristol Bay, with the Adak red king crab catch at 371 mt in 1991, and from 9 to 12 vessels participating. The Dutch Harbor stock has been closed to fishing since 1982 due to low levels of abundance. The Norton Sound red king crab fishery is now an exclusive registration area.

Blue king crab are primarily in two distinct stocks, the St. Matthew and Pribilof stocks, the latter of which is currently closed. Effort has increased significantly on the St. Matthew stock from 31 vessels in 1990 to 174 in 1992. In 1993, however, only 92 vessels participated, likely due to low CPUEs encountered in recent seasons. The GHL for 1993 was 4.4 million pounds, the largest since 1984.

Brown king crab fisheries occur primarily in the Adak and Dutch Harbor areas with most of the harvest in the Adak area. The Dutch Harbor fishery in 1993 had five vessels registered and caught about 1 million pounds. The Adak fishery had landings of 2,382 mt and 2,837 mt in 1990 and 1991, respectively. Current GHLs are based on historic harvest levels. Effort has been around 17 vessels for the past few years.

Tanner and Snow Crab

The primary Tanner (bairdi) crab fishery occurs on the Bering Sea stock which has been increasing from 1990 through 1992, but decreased in 1993 to 50% of 1992 levels. The GHL in 1993 in the Bristol Bay area was 19.7 million pounds and coincided with the red king crab fishery, with about 300 vessels participating. The final harvest for this fishery was 15.5 million pounds.

Snow crab (opilio) of the eastern Bering Sea are considered to be one stock, though the GHL for this fishery is broken down into an eastern and western subdistrict, with approximately half in each area. Traditionally high abundance levels, when compared to the other crab stocks, have decreased significantly. For example, the 1993 GHL was set at 105.8 million pounds, less than half of the 1992 level. This decreasing abundance level is expected to continue for a few more years, until larger year classes recruit to the fisheries.

The numbers presented above are fairly descriptive of the groundfish and crab fisheries off the coast of Alaska. To facilitate a more detailed examination of the industry, the Council asked for the development of fishery profiles which would represent the industry. These are presented in the next section.

2.2 Representative Vessel and Processor Profiles

The representative vessel and processor profiles will be used to describe the fleet in terms of vessel numbers, employment, catch, processed product, costs and revenues. The profiles divide the catching and processing sectors into 21 categories based on similarity in catching and processing characteristics. Development of these profiles has been an arduous task, with economists from NMFS and the Council devoting much time and energy. Unfortunately, due to the accelerated process for the license program, complete profiles are unavailable at this time. For 1992, information detailing the numbers of vessels in each category and the catch and processed product is available and is presented below.[1]

The 21 different categories have been defined as follows:

1. TH1 = Trawler Harvester 1. Trawlers> 125 feet.

   These vessels also use pots. They are required to have 100% observer coverage since they are over 125 feet. Most will be required to have three licensed officers on board. They are primarily mid-water trawl vessels with large auxiliary engines, and in general will have the capacity to deliver both onshore and offshore. Owners are typically not Alaska residents.

2. TH2 = Trawler Harvester 2. Trawlers between 90 and 125 feet.

   These vessels also use pots. They are required to have 30% observer coverage and only 1 licensed officer. They are primarily mid-water trawl vessels with large auxiliary engines, and in general will not have the capacity to deliver large amounts of fish onshore. Owners are typically not Alaska residents.

3. TH3 = Trawler Harvester 3. Trawlers between 58 and 90 feet.

   These vessels also use longline, and pots. They do not, in general, have large auxiliary engines and therefore are less capable as mid-water trawl vessels. They are more likely to use bottom trawl gear. Many of the owners of these vessels are located in Kodiak, while another large group is located in Washington and Oregon.

4. TH4 = Trawler harvester 4. Trawlers < 58 feet.

   These vessels also use longlines, pots, and seines. This class represents the vessels out of King Cove and Sand Point, involved in a wide range of fisheries.

5. LH1 = Longline Harvester 1; Longliners > 58 feet.

   These vessels are full-time longline vessels , and are principally composed of the schooner fleet from Seattle. Other longline vessels in this class hail from Kodiak and other Alaskan ports.

6. LH2 = Longline Harvester 2; Longliners/limit seiners between 50 and 58 feet.

   This group is principally defined by the "Petersburg Fleet." They are very much involved in salmon fisheries and also in the sablefish and halibut fisheries.

7. LH3 = Longline Harvester 3; Longliners < 50 feet.

   This category is mainly representative of the "Sitka" fleet. They also use trolls and jigs, and are involved in salmon fisheries as well as the demersal shelf rockfish fishery.

8. PH1 = Pot Harvester 1; Pot vessels > 125 feet.

   These vessels are principally crab vessels. Because of their large size, they will generally be required to have three licensed officers on board. They are able to carry more pots than smaller vessels in many of the crab fisheries with pot caps. In recent years, some of these vessels have fished Pacific cod with pots. They may also use longlines and trawls.

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[1] Though some information on motherships and shore plants is available, it was not developed at this time because only harvesting vessels and catcher processors are included in the license alternative.

9. PH2 = Pot Harvester 2; Pot vessels < 125 feet.

These are smaller crab vessels which also use longlines and trawls.

10. TP1 = Trawler Processor 1.

These are large factory trawlers generally over 200', with the ability to process surimi, fillets, and headed and gutted products.

11. TP2 = Trawler Processor 2.

These are large factory trawlers generally over 200', with the ability to process fillets, and headed and gutted products.

12. TP3 = Trawler Processor 3.

These vessels can process headed and gutted products. They are usually less than 150' and are not generally load-line stabilized, and therefore are unable to upgrade their processing lines.

13. LP1 = Longline Processor 1.

Process their longline caught fish into headed and gutted product.

14. PP1 = Pot Processor 1.

Pots are principle gear, may use others. Primarily, these vessels are crabbers with brine freezers. Some will have the ability to switch to groundfish, processing headed gutted product.

15. MP1 = Mothership Processor 1.

Process Groundfish both near and off shore. They will typically have surimi processing capacity. But there are a couple of vessels in this class which only have filleting capacity.

16. MP2 = Mothership 2.

Process crab both near and off shore. They have brine freezers but are not generally able to process groundfish.

17. SP1 = Shore plants 1.

All plants located in Dutch Harbor & Akutan including groundfish and crab plants. Some will also process salmon, herring and other products.

18. SP2 = Shore plants 2.

All groundfish and crab processing plants located on the Gulf-side of the Alaska Peninsula, including King Cove, Sand Point, and Chignik.

19. SP3 = Shore plants 3.

All groundfish and crab shore plants located on Kodiak island.

20. SP4 = Shore plants 4.

All groundfish and crab shore plants in Aleutians Islands and the Pribilofs.

21. SP5 = Shore plants 5.

All shore plants which process groundfish located eastward of Kodiak Island.

The number of vessels and average length in each category are shown in Table 2.8 below by residence of the owner.[2] Larger vessels usually are owned by non-Alaskan residents. Alaskan residents show up primarily in the PH2, LH2 and LH3 classes, and the TH3 and TH4 classes. Only a few Alaskan residents own catcher/processors, and most of these are either longline processors or pot processors.

Catches of the different species by the various categories were calculated based on a combination of fish-ticket data, weekly report data, and observer data. These catch data are in Table 2.9.

[2] Because of the indistinct nature of the categories, placing vessels into categories is a difficult process and not entirely accurate. It is possible that some vessels have been mis-classified. To that end, a document describing the vessel and processor classes will be released under a separate cover for review by the industry. It is hoped that with industry review any vessel inappropriately classified will be brought to the attention of the staff.

Table 2.8

OWNER RESIDENCE AND AVERAGE LENGTH OF HARVEST VESSELS

VESSEL CLASS	NUMBER OF VESSELS OWNED BY ALASKANS	NUMBER OF VESSELS OWNED BY OTHERS	AVERAGE LOA (FEET)
LONGLINE HARVESTER 1	49	55	69
LONGLINE HARVESTER 2	97	39	54
LONGLINE HARVESTER 3	1020	176	37
LONGLINE PROCESSOR 1	13	44	131
POT HARVESTER 1	9	27	151
POT HARVESTER 2	237	144	76
POT PROCESSOR 1	1	33	167
TRAWL HARVESTER 1	1	20	155
TRAWL HARVESTER 2	7	35	110
TRAWL HARVESTER 3	35	45	73
TRAWL HARVESTER 4	10	2	55
TRAWL PROCESSOR 1	0	20	291
TRAWL PROCESSOR 2	0	13	227
TRAWL PROCESSOR 3	9	22	165

Table 2.9

1992 CATCH OF GROUNDFISH AND CRAB BY VESSEL CLASS
BERING SEA/ALEUTIAN ISLANDS AND GULF OF ALASKA COMBINED
(ALL IN POUNDS)

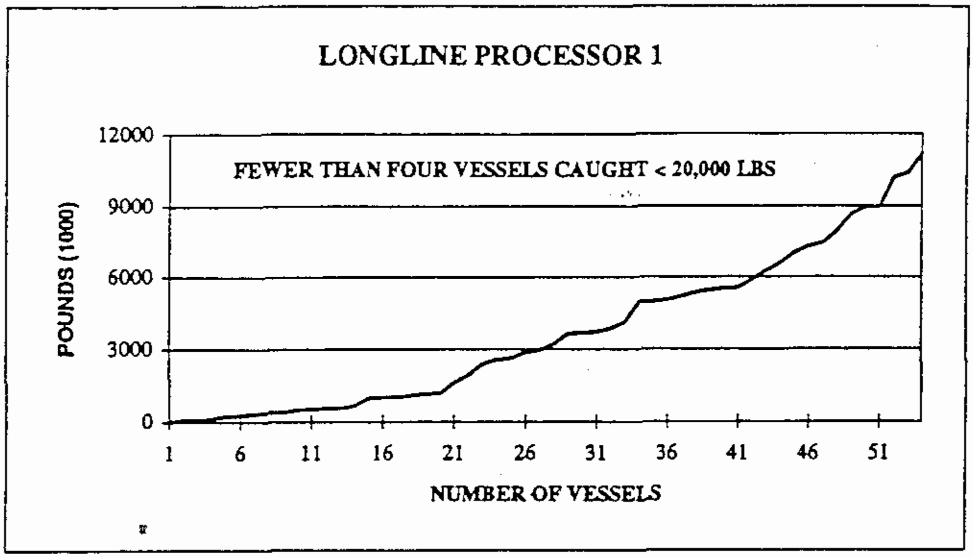
VESSEL CLASS	FLATFISH	OTHER	PCOD	POLLOCK	ROCKFISH	BAIRDI CRAB	BLUE KING CRAB	BROWN KING CRAB	OPILIO CRAB	RED KING CRAB
LONGLINE HARVESTER 1	6,681,056	1,749,400	4,339,215	1,757,238	888,135	43,278	0	1,469	0	52,413
LONGLINE HARVESTER 2	27,347	69	2,833,060	4,691	634,343	0	0	0	0	0
LONGLINE HARVESTER 3	43,302	19,947	10,411,707	58,329	1,249,387	0	0	0	0	0
LONGLINE PROCESSOR 1	8,923,860	30,293,225	214,695,968	7,946,230	4,304,044	1,223,784	76,953	0	4,619,989	115,122
LONGLINE SUBTOTAL	15,675,565	32,062,641	232,279,951	9,766,489	7,075,909	1,267,062	76,953	1,469	4,619,989	167,535
POT HARVESTER 1	0	0	1,178,365	0	0	4,812,898	322,433	2,646,577	51,558,235	1,336,630
POT HARVESTER 2	265,552	77,313	31,098,972	48,215,085	122,389	23,913,791	1,834,431	724,913	195,615,948	5,730,033
POT PROCESSOR 1	13,558	218,929	18,669,911	4,431	3,086	3,967,794	289,875	3,803,010	44,028,193	1,257,778
POT SUBTOTAL	279,109	296,242	50,947,248	48,219,516	125,476	32,694,483	2,446,739	7,174,500	291,202,376	8,324,441
TRAWL HARVESTER 1	7,772,983	243,312	5,313,873	363,769,669	7,169	450,341	30,652	0	4,676,858	163,493
TRAWL HARVESTER 2	9,169,487	638,402	22,077,145	489,430,127	181,981	1,087,892	0	0	1,037,763	568,185
TRAWL HARVESTER 3	20,128,346	211,637	66,731,625	155,055,748	855,476	275,289	6,102	0	282,450	164,100
TRAWL HARVESTER 4	552,037	450	7,765,440	4,256,824	6,703	0	0	0	0	0
TRAWL PROCESSOR 1	32,824,405	22,632,902	15,216,442	1,168,380,783	1,304,652	0	0	0	0	25,239
TRAWL PROCESSOR 2	86,619,939	25,365,649	38,444,432	286,942,257	6,229,586	0	0	0	0	0
TRAWL PROCESSOR 3	279,211,627	140,210,816	51,377,082	73,014,046	66,086,498	0	0	0	0	0
TRAWL SUBTOTAL	436,278,826	189,303,168	206,926,038	2,540,849,454	74,672,065	1,813,522	36,754	0	5,997,071	921,017
SPECIES TOTAL	452,233,500	221,662,051	490,153,237	2,598,835,459	81,873,450	35,775,067	2,560,446	7,175,969	301,819,436	9,412,993

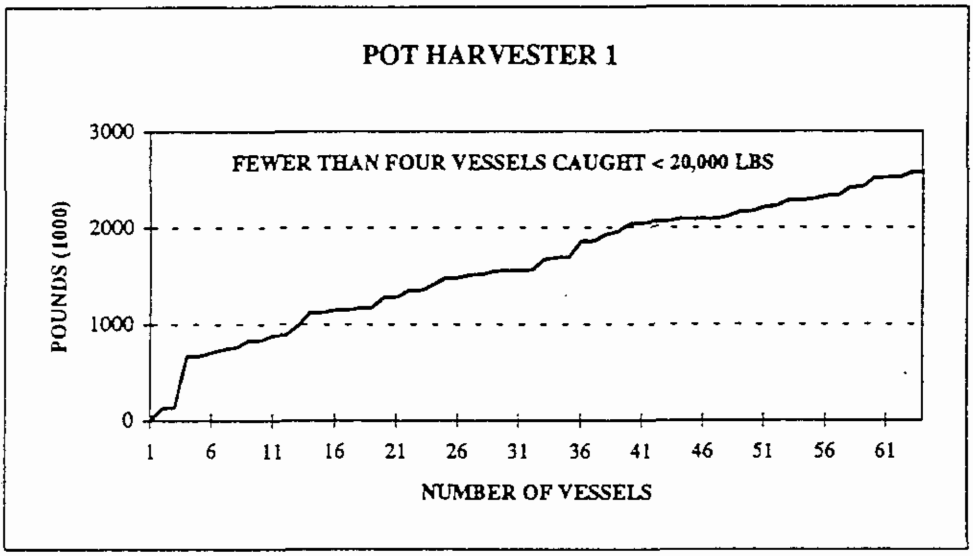
NOTE:

Crab catches appear in categories other than "Pot Harvesters." For example, the "Trawl Harvester 2" category accounted for 1,087,892 lbs of *bairdi*. This is due to the overlap between sectors for which the data is compiled. While primarilly using trawl gear, some vessels in this category also harvest crabs with pot gear.

Finally, for the main species of each group, the chartlets in Figures 2.1a - 2.1e show the distribution of catch within each category. With these figures, one can judge the relative performance of different vessels within the fleet. Note that confidentiality restrictions preclude reporting the catches of the highest performing vessels. Interpreting the figures is fairly straight-forward. For example, the first chartlet in Figure 2.1a shows that 27 of the longline processors caught less than 3,000,000 lbs, and fewer than four caught less than 20,000 lbs. Therefore, very few of these vessels would be disqualified with a minimum landings requirement, even as high as 20,000 pounds. The third chartlet in Figure 2.1a describes the pot harvester 2 class and paints a different picture. For that class, 67 vessels caught less than 20,000 lbs. Approximately 275 vessels caught less than 500,000 lbs. The most restrictive license alternatives under consideration would require landings of 20,000 lbs or more for qualification. These chartlets show how many vessels of each class would meet that requirement based on catches in 1992.

Figure 2.1a


LONGLINE PROCESSOR 1
FEWER THAN FOUR VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
12000
9000
6000
3000
0
1
6
11
16
21
26
31
36
41
46
51
NUMBER OF VESSELS


POT HARVESTER 1
FEWER THAN FOUR VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
3000
2000
1000
0
1
6
11
16
21
26
31
36
41
46
51
56
61
NUMBER OF VESSELS

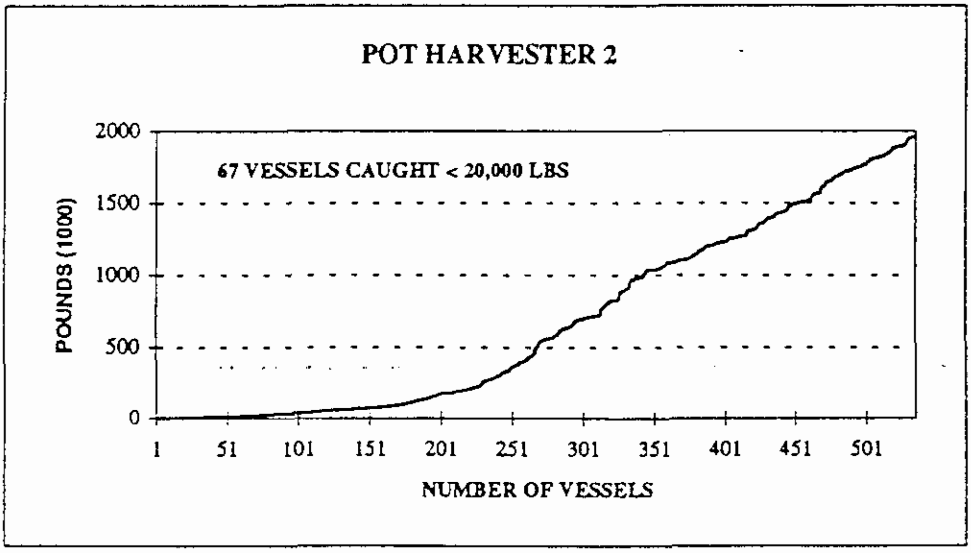
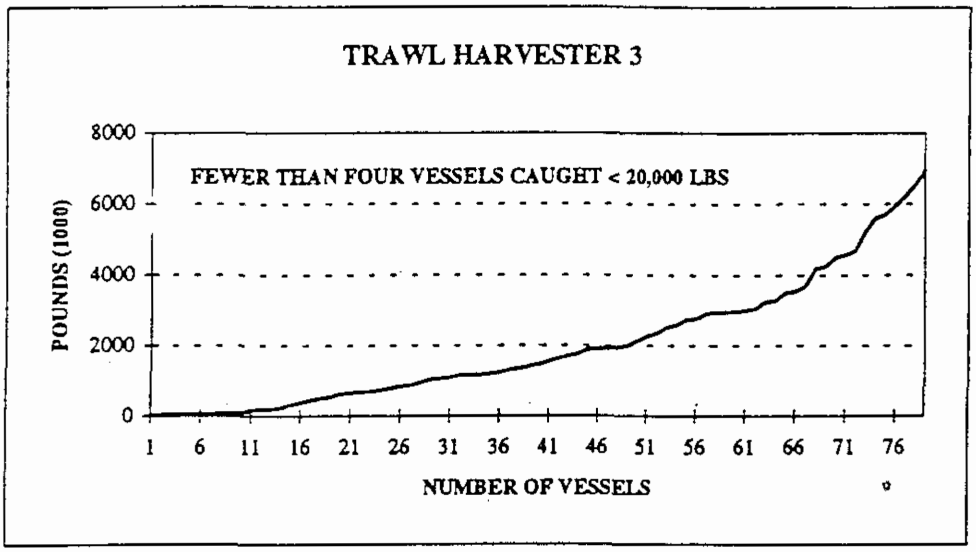
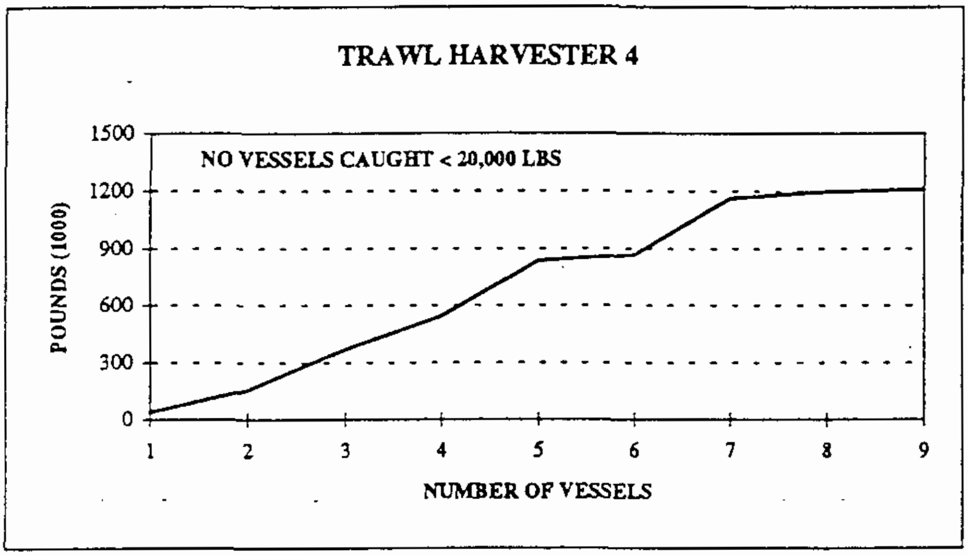

POT HARVESTER 2
67 VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
2000
1500
1000
500
0
1
51
101
151
201
251
301
351
401
451
501
NUMBER OF VESSELS

Figure 2.1b


TRAWL HARVESTER 3
FEWER THAN FOUR VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
8000
6000
4000
2000
0
1 6 11 16 21 26 31 36 41 46 51 56 61 66 71 76
NUMBER OF VESSELS


TRAWL HARVESTER 4
NO VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
1500
1200
900
600
300
0
1 2 3 4 5 6 7 8 9
NUMBER OF VESSELS

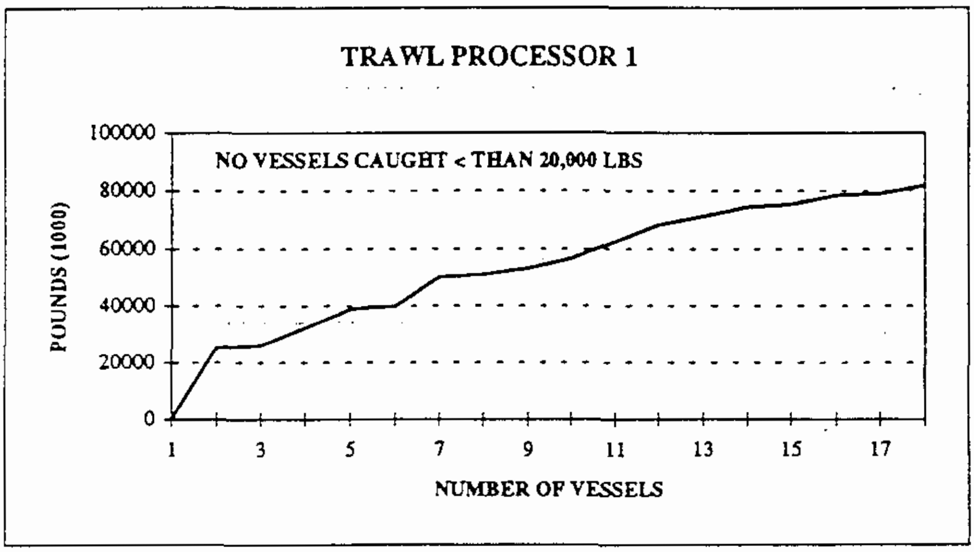
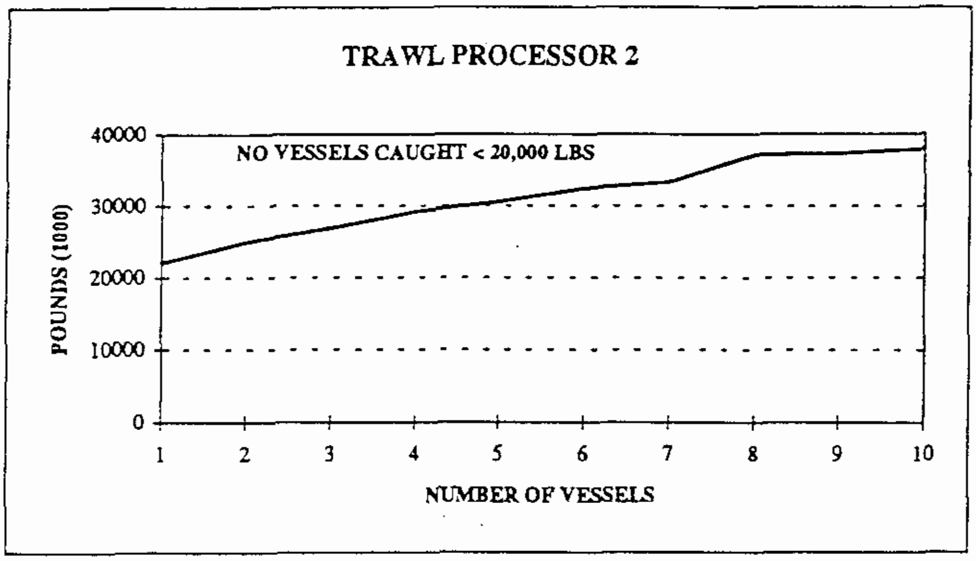

TRAWL PROCESSOR 1
NO VESSELS CAUGHT < THAN 20,000 LBS
POUNDS (1000)
100000
80000
60000
40000
20000
0
1 3 5 7 9 11 13 15 17
NUMBER OF VESSELS

Figure 2.1c


TRAWL PROCESSOR 2
NO VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
40000
30000
20000
10000
0
1
2
3
4
5
6
7
8
9
10
NUMBER OF VESSELS

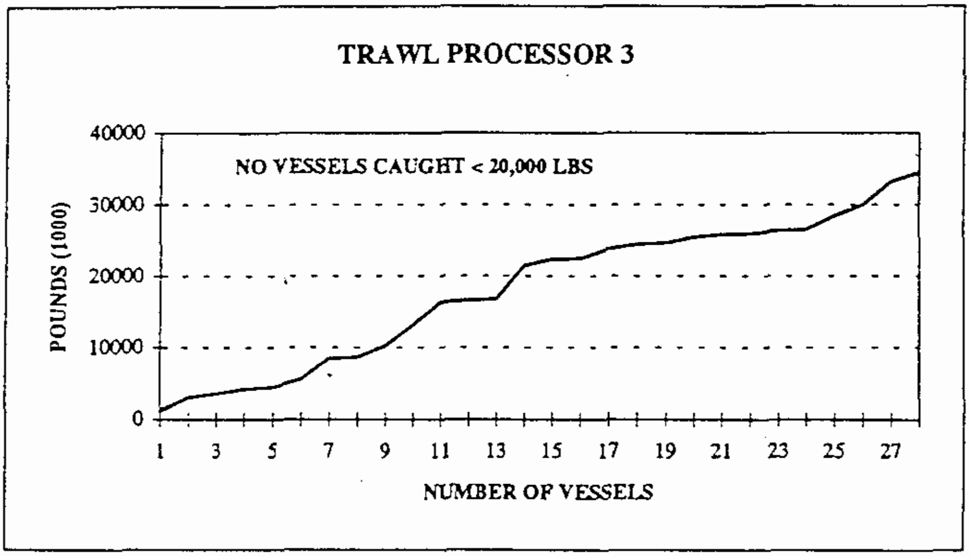
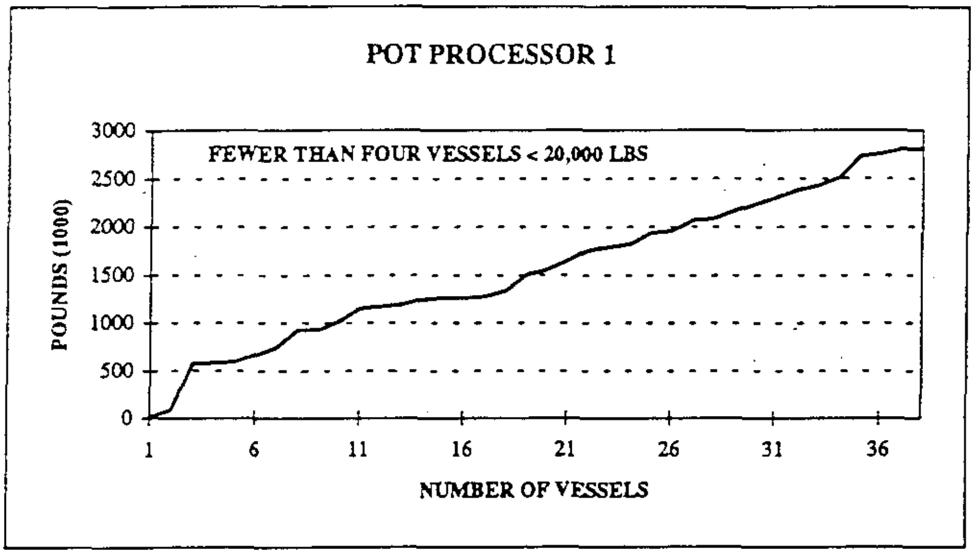
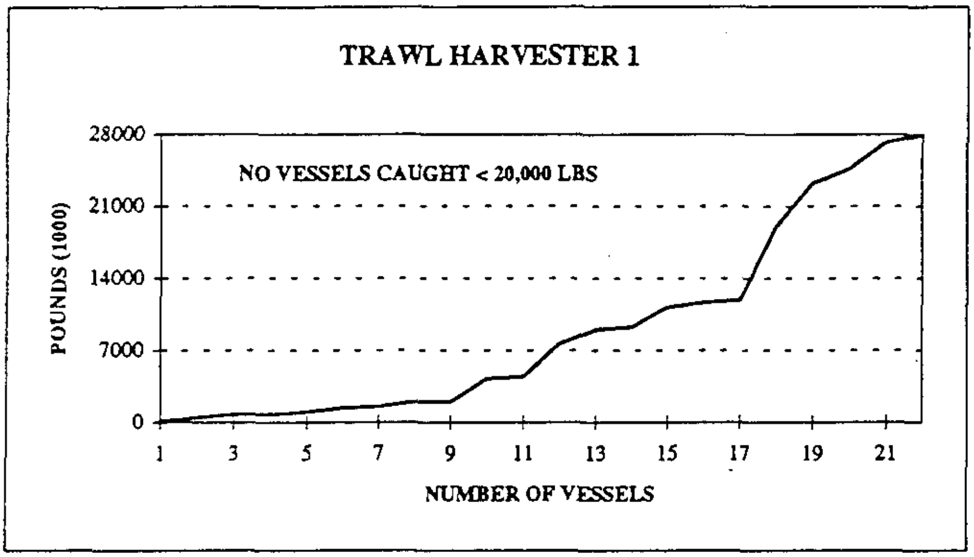

TRAWL PROCESSOR 3
NO VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
40000
30000
20000
10000
0
1
3
5
7
9
11
13
15
17
19
21
23
25
27
NUMBER OF VESSELS

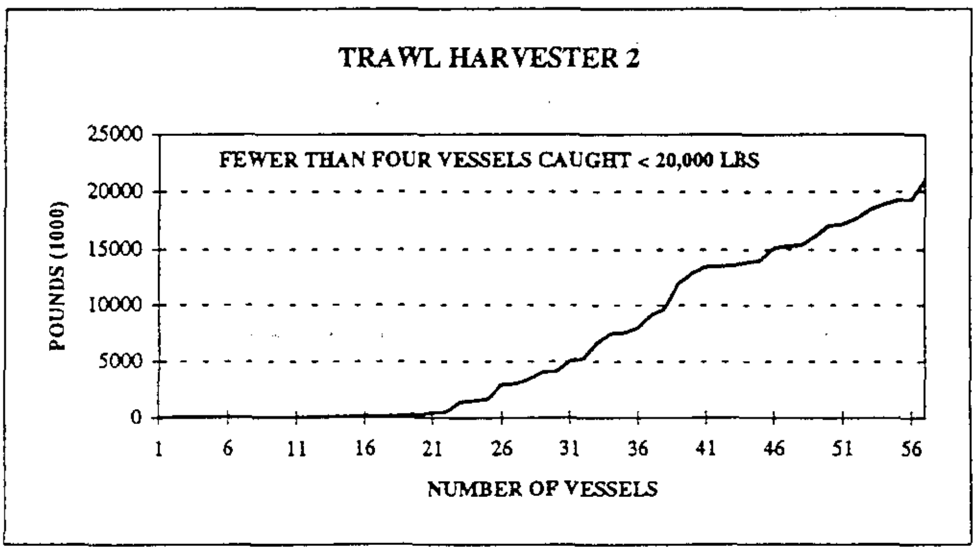
Figure 2.1d



POT PROCESSOR 1
FEWER THAN FOUR VESSELS < 20,000 LBS
POUNDS (1000)
3000
2500
2000
1500
1000
500
0
1
6
11
16
21
26
31
36
NUMBER OF VESSELS

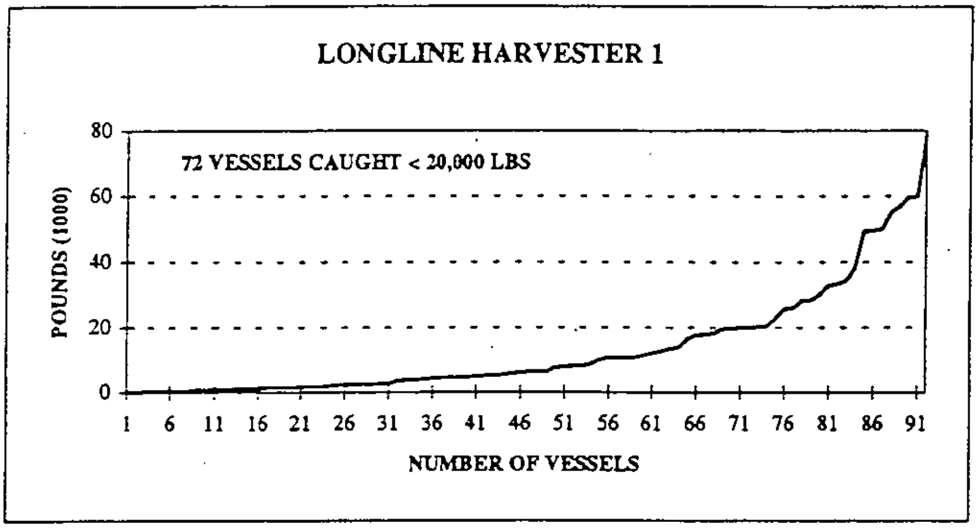


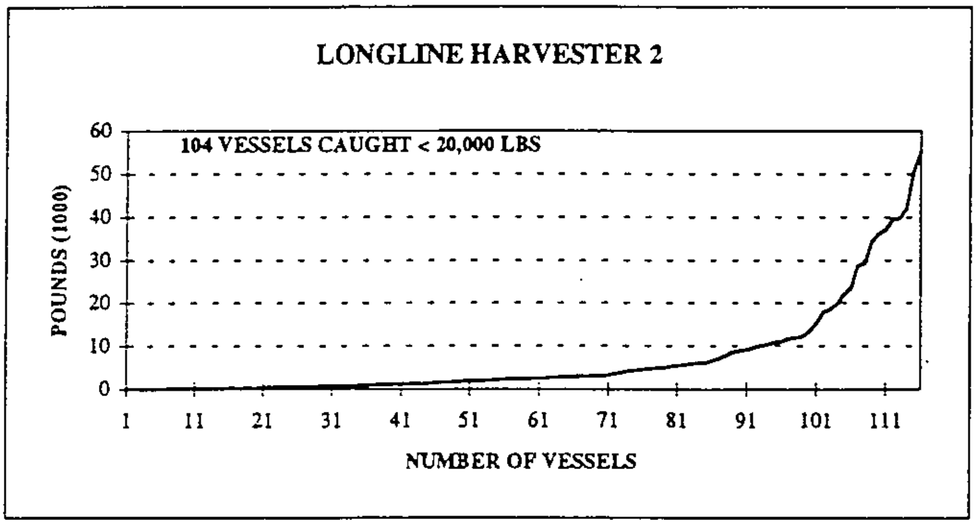
TRAWL HARVESTER 1
NO VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
28000
21000
14000
7000
0
1
3
5
7
9
11
13
15
17
19
21
NUMBER OF VESSELS

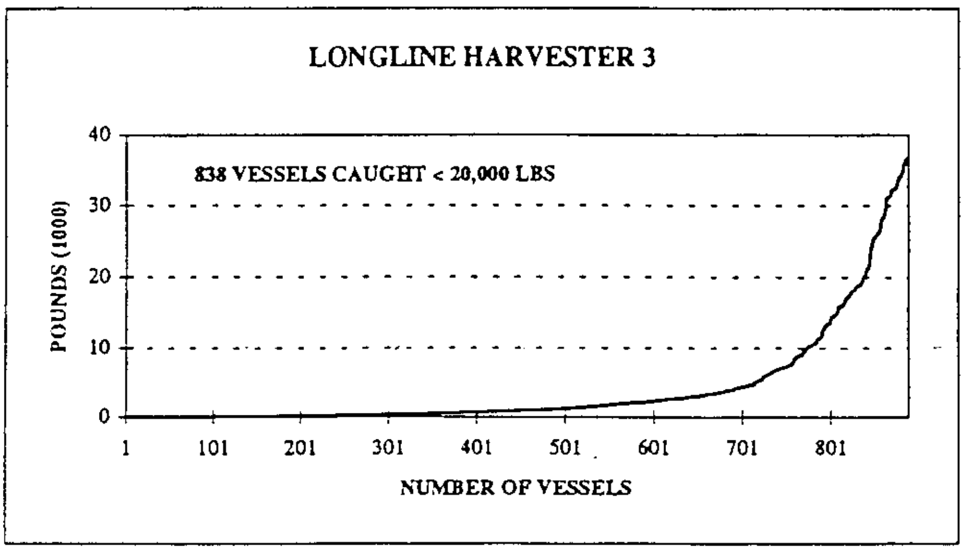


TRAWL HARVESTER 2
FEWER THAN FOUR VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
25000
20000
15000
10000
5000
0
1
6
11
16
21
26
31
36
41
46
51
56
NUMBER OF VESSELS

Figure 2.1e


LONGLINE HARVESTER 1
72 VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
80
60
40
20
0
1 6 11 16 21 26 31 36 41 46 51 56 61 66 71 76 81 86 91
NUMBER OF VESSELS


LONGLINE HARVESTER 2
104 VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
60
50
40
30
20
10
0
1 11 21 31 41 51 61 71 81 91 101 111
NUMBER OF VESSELS


LONGLINE HARVESTER 3
838 VESSELS CAUGHT < 20,000 LBS
POUNDS (1000)
40
30
20
10
0
1 101 201 301 401 501 601 701 801
NUMBER OF VESSELS

2.3 General Discussion of Fishery Economics

The Magnuson Act, National Environmental Policy Act, and various executive orders including E.O. 12866 require consideration of net benefits to the Nation of policy alternatives. "Net benefits" means different things to different groups. It is therefore important to define how this analysis will deal with the issue. Originally, cost/benefit analysis was used to examine the potential returns to an investor or entrepreneur of a given capital project. Usually this involved an initial outlay of capital which generated a stream of returns for the life of the project. For the project to be feasible from a financial perspective, the expected[3] stream of returns discounted[4] to its present value, would have to exceed the next best use (or opportunity cost) of the original capital outlay.[5] If the business had several different projects under consideration, then the alternative chosen was that which brought in the greatest expected return over the opportunity cost.

From its beginnings as a tool to analyze business opportunities, cost/benefit analysis has shifted into the public policy arena. An entire branch of economics referred to as welfare economics, focuses on the impacts of social change including the economic implications of policy actions. Early examples of the use of cost-benefit analyses in public policy were completed by the Army Corps of Engineers in their reports to Congress justifying the spending for construction of the hydro-electric and irrigation projects found throughout the Western States. From its earliest uses through today, critics of cost-benefit analysis abound. Some of the primary criticisms of the use of cost-benefit analysis in public policy are:

1. By its nature, public policy actions impact different individuals differently. If one person is made better off, and another person is made worse off, who is to judge whether or not to implement the policy.[6]

2. Many costs and benefits of any policy action occur outside of the market-place, and therefore cannot be measured on equal terms with market oriented goods and services.

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[3]Uncertainties are inherent in forecasting future streams of returns. To account for these uncertainties the "expected" return should be discounted by the probability that it would actually occur. For example, if there is a 50% probability of a $1000 return and a 50% probability of a $200 loss, the expected return is $400.

$$50\% \times \$1000 + 50\% \times (\$200) = \$500 - \$100 = \$400.$$

[4]Future returns are discounted because humans in general place more value on the present than in the future. The "correct" discount rate is a subject of great debate. For business ventures, discount rate will be assigned according to that business's own philosophy. If one business values current wealth over future wealth, a higher discount rate will be used. Businesses with relatively short "life-spans" will use higher discount rates than those with longer time horizons.

[5]The usual approach to calculating the opportunity cost of capital is to assume the capital is invested in the bond or stock market for the same amount of time as the life of the project. Alternatively, and the method used in this analysis, one can assume that the same investment was used to purchase a mortgage with the interest rate equal to the investor's required rate of return, over the lifetime of the original investment.

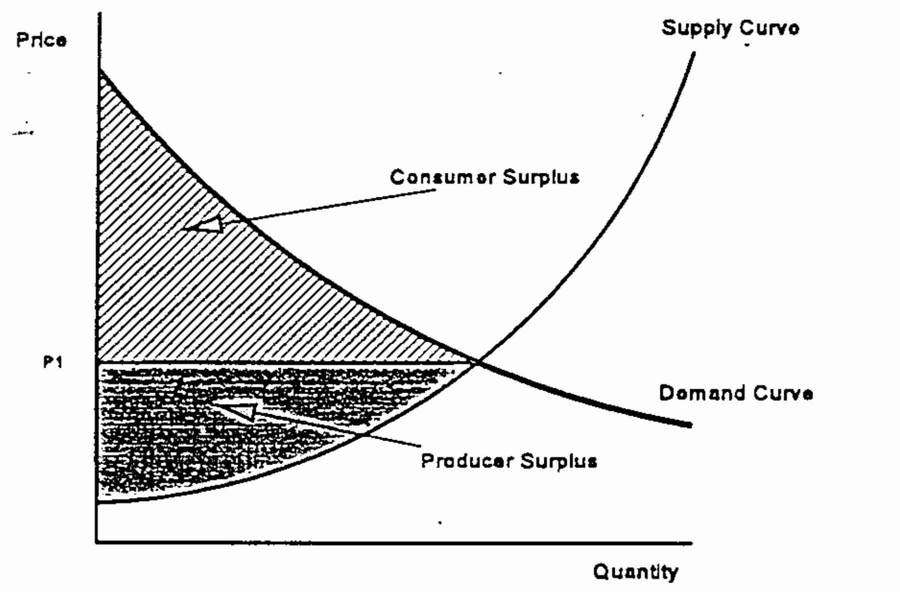
[6]Three theoretical approaches deal with this problem: 1) A *Pareto superior* solution is one which leaves no individual worse off and at least one individual better off. *Pareto* solutions are theoretically possible, but practically impossible in the public policy arena. 2) A *Hicks-Kaldor superior* solution is one in which individuals made better off by the solution could, in theory, fully compensate those made worse off, and still be better off themselves. It should be noted that actual compensation is not a requirement for a *Hicks-Kaldor* solution. Almost all public policy decisions fall into the realm of *Hicks-Kaldor* solutions. 3) The third approach holds that a *social welfare function* can be developed which accounts for the different levels of importance individuals or groups place on various goods and services affected by the policy. In theory, the gains of one individual or group of individuals can be compared against the losses of others. This approach though theoretical appealing, has not been successfully applied in practice, primarily because of the inability to find the "correct" social welfare function.

3. Discount rates vary from individual to individual, and therefore choosing one rate to represent "Societies" discount rate is inappropriate.

Welfare economists are the first to admit that the usefulness of cost-benefit analysis has its limits in the public policy area. While economists have theories and tools that take into account each of the criticisms above, practical application of these tools is often very difficult, time consuming, and often yield results which are, at best, rife with uncertainty. Therefore, an accepted practice is to attempt to quantify only those costs and benefits which are readily quantifiable, and to discuss in more qualitative terms those which are more difficult to assess.

Two areas which economists are more equipped to discuss are the net benefits of a change on the consumers and producers of goods and services. Economists define net benefits in rigorous terms. Specifically, the net benefits of a policy change from the status quo are equal to the sum of the change in producer surplus and the change in consumer surplus resulting from the policy. Consumer surplus is defined as the difference between what consumers are willing to pay for a product or service and what they actually have to pay. This is represented in Figure 2.2 by the lined area above the price line, P1, and below the demand curve. Gains in consumer surplus will occur as a result of a change in management regime if consumers end up paying less for the same quality product or paying the same for a better quality product. Conversely, consumers of seafood will lose if there is a price increase and no gain in the quality of product they purchase. These changes may be estimated if reasonable data exist to construct demand curves for seafood products and their substitutes. Because of the complex international market for seafood, among other things, demand estimates are currently unavailable for groundfish products. Further, the vast majority of the production of North Pacific groundfish is exported and therefore U.S. consumers are affected only indirectly.

Figure 2.2 Consumer And Producer Surplus



Producer surplus is defined as the sum of each producer's net return or rent. Producer surplus is shown as the gray-shaded area in Figure 2.2. Changes in producer surplus will occur when the cost of production changes, which in turn brings about a change in the supply curve, or if the demand changes. As an example, imagine an increase in the price of oil which increases the cost to supply products. Such a change is shown in Figure 2.3. The new supply curve has shifted up and to the left. In the figure, this shift in the supply curve results in a change in producer surplus and a change in consumer surplus. Calculating the sum of these changes is the goal of cost-benefit analysis in the public policy arena. From the figures, it is easy to see that consumer surplus has been reduced by the darkly shaded small triangular area plus the unshaded area between the price lines P1 and P2. The change in producer surplus is more difficult to see in the figure. The unshaded area between the price lines represents a gain in producer surplus because every unit is now sold at a higher price. But the cross-hatched area to the right of the new supply curve and below the old price line represents a loss of producer surplus. Whether the gain (unshaded area) is offset by the loss (cross-hatched area) is an empirical question. The net change to producers and consumers combined is unambiguous, and is represented by the small darkly shaded area plus the cross-hatched area.

In TAC-regulated fisheries, as are found in the North Pacific fisheries managed by the Council, the economics of supply and demand are somewhat different. This is because the TAC strictly limits supply. Therefore, the supply curve turns vertical at the TAC. This is shown in Figure 2.4. This figure simplifies the situation somewhat, because it is probable that the portion of the supply curve left of the TAC line will not fall on the same path as the supply curve without a TAC. In other words, producers are likely to change their costs under a TAC regulated fishery. In addition, the price P1, which under normal circumstances will be in equilibrium where supply and demand intersect as shown, becomes indeterminate under a TAC regulated fishery; the price could fall anywhere between point A, the intersection of the TAC and the supply curve, or point B, the intersection of the TAC and the demand curve.[7] For convenience, we have chosen in this discussion to draw the price line where it would normally have fallen under a "normal" supply curve. Producer surplus is again represented by the cross-hatched area, and consumer surplus is represented by the lined area. Notice that both consumer and producer surplus is less than what would have occurred without a TAC.[8] By increasing or decreasing the TAC, a policy decision, consumer and producer surplus will clearly change.

Figure 2.3 New Consumer And Producer Surplus

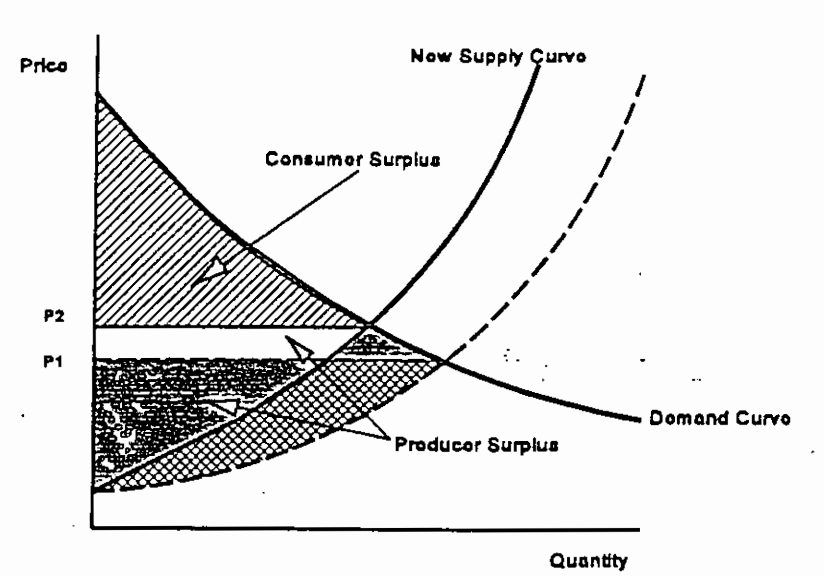
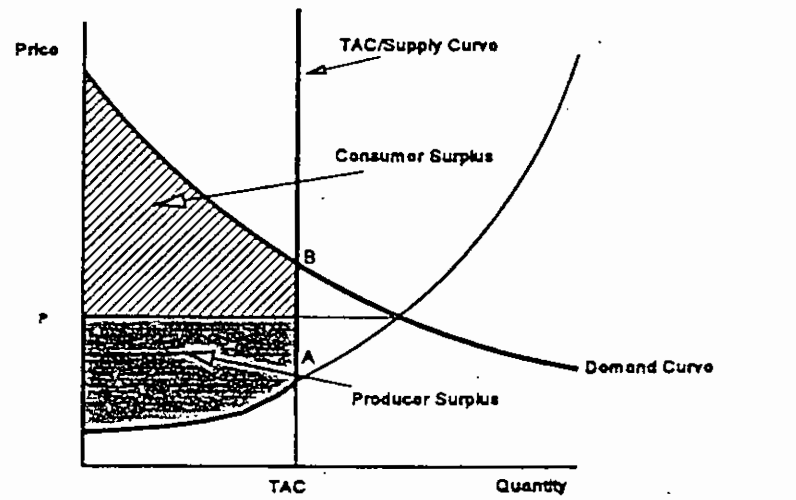


Figure 2.4 Consumer & Producer Surplus With TAC Supply Curve Change



P is indeterminate, but will fall between A and B depending on the relative market power of processors and fishing.

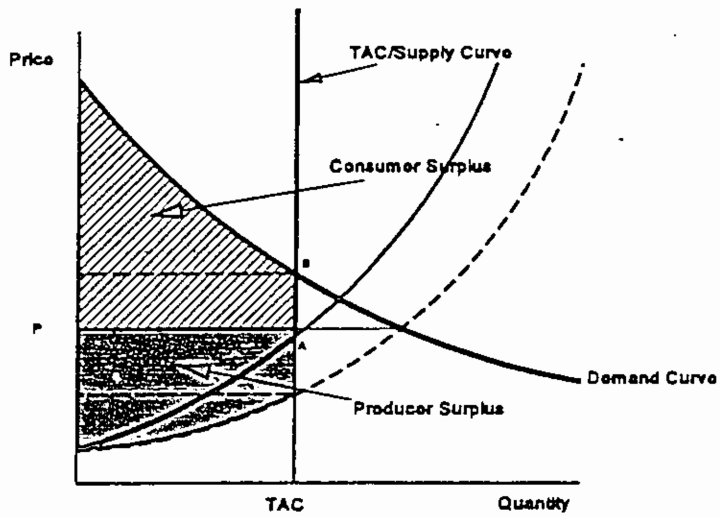
While TAC increases or decreases impact consumer and producer surplus, other policy actions may impact surplus as well. Figure 2.5 shows the impact on producer surplus of a cost increase.

[7]Exactly where the price falls is a function of, among other things, the relative bargaining power of the consumer and the producer. In the case of catch delivered to a processor by catcher vessels, the producer is the catching vessel and the consumer is the processor.

[8]This could lead to the conclusion that society is worse off with a TAC-limited fishery. However, the imposition of an overall TAC, because of the common property nature of fisheries, can prevent overfishing and preserve the long-run viability of the fishery resource.

This figure is analogous to Figure 2.3. The underlying supply curve shifts upward and to the left. But if the TAC is unchanged, the supply curve becomes vertical at the same level of output. No change in price is depicted, because price is indeterminate with a discontinuous supply curve, and at the existing price, producers would still be willing to supply the entire TAC to consumers. Consumer surplus is unchanged, but producer surplus, now represented by the dotted area, is clearly smaller. The cross-hatched area represents the loss in producer surplus resulting from the cost increase.

Figure 2.5 Consumer & Producer Surplus With TAC/Supply Curve Change



P is indeterminate, but will fall between A and B depending on the relative market power of processors and fishing.

It is important to note that in addition to changes affecting seafood producers and seafood consumers, the changes may impact other marine resources, such as marine mammals and seabirds, and the marine ecosystem as a whole. The relatively new field of environmental economics tries to place values on these non-market products and services, so that they may be treated on the same terms as more traditional consumables. Placing values on the non-market goods and services in the marine environment is beyond the scope of this analysis, however potential impacts on the ecosystem are discussed in Chapter 5 and should be considered in the final decision. Additionally, impacts on safety, bycatch, and discard loss are not quantified in this analysis but should be considered qualitatively. Also, included in the net benefits equation are the costs to society of the decision making process,[9] the costs of implementing the program, and the cost of monitoring and enforcing the program. If the monitoring and enforcement program results in benefits to the resource, then these are also counted. Implementation, monitoring and enforcement costs of specific alternatives will be addressed later in this document.

[9]Although there will be no formal attempt to quantify the decision making costs for the CRP, it should be noted that these can be substantial.

3.0 Regulatory Impact Review of the Alternatives

After the brief introductory remarks below on the need for a regulatory review and evaluation, this chapter presents, in Section 3.1, an analysis of the no-action alternative. It draws first in Section 3.1.1 on results of the moratorium, and then in Section 3.1.2, projects the potential for vessel entry using a series of break-even analyses. Sections 3.1.3 - 3.1.5 offer discussion of inshore/offshore and full utilization, and then presents conclusions concerning the no-action alternative. With Section 3.2 begins the analysis of Alternative 2, License Limitation.

Regulatory Impact Review. Executive Order 12866, "Regulatory Planning and Review," was signed on September 30, 1993, and established guidelines for promulgating and reviewing regulations. While the executive order covers a wide variety of regulatory policy considerations, the benefits and costs of regulator actions are a prominent concern. Section 1 of the order deals with the regulatory philosophy and principles that are to guide agency development of regulations. The regulatory philosophy stresses that, in deciding whether and how to regulate, agencies should assess all costs and benefits of all regulatory alternatives. In choosing among regulatory approaches, the philosophy is to choose those approaches that maximize net benefits to society.

The regulatory principles in E.O. 12866 emphasize careful identification of the problem to be addressed. The agency is to identify and assess alternatives to direct regulation, including economic incentives, such as user fees or marketable permits, to encourage the desired behavior. When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner to achieve the regulatory objective. Each agency shall assess both the costs and benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Each agency shall base its decisions on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation.

The National Marine Fisheries Service (NMFS) requires the preparation of a Regulatory Impact Review (RIR) for all regulatory actions that either implement a new Fishery Management Plan (FMP) or significantly amend an existing plan. The RIR is part of the process of preparing and reviewing FMPs and provides a comprehensive review of the changes in net economic benefits to society associated with proposed regulatory actions. The analysis also provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problems. The purpose of the analysis is to ensure that the regulatory agency systematically and comprehensively considers all available alternatives so that public welfare can be enhanced in the most efficient and cost-effective way. The RIR addresses many of the items in the regulatory philosophy and principle of E.O. 12866.

E.O. 12866 requires that the Office of Management and Budget (OMB) review proposed regulatory programs that are considered to be significant. A 'significant' regulatory action is one that is likely to:

(1) Have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities.

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof, or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

A regulatory program is 'economically significant' if it is likely to result in the effects described in item (1) above. The RIR is designed to provide information to determine whether the proposed regulation is likely to be 'economically significant.'

3.1 Alternative 1: No Action

An examination of the no action alternative, often referred to as the status quo alternative, is required by NEPA and other federal mandates when a governmental agency is contemplating a change in policy. The Council is examining license limitation for North Pacific groundfish and crab fisheries primarily as a step toward the implementation of a more comprehensive market-based system such as an individual quota system. The Council has also indicated its intent to revisit the inshore/offshore allocation, and to examine alternatives to increase the utilization and retention of harvested groundfish and crab. Complicating the picture somewhat is the Secretary of Commerce's recent disapproval of the Council's planned moratorium. Given the Council's stated intent, discussion of the no-action alternative assumes the following:

- Do not enact a license limitation program.
- Revise and resubmit the moratorium.
- Continue studying IFQs.
- Revisit the inshore/offshore allocation.
- Examine alternatives to increase the utilization and retention of harvested groundfish and crab resources.

Analysis of the no action alternative will focus on possible evolution of the groundfish and crab fisheries without license limitation. The sections below recap the results of the moratorium analysis and summarize possible actions the Council could take under the existing analysis. A break-even analysis of the fleet is presented using cost data collected in the inshore/offshore analysis. Possible directions are discussed for the industry in the absence of license limitation.

3.1.1 Results of the Moratorium Analysis

The Council adopted a 3-year moratorium on groundfish and crab fisheries in June 1992, to be implemented by Amendment 28 to the Gulf of Alaska Groundfish Plan, Amendment 23 to the Bering Sea and Aleutian Groundfish Plan, Amendment 4 to the Bering Sea and Aleutian Crab Plan, and regulatory changes to halibut management under the North Pacific Halibut Act of 1982. Though the Secretary of Commerce disapproved the Council's proposed moratorium on August 5, 1994, citing inconsistencies with the National Standards, the Council may decide to revise/resubmit it at their September 1994 meeting.

As proposed, vessels qualified for the moratorium if they landed fish between January 1, 1980 and February 9, 1992. Other vessels could access the fisheries only through a transfer of moratorium rights. Vessels under 125 ft could increase length by 20%, not to exceed 125 ft, but longer vessels could not increase length. Vessels could crossover from one moratorium fishery to another even if they had never participated in the other fishery during the qualifying years. Vessels under 26 ft in the Gulf of Alaska and under 32 ft in the Bering Sea and Aleutians were exempt from the moratorium. Vessels less than 125 ft built for the CDQ program also were exempt. And last, all owners of sablefish and halibut IFQs will retain the option of using non-moratorium qualified vessels in the IFQ fisheries. Because of the crossover provisions, they potentially could sell their existing moratorium qualified vessels to be used in the groundfish and crab fisheries, replacing them with non-qualified new vessels.

The moratorium analysis estimated the size of the fleet that would qualify at about 13,500 vessels (NPFMC, 1992). About 7,550 of those fished only for halibut to qualify. The Secretary, in disapproving the moratorium, suggested that halibut boats not be included in the moratorium because of the IFQ program, and thus not be able to crossover into the groundfish and crab fisheries. This would reduce the moratorium fleet by 56% to about 6,000 vessels.

Another approximately 4,000 vessels qualified for the moratorium because they landed halibut and groundfish, but data available for the moratorium analysis did not identify the groundfish species landed. Halibut is strictly a hook-and-line fishery, so it is likely that these vessels used the same gear type and harvested some combination of sablefish, Pacific cod and rockfish for their groundfish component. Other data show that probably half (2,000 of the 4,000 vessels) of those "groundfish" landings were only sablefish. Therefore, we conclude that roughly 9,550 vessels (7,550 + 2,000) will comprise the initial sablefish and halibut IFQ fleet starting in 1995. Of the 13,500 moratorium qualified vessels, the above estimate leaves about 4,000 vessels (13,500 - 9,550 = 3,950) that qualify because they fished species other than sablefish and halibut. In summary, the moratorium fleet would have about 4,000 vessels if halibut and sablefish IFQ holders that did not participate in any other groundfish fishery were disallowed. Conversely, there is the potential that under the current Council moratorium proposal, all of the those 9,550 vessel owners could transfer their current vessels into the groundfish and crab fisheries, replacing them with new vessels for use solely in the IFQ fisheries.

The moratorium analysis also showed that 12,499 of 13,507 moratorium qualified vessels were less than 60 feet in length. In 1991, nearly 5,000 vessels participated in the groundfish, crab, and halibut fisheries under the Council's jurisdiction. Approximately 4,250 or 85% of these vessels were less than 60 feet, but harvested only 6% of the total catch that year. This indicates that although the number of vessels which could have fished under the moratorium was potentially very large, the actual catching power of a great majority of those vessels was quite limited.

At the other end of the spectrum, 353 vessels greater than 90 feet caught 87% of the total groundfish catch in 1991. Clearly, the vast majority of the catching power of the fleet is accounted for in these larger vessels.

Under the proposed moratorium, 471 vessels over 90 feet would have qualified, including all vessels which fished in 1991. If the Council had chosen a shorter qualifying period, such as January 1, 1988, through February 9, 1992, only 417 vessels over 90 feet would have qualified. In other words, only 54 vessels of this length have "dropped" out of the fishery since 1980, and 43 of these were less than 125 feet. Only 12 vessels between 125 feet and 190 feet, and none greater than 190 feet, left the fishery between January 1, 1980 and January 1, 1988.

The moratorium analysis also cites a break-even analysis developed for the groundfish trawl fleet (Wiese and Burden 1991). In their approach, aggregate vessel capacity was estimated based on the calculated fleet size that would break-even in terms of total revenues just covering total costs. For 1989, Wiese and Burden projected a break-even trawl fleet of 138 vessels. The actual fleet had 165 vessels, implying excess capacity of 27 vessels, 20 catchers and 7 factory trawlers. The break-even approach uses raw product prices, cost levels, and catch to assess capacity. Using a similar approach, adjusted to 1991 conditions, projects a 1991 break-even fleet of 175 to 200 vessels, compared to an actual fleet of approximately 250 vessels. The increase in break-even fleet size between 1989 and 1991 results from an increase in domestic pollock quota available to the fleet and higher pollock prices. While there are possible differences in the mix of trawl vessels between 1989 and 1991, the conclusions are similar; there are 20 to 25 percent more trawl vessels in the groundfish fishery than can be justified based on financial break-even criteria.

The moratorium analysis also examined the question of net national benefits. We have excerpted this entire section and included it as Appendix III, because the findings apply directly to the license program as well as the moratorium. Included in the Appendix is a table examining the impacts of adding one additional vessel to several different sectors of the existing fleet. The moratorium analysis concludes that there would have been few if any impacts on consumers, because total allowable catch, products produced, and product prices would not have been impacted. The economic forces which would impact producers will operate under the moratorium or status quo, leading the analysis to conclude that the moratorium would have little impact on producer surplus and, therefore, little impact on the net national benefits accruing to the fishery.

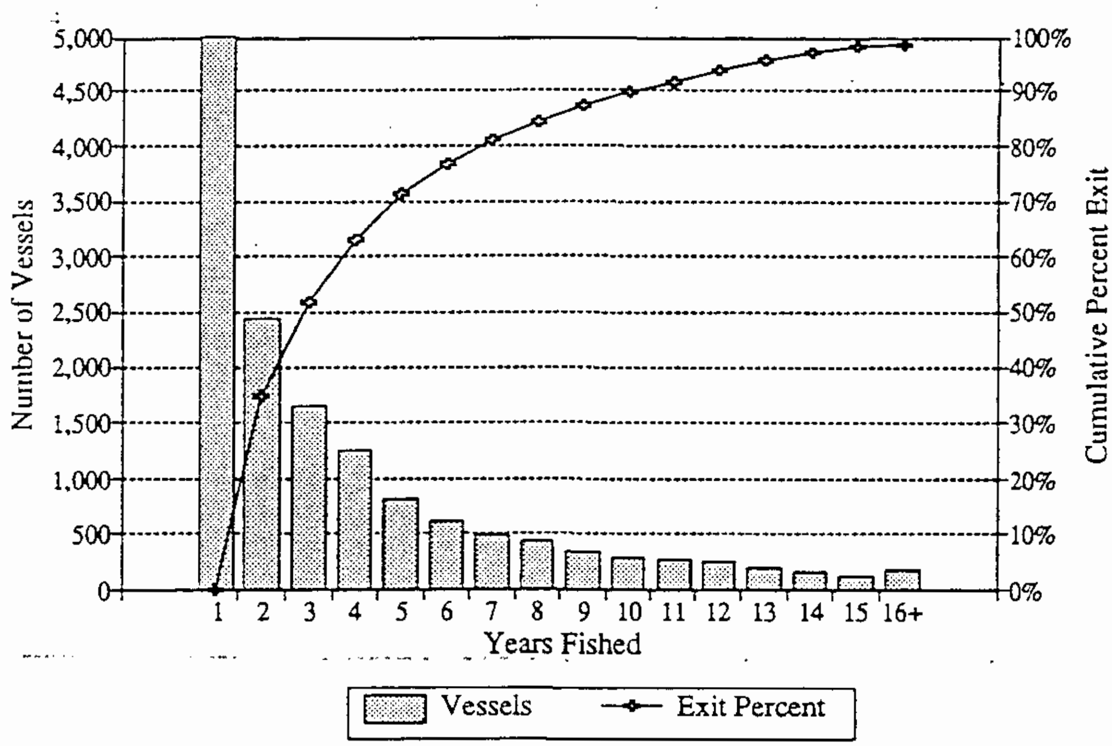
Nearly three years have passed since the February 9, 1992 cut-off date for the moratorium. Using available data through April 4, 1994, we estimate that 394 non-qualified vessels have fished in Council fisheries. This is a significant decrease from the numbers of "new" vessels that normally entered each year before 1992. Many of these vessels were under 26 feet, some may have acquired "moratorium fishing" rights via a transfer, and many will only fish sablefish and halibut. Table 3.1 shows that only 22 relevant vessels have entered Federally managed crab and groundfish fisheries since the cut-off date set by in the Council's Moratorium. This number is derived by first ignoring those vessels which would be exempt anyway, and then also deducting those vessels attributable to the halibut fishery (156) and those which operated only in State waters (13); i.e., 8 crab and 14 groundfish vessels entered which would not otherwise qualify, for a total of 22.

Table 3.1 Vessels Entering Council Fisheries Between February 9, 1992 and April 4, 1994.

Fishery	Total Vessels	Non Exempt Vessels (≥26')
Halibut	343	156
Crab	11	8
Groundfish (with Federal Permits)	14	14
Groundfish (no Federal Permit but legal landings inside state waters)	26	13
All fisheries under the Council jurisdiction	394	191

Figure 3.1 was developed for the moratorium analysis. It shows that very few vessels remain in the fishery after 3-4 years. Fully 63% of the vessels fished 3 years or less. Over 70% fished 4 years or less.

Figure 3.1 Total Years Fished and Cummulative.Exit Over Time



Conclusions Regarding the Moratorium within the No-Action Alternative.

The analysis of the moratorium indicates that there are 20 to 25 percent more trawl vessels in the groundfish fishery than can be justified based on financial break-even criteria. Table 3.1 above shows that very few vessels have entered the groundfish and crab fisheries since February 9, 1992. It may be that the threat of the moratorium kept new vessels out of the industry, or, perhaps investors have decided their money is better spent elsewhere. Nonetheless, under the No-Action Alternative there does not appear to be any changes in the financial benefit of entering the fishery, particularly if the moratorium is resubmitted for approval.

3.1.2 Vessel Entry Under the No Action Alternative

Even if the moratorium is not resubmitted and implemented, there is still some question of whether vessels will continue to enter the groundfish and crab fisheries as they have in the past. As discussed in Chapter 2 vessels enter the fishery because their owners perceive that it is a better use of their capital and effort than the next best alternative. The groundfish and crab fisheries are extremely diverse. Projecting vessel entry and the impacts of vessel entry is difficult because of the lack of current, accurate cost and revenue data to describe the fleet.

During the analysis of the inshore/offshore issue (Amendment 18/23 to the Groundfish FMPs), an OMB-approved survey was conducted of the groundfish harvesting and processing vessels and plants. It asked for cost and performance data, on the Pacific cod and pollock fisheries, for all of 1989 and half of 1990. Although the survey was very lengthy and complicated and the response rate to the survey was low, it produced enough useful information to construct representative harvesting and processing vessels and plants for use in an economic impact assessment model. Although that information is dated and controversial , it is the best and most complete set of information available.[10] Using those data identified above, a "break-even" analysis was undertaken with the fishing fleets as defined in the inshore/offshore analysis.[11] Most break-even analyses attempt to determine how much catch a given vessel must have to remain a viable economic unit.[12] In this case, rather than increasing the catch of a given vessel we increase or decrease, as necessary, the number of vessels in a given sector, holding the sector catch constant.[13] The "Break-even Fleet" includes the maximum number of vessels in that sector while maintaining positive returns.

The break-even analysis demonstrates the likelihood of additional vessels entering the groundfish fleet under the No Action alternative. Recognizing that the information contained in the inshore/offshore analysis is

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[10] Under the CRP analysis, Representative Vessel and Processor Profiles are being constructed. However, for a variety of reasons including an acceleration of the license alternative and the reluctance of the industry to provide this information, these profiles have not been completed. Until more reliable information is available, the inshore/offshore economic performance information will be used.

[11] Since the analysis concentrated its efforts on pollock in the Bering Sea and Gulf and Pacific cod in the Gulf, data on vessels which were not directly involved with those species in those areas were not fully developed. Therefore this analysis does not include data on crab vessels, and vessels which concentrated their efforts on rockfish and flatfish.

[12] Viable economic unit implies that all fixed, and variable costs are being covered and the operation is generating a normal return on the owner's investment (i.e. it is also covering its opportunity costs) including depreciation and interest payments. The fact that these latter costs are included, differentiates break-even analyses from more traditional efficiency based analyses.

[13] Holding the catch of a given sector constant is a simplifying assumption which would not hold in reality. Since we are simultaneously changing the size of each sector of the fleet, catch will shift to different sectors as a function of catching power. Predicting changes in catch by sector is a much more difficult problem requiring complex mathematical models, and is outside the scope of this analysis, and the available cost and revenue information.

somewhat dated and controversial, five additional "break-even" fleets were estimated by (1) increasing ex-vessel and product prices by 10%, (2) increasing catches by 25%, (3) decreasing the assumed time horizon for return on investment, (4) increasing the desired return on investment, and (5) decreasing the assumed initial vessel and permit purchase prices by 25%. If the potential number of vessels in the break-even fleet is less than the number allowed to participate under the moratorium, or under a license limitation program, then the potential benefits of either program are greatly reduced.

Tables 3.2 - 3.10 show the basis for and results of the break-even analyses. Table 3.2 defines the baseline cost and revenue parameters used at the vessel level. Table 3.3 shows single vessel costs and revenues (all assumed to be linear) for eight different types of vessels. Unless noted, the vessels are assumed to be operating in the BSAI fishery.

Table 3.4 shows the Modelled Fleet used for the inshore/offshore analysis. The number of vessels was taken directly from Table 3.2a on pages 3-14, 15 of the final SEIS.[14] This analysis, (as in the inshore/offshore analysis) assumes that all vessels in a given class are identical and each has the same operating characteristics. Assuming a homogenous fleet with linear cost and production functions, the "Modelled Fleet" totals are estimated by multiplying the number of vessels by the various cost and revenue parameters in Table 3.3. The "Modelled Fleet" as estimated here shows substantial net economic returns. For most of the vessel types depicted, vessels could be added to the sector while remaining economically viable.

Table 3.5 shows the "Break-even Fleet" for the modelled vessels. The break-even fleet is calculated by adding vessels to each sector, while holding the catch, production , variable costs, and revenues constant for the entire sector. Adding additional vessels in this case implies adding additional fixed costs and opportunity costs to each sector. The "abnormal" profits in the fleet in the modelled case allow additional vessels to enter. Each vessel in each sector, including the newcomers, will still be able to cover all variable, fixed, and opportunity costs, and would remain economically viable. As Table 3.5 shows, 75 additional vessels could break-even under the assumptions used in the inshore/offshore analysis.

Tables 3.6-3.10 show the break-even fleets if certain assumptions are changed, and demonstrate the sensitivity of the break-even analysis to different parameters. Table 3.6 calculates the break-even fleet under the assumption that ex-vessel prices and wholesale prices all rise by 10%, while catch, production, and all other costs remain constant. The 10% price increase allows 107 additional vessels beyond the "break-even fleet" in Table 3.5 to enter the fishery as economically viable units. Whether or not this many vessels will enter the fishery with a 10% price increase will clearly depend on the vessel owner's assessment of price stability. If the owner or prospective investor sees the price hike as temporary they will be less likely to commit their funds to a fishing venture, especially assuming a 15-year horizon for returns to investment.

Table 3.7 shows the break-even fleet assuming that catches accruing to each sector increase by 25%. A 25% increase was chosen to match catch levels to a typical annual catch in the Bering Sea. The increase in catch results in a 25% increase in total revenues. However, catching and processing 25% more fish also increases variable harvesting and processing costs by 25%, so the net effect is significantly less than the effect of a 25% price increase, or even the 10% increase shown in Table 3.6. As seen in Table 3.7, 157 more vessels would break-even under this scenario than in the fleet modelled in Amendment 18/23, but only 82 more vessels than the break-even fleet. Investors would likely only commit their funding to more fishing vessels under this

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[14]The fleet modeled in the Inshore/Offshore analysis was a "modelled fleet" rather than the actual fleet in existence at the time. For analysis purposes, a "modelled fleet" is often more appropriate than a "snap-shot" of the actual fleet because of the use of "representative vessels," the dearth of detailed cost and operating information for individual vessels, and the great amount of diversity within each sector. One example of this is shown in the freezer longliner fleet which was modelled only for the GOA. Since Pacific cod was not a part of the alternatives for the BSAI, these vessels were not included. As another example, the "purse seiner" and "crabber" classes developed in the inshore/offshore SEIS were used only to supply the various processors with sufficient raw product of crab, salmon, halibut, and herring. Since the inshore/offshore amendment did not change the harvests of these vessels, the cost profiles used were immaterial and, therefore, not fully developed. Therefore, these two classes were dropped from this break-even analysis.

scenario if there was a high likelihood of catch levels remaining high over the life of the investment, assumed to be 15 years.

We have assumed for simplicity that each vessel owner is in the fishing industry to make a reasonable return on the capital and labor they have invested in the fishery. We have assumed that the returns the vessel owner receives from the "lifestyle" of fishing do not enter into his or her business decisions. Under these assumptions, returns on an investment must equal or exceed returns that the same amount of capital or labor would make elsewhere, i.e., the opportunity cost of capital and labor. In calculating the net economic return on an investment, this opportunity cost is deducted from net revenue. As a proxy for the amount of this investment we have used the estimated value of the vessel.[15] The opportunity cost is calculated assuming that, rather than purchasing the vessel, the investor could have purchased a mortgage for the same amount. The returns to the lender on a mortgage depend on the amount of the loan, the interest rate (or return on investment), and the time allowed for repayment (the time horizon of the investment). We have assumed a 10% rate of return over a 15-year time horizon. This is equivalent to assuming that the vessel owner borrowed the purchase price of the vessel, invested none of his or her own capital, and made payments to the bank.

Table 3.8 shows the importance of our assumptions regarding initial investments and expected return to investments. In this scenario, the vessel value was reduced by 25%. In other words, the initial investment to enter the fishery decreases by that amount. As a consequence, expected return to investment also decreases, and profit increases for each new vessel for any given amount of fish caught and processed. Table 3.8 shows that the break-even fleet would increase by 58 vessels under these assumptions. Note again that these conditions would have to hold for the time horizon of the investments. It should also be noted that a drop in vessel values does not impact new investors the same as vessel owners who purchased the vessel at higher prices. The expected return to the vessel owner should remain constant throughout the period he owns the vessel, unless additional capital is put into the vessel. If the sales price of other vessels drops, it does not affect the price paid or the expected return. Also, if vessel prices drop, it is a good indicator of the return new investors in vessels are expecting and, therefore, a good indicator the earlier investors may be heading for hard times.

Tables 3.9 and 3.10 show the impacts of the return on investment assumed for the fleet. For all scenarios up to this point, we have assumed a 10% return over 15-years. Because of uncertainty and volatility in the fishery, it can be argued that a 15-year time horizon is too long. Table 3.9 calculates the fishery using the same 10% return on investment, but over 10 years. This has the effect of increasing the opportunity cost of capital (or fixed costs if the vessel owner has borrowed money to purchase the vessel). Increasing opportunity or fixed costs results in a smaller break-even fleet (42 fewer vessels) than in Table 3.5. A similar impact is seen in Table 3.10 which assumes investors will not risk their money in the highly uncertain fishing industry unless the return on investment is high. In this scenario, we assume a 1[illegible]% return over a 15-year time horizon, which results in 53 fewer economically viable vessels than the "break-even" fleet shown in Table 3.5.

[15]The opportunity cost of the vessel owner's labor must also be deducted from net revenue. We have assumed that this is included in administrative salaries which are a component of fixed costs.

Table 3.2 Parameter Definitions Used in the Break-Even Analysis of Inshore/Offshore Vessels

Number of Vessels	This is the number of vessels modeled in each particular table.
Harvesting:	The next rows from catch to fixed cost refer to harvesting only.
Catch Lbs.	Total pounds of all species harvested by the vessel(s).
Species (mt)	This is a breakdown of the catch of the vessel(s) by species in metric tons.
Ex-Vessel Value	Total ex-vessel value of all species harvested by the vessel(s).
Variable Cost	Total variable cost of harvesting of all species by the vessel(s).
Fixed Cost	Total fixed cost allocated to harvesting.
Processing:	The next four rows refer to processing only and are only shown for catcher/processors. Shore-based and mothership processing are not included.
Product Lbs.	Total pounds of all products of all species produced by the vessel(s).
Variable Costs	Variable processing costs of all production by the vessel(s).
Fixed Costs	Fixed costs allocated to the processing sector.
Totals:	The next two rows combine harvesting and processing costs and revenues.
Total Income	Ex-vessel value of delivered fish plus wholesale value of processed product.
Total Expenses	Fixed and variable harvesting costs plus fixed and variable processing costs.
Net Revenue	Total income minus total expenses. This does not include the opportunity cost of capital, depreciation or any interest payments which are captured in the estimate of opportunity costs.
Vessel Value	The estimated purchase price of the vessel including harvesting and processing equipment. For the limit seiner class, this includes the value of salmon permits.
Opportunity Cost	This is estimated as the next best opportunity for the vessel owner's investment in the vessel, equipment and permits. We assume the owner could have purchased a mortgage of the same value with a 10% yield over a 15-year period. The value shown represents the annual payment which would accrue to such a mortgage. It should be noted that this amount represents the costs of interest and principle the owner would be paying if the vessel was purchased using borrowed funds.
Net Economic Return	Calculated by subtracting opportunity costs from net revenue. This is the amount of profit above "normal profit" accruing to each class. Note that in this exercise it is always positive. In the "Break-even" Tables 3.5-3.10 adding an additional vessel to a given sector will turn this number negative for that sector.
Incremental Vessels v. Modelled Fleet	This is number of vessels added to (or subtracted from) the modelled fleet as shown in Table 3.3 for each particular scenario.
Incremental Vessels v. Break-even Fleet	This is number of vessels added to (or subtracted from) the modelled fleet as shown in Table 3.4 for each particular scenario.

Table 3.3

Vessel Type	H&G FT	Fillet FT	Surimi FT	Freezer Longliner	At-sea Trawler	Shorebased Trawler	Longliner	Combo	Total
	Vessel Level Information								
Number of Vessels	1	1	1	1	1	1	1	1	8
Harvesting:									
Pounds of Catch	9,006,297	33,666,086	93,373,316	1,803,994	34,327,950	17,867,857	352,169	5,978,951	196,376,620
Pollock (mt)	1,848	12,019	41,624		2,385	7,533		2,167	67,577
Pacific Cod (mt)	726	2,471	741	215	3,460	574	79	433	8,700
Flatfish (mt)	1,399	746		21	560				2,726
Rockfish (mt)	15	10		21	5				52
Halibut (mt)		28		466			30	15	539
Sablefish (mt)	98			95			79	5	277
King Crab								17	17
C. bairdi (mt)								10	10
C. Opilio (mt)								66	66
Total Catch (mt)	4,086	15,275	42,365	819	6,410	8,107	189	2,713	79,964
Ex-Vessel Value	$0	$0	$0	$310,800	$2,694,403	$1,517,689	$278,134	$918,135	$5,719,161
Variable Cost	$1,184,646	$2,339,586	$2,616,045	$605,057	$1,755,254	$932,314	$168,937	$743,628	$10,345,467
Fixed Cost	$204,175	$362,100	$594,000	$201,000	$343,500	$218,100	$26,825	$56,500	$2,006,200
Processing:									
Pounds of Product	3,577,107	7,506,558	15,123,557	1,082,562	0	0	0	0	27,289,784
Product Value	$4,223,433	$8,581,014	$14,949,708	$1,715,784	$0	$0	$0	$0	$29,469,939
Variable Costs	$1,739,461	$3,401,779	$5,564,102	$475,876	$0	$0	$0	$0	$11,181,218
Fixed Costs	$380,000	$754,900	$1,469,000	$220,500	$0	$0	$0	$0	$2,824,400
Total Income	$4,223,433	$8,581,014	$14,949,708	$2,026,584	$2,694,403	$1,517,689	$278,134	$918,135	$35,189,100
Total Expenses	$3,508,282	$6,858,365	$10,243,147	$1,502,433	$2,098,754	$1,150,414	$195,762	$800,128	$26,357,285
Net Revenue	$715,151	$1,722,649	$4,706,561	$524,151	$595,649	$367,275	$82,372	$118,007	$8,831,815
Vessel Value	$4,800,000	$9,500,000	$25,000,000	$3,000,000	$2,500,000	$2,750,000	$375,000	$600,000	$48,525,000
Opportunity Cost	$631,074	$1,249,001	$3,286,844	$394,421	$328,684	$361,553	$49,303	$78,884	$6,379,765
Net Economic Return	$84,077	$473,648	$1,419,717	$129,730	$266,965	$5,722	$33,069	$39,123	$2,452,050

Table 3.4	Modeled Number of Vessels								
Vessel Type	H&G FT	Fillet FT	Surimi FT	Freezer Longliner	At-sea Trawler	Shorebased Trawler	Longliner	Combo	Total
Number of Vessels	14	20	12	20	12	18	104	58	258
Harvesting:									
Pounds of Catch	126,088,158	673,321,720	1,120,479,792	36,079,880	411,935,400	321,621,426	36,625,576	346,779,158	3,072,931,110
Pollock (mt)	25,878	240,389	499,488	0	28,625	135,595	0	125,660	1,055,635
Pacific Cod (mt)	10,161	49,423	8,896	4,308	41,516	10,332	8,265	25,143	158,044
Flatfish (mt)	19,590	14,925	0	420	6,716	0	0	0	41,652
Rockfish (mt)	215	205	0	420	64	0	0	0	905
Halibut (mt)	0	557	0	9,316	0	0	3,146	859	13,878
Sablefish (mt)	1,365	0	0	1,906	0	0	8,265	293	11,829
King Crab	0	0	0	0	0	0	0	960	960
C. bairdi (mt)	0	0	0	0	0	0	0	609	609
C. Opilio (mt)	0	0	0	0	0	0	0	3,817	3,817
Total Catch (mt)	57,209	305,500	508,385	16,370	76,922	145,926	19,677	157,341	1,287,329
Ex-Vessel Value	$0	$0	$0	$6,216,000	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$148,045,004
Variable Cost	$16,585,044	$46,791,720	$31,392,540	$12,101,140	$21,063,048	$16,781,652	$17,569,448	$43,130,424	$205,415,016
Fixed Cost	$2,858,450	$7,242,000	$7,128,000	$4,020,000	$4,122,000	$3,925,800	$2,789,800	$3,277,000	$35,363,050
Processing:									
Pounds of Product	50,079,498	150,131,160	181,482,684	21,651,240	0	0	0	0	403,344,582
Product Value	$59,128,062	$171,620,280	$179,396,496	$34,315,680	$0	$0	$0	$0	$444,460,518
Variable Costs	$24,352,454	$68,035,580	$66,769,224	$9,517,520	$0	$0	$0	$0	$168,674,778
Fixed Costs	$5,320,000	$15,098,000	$17,628,000	$4,410,000	$0	$0	$0	$0	$42,456,000
Total Income	$59,128,062	$171,620,280	$179,396,496	$40,531,680	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$592,505,522
Total Expenses	$49,115,948	$137,167,300	$122,917,764	$30,048,660	$25,185,048	$20,707,452	$20,359,248	$46,407,424	$451,908,844
Net Revenue	$10,012,114	$34,452,980	$56,478,732	$10,483,020	$7,147,788	$6,610,950	$8,566,688	$6,844,406	$140,596,678
Vessel Value	$67,200,000	$190,000,000	$300,000,000	$60,000,000	$30,000,000	$49,500,000	$39,000,000	$34,800,000	$770,500,000
Opportunity Cost	$8,835,038	$24,980,018	$39,442,133	$7,888,427	$3,944,213	$6,507,952	$5,127,477	$4,575,287	$101,300,545
Net Economic Return	$1,177,076	$9,472,962	$17,036,599	$2,594,593	$3,203,575	$102,998	$3,439,211	$2,269,119	$39,296,133

Table 3.5	Break Even Number of Vessels								
Vessel Type	H&G FT	Fillet FT	Surimi FT	Freezer Longliner	At-sea Trawler	Shorebased Trawler	Longliner	Combo	Total
Number of Vessels	14	24	15	23	16	18	149	74	333
Harvesting:									
Pounds of Catch	126,088,158	673,321,720	1,120,479,792	36,079,880	411,935,400	321,621,426	36,625,576	346,779,158	3,072,931,110
Pollock (mt)	25,878	240,389	499,488	0	28,625	135,595	0	125,660	1,055,635
Pacific Cod (mt)	10,161	49,423	8,896	4,308	41,516	10,332	8,265	25,143	158,044
Flatfish (mt)	19,590	14,925	0	420	6,716	0	0	0	41,652
Rockfish (mt)	215	205	0	420	64	0	0	0	905
Halibut (mt)	0	557	0	9,316	0	0	3,146	859	13,878
Sablefish (mt)	1,365	0	0	1,906	0	0	8,265	293	11,829
King Crab	0	0	0	0	0	0	0	960	960
C. bairdi (mt)	0	0	0	0	0	0	0	609	609
C. Opilio (mt)	0	0	0	0	0	0	0	3,817	3,817
Total Catch (mt)	57,209	305,500	508,385	16,370	76,922	145,926	19,677	157,341	1,287,329
Ex-Vessel Value	$0	$0	$0	$6,216,000	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$148,045,004
Variable Cost	$16,585,044	$46,791,720	$31,392,540	$12,101,140	$21,063,048	$16,781,652	$17,569,448	$43,130,424	$205,415,016
Fixed Cost	$2,858,450	$8,690,400	$8,910,000	$4,623,000	$5,496,000	$3,925,800	$3,996,925	$4,181,000	$42,681,575
Processing:									
Pounds of Product	50,079,498	150,131,160	181,482,684	21,651,240	0	0	0	0	403,344,582
Product Value	$59,128,062	$171,620,280	$179,396,496	$34,315,680	$0	$0	$0	$0	$444,460,518
Variable Costs	$24,352,454	$68,035,580	$66,769,224	$9,517,520	$0	$0	$0	$0	$168,674,778
Fixed Costs	$5,320,000	$18,117,600	$22,035,000	$5,071,500	$0	$0	$0	$0	$50,544,100
Total Income	$59,128,062	$171,620,280	$179,396,496	$40,531,680	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$592,505,522
Total Expenses	$49,115,948	$141,635,300	$129,106,764	$31,313,160	$26,559,048	$20,707,452	$21,566,373	$47,311,424	$467,315,469
Net Revenue	$10,012,114	$29,984,980	$50,289,732	$9,218,520	$5,773,788	$6,610,950	$7,359,563	$5,940,406	$125,190,053
Vessel Value	$67,200,000	$228,000,000	$375,000,000	$69,000,000	$40,000,000	$49,500,000	$55,875,000	$44,400,000	$928,975,000
Opportunity Cost	$8,835,038	$29,976,021	$49,302,666	$9,071,691	$5,258,951	$6,507,952	$7,346,097	$5,837,436	$122,135,852
Net Economic Return	$1,177,076	$8,959	$987,066	$146,829	$514,837	$102,998	$13,466	$102,970	$3,054,201
Incremental Vessels v. Modelled Fleet Table 3.4)	0	4	3	3	4	0	45	16	75

Table 3.6

Break Even Vessels With 10% Increase in Ex-Vessel and Product Prices

Vessel Type	H&G FT	Fillet FT	Surimi FT	Freezer Longliner	At-sea Trawler	Shorebased Trawler	Longliner	Combo	Total
Number of Vessels	19	31	18	28	21	22	187	114	440
Harvesting:									
Pounds of Catch	126,088,158	673,321,720	1,120,479,792	36,079,880	411,935,400	321,621,426	36,625,576	346,779,158	3,072,931,110
Pollock (mt)	25,878	240,389	499,488	0	28,625	135,595	0	125,660	1,055,635
Pacific Cod (mt)	10,161	49,423	8,896	4,308	41,516	10,332	8,265	25,143	158,044
Flatfish (mt)	19,590	14,925	0	420	6,716	0	0	0	41,652
Rockfish (mt)	215	205	0	420	64	0	0	0	905
Halibut (mt)	0	557	0	9,316	0	0	3,146	859	13,878
Sablefish (mt)	1,365	0	0	1,906	0	0	8,265	293	11,829
King Crab	0	0	0	0	0	0	0	960	960
C. bairdi (mt)	0	0	0	0	0	0	0	609	609
C. Opilio (mt)	0	0	0	0	0	0	0	3,817	3,817
Total Catch (mt)	57,209	305,500	508,385	16,370	76,922	145,926	19,677	157,341	1,287,329
Ex-Vessel Value	$0	$0	$0	$6,837,600	$35,566,120	$30,050,242	$31,818,530	$58,577,013	$162,849,504
Variable Cost	$16,585,044	$46,791,720	$31,392,540	$12,101,140	$21,063,048	$16,781,652	$17,569,448	$43,130,424	$205,415,016
Fixed Cost	$3,879,325	$11,225,100	$10,692,000	$5,628,000	$7,213,500	$4,798,200	$5,016,275	$6,441,000	$54,893,400
Processing:									
Pounds of Product	50,079,498	150,131,160	181,482,684	21,651,240	0	0	0	0	403,344,582
Product Value	$65,040,868	$188,782,308	$197,336,146	$37,747,248	$0	$0	$0	$0	$488,906,570
Variable Costs	$24,352,454	$68,035,580	$66,769,224	$9,517,520	$0	$0	$0	$0	$168,674,778
Fixed Costs	$7,220,000	$23,401,900	$26,442,000	$6,174,000	$0	$0	$0	$0	$63,237,900
Total Income	$65,040,868	$188,782,308	$197,336,146	$44,584,848	$35,566,120	$30,050,242	$31,818,530	$58,577,013	$651,756,074
Total Expenses	$52,036,823	$149,454,300	$135,295,764	$33,420,660	$28,276,548	$21,579,852	$22,585,723	$49,571,424	$492,221,094
Net Revenue	$13,004,045	$39,328,008	$62,040,382	$11,164,188	$7,289,572	$8,470,390	$9,232,807	$9,005,589	$159,534,980
Vessel Value	$91,200,000	$294,500,000	$450,000,000	$84,000,000	$52,500,000	$60,500,000	$70,125,000	$68,400,000	$1,171,225,000
Opportunity Cost	$11,990,408	$38,719,027	$59,163,200	$11,043,797	$6,902,373	$7,954,164	$9,219,599	$8,992,806	$153,985,374
Net Economic Return	$1,013,637	$608,981	$2,877,182	$120,391	$387,198	$516,227	$13,208	$12,783	$5,549,606
Incremental Vessels v. Modelled Fleet Table 3.4)	5	11	6	8	9	4	83	56	182
Incremental Vessels v. Break-even Fleet Table 3.5)	5	7	3	5	5	4	38	40	107

Table 3.7

Break Even Vessels With 25% Increase In Total Catch
(Also Increases total production, variable cost, and revenue.)

Vessel Type	H&G FT	Fillet FT	Surimi FT	Freezer Longliner	At-sea Trawler	Shorebased Trawler	Longliner	Combo	Total
Number of Vessels	18	30	18	28	20	22	186	93	415
Harvesting:									
Pounds of Catch	157,610,198	841,652,150	1,400,599,740	45,099,850	514,919,250	402,026,783	45,781,970	433,473,948	3,841,163,888
Pollock (mt)	32,347	300,486	624,361	0	35,782	169,493	0	157,075	1,319,543
Pacific Cod (mt)	12,701	61,779	11,120	5,385	51,895	12,915	10,332	31,428	197,555
Flatfish (mt)	24,487	18,657	0	525	8,396	0	0	0	52,065
Rockfish (mt)	269	256	0	525	80	0	0	0	1,131
Halibut (mt)	0	697	0	11,645	0	0	3,933	1,074	17,348
Sablefish (mt)	1,707	0	0	2,382	0	0	10,332	367	14,787
King Crab	0	0	0	0	0	0	0	1,200	1,200
C. bairdi (mt)	0	0	0	0	0	0	0	761	761
C. Opilio (mt)	0	0	0	0	0	0	0	4,771	4,771
Total Catch (mt)	71,511	381,875	635,481	20,463	96,152	182,408	24,596	196,676	1,609,161
Ex-Vessel Value	$0	$0	$0	$7,770,000	$40,416,045	$34,148,003	$36,157,420	$66,564,788	$185,056,255
Variable Cost	$20,731,305	$58,489,650	$39,240,675	$15,126,425	$26,328,810	$20,977,065	$21,961,810	$53,913,030	$256,768,770
Fixed Cost	$3,675,150	$10,863,000	$10,692,000	$5,628,000	$6,870,000	$4,798,200	$4,989,450	$5,254,500	$52,770,300
Processing:									
Pounds of Product	62,599,373	187,663,950	226,853,355	27,064,050	0	0	0	0	504,180,728
Product Value	$73,910,078	$214,525,350	$224,245,620	$42,894,600	$0	$0	$0	$0	$555,575,648
Variable Costs	$30,440,568	$85,044,475	$83,461,530	$11,896,900	$0	$0	$0	$0	$210,843,473
Fixed Costs	$6,840,000	$22,647,000	$26,442,000	$6,174,000	$0	$0	$0	$0	$62,103,000
Total Income	$73,910,078	$214,525,350	$224,245,620	$50,664,600	$40,416,045	$34,148,003	$36,157,420	$66,564,788	$740,631,903
Total Expenses	$61,687,023	$177,044,125	$159,836,205	$38,825,325	$33,198,810	$25,775,265	$26,951,260	$59,167,530	$582,485,543
Net Revenue	$12,223,055	$37,481,225	$64,409,415	$11,839,275	$7,217,235	$8,372,738	$9,206,160	$7,397,258	$158,146,360
Vessel Value	$86,400,000	$285,000,000	$450,000,000	$84,000,000	$50,000,000	$60,500,000	$69,750,000	$55,800,000	$1,141,450,000
Opportunity Cost	$11,359,334	$37,470,026	$59,163,200	$11,043,797	$6,573,689	$7,954,164	$9,170,296	$7,336,237	$150,070,743
Net Economic Return	$863,721	$11,199	$5,246,215	$795,478	$643,546	$418,574	$35,864	$61,021	$8,075,617
Incremental Vessels v. Modelled Fleet Table 3.4)	4	10	6	8	8	4	82	35	157
Incremental Vessels v. Break-even Fleet Table 3.5)	4	6	3	5	4	4	37	19	82

Table 3.8

Break Even Vessels With A 25% Decrease In Vessel Values
(i.e. a 25% reduction in vessel opportunity costs)

Vessel Type	H&G FT	Fillet FT	Surimi FT	Freezer Longliner	At-sea Trawler	Shorebased Trawler	Longliner	Combo	Total
Number of Vessels	17	27	17	26	19	21	177	87	391
Harvesting:									
Pounds of Catch	126,088,158	673,321,720	1,120,479,792	36,079,880	411,935,400	321,621,426	36,625,576	346,779,158	3,072,931,110
Pollock (mt)	25,878	240,389	499,488	0	28,625	135,595	0	125,660	1,055,635
Pacific Cod (mt)	10,161	49,423	8,896	4,308	41,516	10,332	8,265	25,143	158,044
Flatfish (mt)	19,590	14,925	0	420	6,716	0	0	0	41,652
Rockfish (mt)	215	205	0	420	64	0	0	0	905
Halibut (mt)	0	557	0	9,316	0	0	3,146	859	13,878
Sablefish (mt)	1,365	0	0	1,906	0	0	8,265	293	11,829
King Crab	0	0	0	0	0	0	0	960	960
C. bairdi (mt)	0	0	0	0	0	0	0	609	609
C. Opilio (mt)	0	0	0	0	0	0	0	3,817	3,817
Total Catch (mt)	57,209	305,500	508,385	16,370	76,922	145,926	19,677	157,341	1,287,329
Ex-Vessel Value	$0	$0	$0	$6,216,000	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$148,045,004
Variable Cost	$16,585,044	$46,791,720	$31,392,540	$12,101,140	$21,063,048	$16,781,652	$17,569,448	$43,130,424	$205,415,016
Fixed Cost	$3,470,975	$9,776,700	$10,098,000	$5,226,000	$6,526,500	$4,580,100	$4,748,025	$4,915,500	$49,341,800
Processing:									
Pounds of Product	50,079,498	150,131,160	181,482,684	21,651,240	0	0	0	0	403,344,582
Product Value	$59,128,062	$171,620,280	$179,396,496	$34,315,680	$0	$0	$0	$0	$444,460,518
Variable Costs	$24,352,454	$68,035,580	$66,769,224	$9,517,520	$0	$0	$0	$0	$168,674,778
Fixed Costs	$6,460,000	$20,382,300	$24,973,000	$5,733,000	$0	$0	$0	$0	$57,548,300
Total Income	$59,128,062	$171,620,280	$179,396,496	$40,531,680	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$592,505,522
Total Expenses	$50,868,473	$144,986,300	$133,232,764	$32,577,660	$27,589,548	$21,361,752	$22,317,473	$48,045,924	$480,979,894
Net Revenue	$8,259,589	$26,633,980	$46,163,732	$7,954,020	$4,743,288	$5,956,650	$6,608,463	$5,205,906	$111,525,628
Vessel Value	$61,200,000	$192,375,000	$318,750,000	$58,500,000	$35,625,000	$43,312,500	$49,781,250	$39,150,000	$798,693,750
Opportunity Cost	$8,046,195	$25,292,268	$41,907,266	$7,691,216	$4,683,753	$5,694,458	$6,544,929	$5,147,198	$105,007,284
Net Economic Return	$213,394	$1,341,712	$4,256,466	$262,804	$59,535	$262,192	$63,534	$58,708	$6,518,344
Incremental Vessels v. Modelled Fleet Table 3.4)	3	7	5	6	7	3	73	29	133
Incremental Vessels v. Break-even Fleet Table 3.5)	3	3	2	3	3	3	28	13	58

Table 3.9

Break Even Vessels With A 5 Year Reduction In the Investment Time Horizon (i.e. a 10% return over a 10 year period)

Vessel Type	H&G FT	Fillet FT	Surimi FT	Freezer Longliner	At-sea Trawler	Shorebased Trawler	Longliner	Combo	Total
Number of Vessels	13	21	13	20	15	15	129	65	291
Harvesting:									
Pounds of Catch	126,088,158	673,321,720	1,120,479,792	36,079,880	411,935,400	321,621,426	36,625,576	346,779,158	3,072,931,110
Pollock (mt)	25,878	240,389	499,488	0	28,625	135,595	0	125,660	1,055,635
Pacific Cod (mt)	10,161	49,423	8,896	4,308	41,516	10,332	8,265	25,143	158,044
Flatfish (mt)	19,590	14,925	0	420	6,716	0	0	0	41,652
Rockfish (mt)	215	205	0	420	64	0	0	0	905
Halibut (mt)	0	557	0	9,316	0	0	3,146	859	13,878
Sablefish (mt)	1,365	0	0	1,906	0	0	8,265	293	11,829
King Crab	0	0	0	0	0	0	0	960	960
C. bairdi (mt)	0	0	0	0	0	0	0	609	609
C. Opilio (mt)	0	0	0	0	0	0	0	3,817	3,817
Total Catch (mt)	57,209	305,500	508,385	16,370	76,922	145,926	19,677	157,341	1,287,329
Ex-Vessel Value	$0	$0	$0	$6,216,000	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$148,045,004
Variable Cost	$16,585,044	$46,791,720	$31,392,540	$12,101,140	$21,063,048	$16,781,652	$17,569,448	$43,130,424	$205,415,016
Fixed Cost	$2,654,275	$7,604,100	$7,722,000	$4,020,000	$5,152,500	$3,271,500	$3,460,425	$3,672,500	$37,557,300
Processing:									
Pounds of Product	50,079,498	150,131,160	181,482,684	21,651,240	0	0	0	0	403,344,582
Product Value	$59,128,062	$171,620,280	$179,396,496	$34,315,680	$0	$0	$0	$0	$444,460,518
Variable Costs	$24,352,454	$68,035,580	$66,769,224	$9,517,520	$0	$0	$0	$0	$168,674,778
Fixed Costs	$4,940,000	$15,852,900	$19,097,000	$4,410,000	$0	$0	$0	$0	$44,299,900
Total Income	$59,128,062	$171,620,280	$179,396,496	$40,531,680	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$592,505,522
Total Expenses	$48,531,773	$138,284,300	$124,980,764	$30,048,660	$26,215,548	$20,053,152	$21,029,873	$46,802,924	$455,946,994
Net Revenue	$10,596,289	$33,335,980	$54,415,732	$10,483,020	$6,117,288	$7,265,250	$7,896,063	$6,448,906	$136,558,528
Vessel Value	$62,400,000	$199,500,000	$325,000,000	$60,000,000	$37,500,000	$41,250,000	$48,375,000	$39,000,000	$813,025,000
Opportunity Cost	$10,155,313	$32,467,706	$52,892,253	$9,764,724	$6,102,952	$6,713,248	$7,872,808	$6,347,070	$132,316,075
Net Economic Return	$440,976	$868,274	$1,523,479	$718,296	$14,336	$552,002	$23,255	$101,836	$4,242,453
Incremental Vessels v. Modelled Fleet Table 3.4)	(1)	1	1	0	3	(3)	25	7	33
Incremental Vessels v. Break-even Fleet Table 3.5)	(1)	(3)	(2)	(3)	(1)	(3)	(20)	(9)	(42)

Table 3.10

Break Even Vessels With A 5% Increase in the Return on Investment
(i.e. a 15% return over a 15 year time horizon)

Vessel Type	H&G FT	Fillet FT	Surimi FT	Freezer Longliner	At-sea Trawler	Shorebased Trawler	Longliner	Combo	Total
Number of Vessels	12	20	12	20	14	15	124	63	280
Harvesting:									
Pounds of Catch	126,088,158	673,321,720	1,120,479,792	36,079,880	411,935,400	321,621,426	36,625,576	346,779,158	3,072,931,110
Pollock (mt)	25,878	240,389	499,488	0	28,625	135,595	0	125,660	1,055,635
Pacific Cod (mt)	10,161	49,423	8,896	4,308	41,516	10,332	8,265	25,143	158,044
Flatfish (mt)	19,590	14,925	0	420	6,716	0	0	0	41,652
Rockfish (mt)	215	205	0	420	64	0	0	0	905
Halibut (mt)	0	557	0	9,316	0	0	3,146	859	13,878
Sablefish (mt)	1,365	0	0	1,906	0	0	8,265	293	11,829
King Crab	0	0	0	0	0	0	0	960	960
C. bairdi (mt)	0	0	0	0	0	0	0	609	609
C. Opilio (mt)	0	0	0	0	0	0	0	3,817	3,817
Total Catch (mt)	57,209	305,500	508,385	16,370	76,922	145,926	19,677	157,341	1,287,329
Ex-Vessel Value	$0	$0	$0	$6,216,000	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$148,045,004
Variable Cost	$16,585,044	$46,791,720	$31,392,540	$12,101,140	$21,063,048	$16,781,652	$17,569,448	$43,130,424	$205,415,016
Fixed Cost	$2,450,100	$7,242,000	$7,128,000	$4,020,000	$4,809,000	$3,271,500	$3,326,300	$3,559,500	$35,806,400
Processing:									
Pounds of Product	50,079,498	150,131,160	181,482,684	21,651,240	0	0	0	0	403,344,582
Product Value	$59,128,062	$171,620,280	$179,396,496	$34,315,680	$0	$0	$0	$0	$444,460,518
Variable Costs	$24,352,454	$68,035,580	$66,769,224	$9,517,520	$0	$0	$0	$0	$168,674,778
Fixed Costs	$4,560,000	$15,098,000	$17,628,000	$4,410,000	$0	$0	$0	$0	$41,696,000
Total Income	$59,128,062	$171,620,280	$179,396,496	$40,531,680	$32,332,836	$27,318,402	$28,925,936	$53,251,830	$592,505,522
Total Expenses	$47,947,598	$137,167,300	$122,917,764	$30,048,660	$25,872,048	$20,053,152	$20,895,748	$46,689,924	$451,592,194
Net Revenue	$11,180,464	$34,452,980	$56,478,732	$10,483,020	$6,460,788	$7,265,250	$8,030,188	$6,561,906	$140,913,328
Vessel Value	$57,600,000	$190,000,000	$300,000,000	$60,000,000	$35,000,000	$41,250,000	$46,500,000	$37,800,000	$768,150,000
Opportunity Cost	$9,850,582	$32,493,240	$51,305,116	$10,261,023	$5,985,597	$7,054,453	$7,952,293	$6,464,445	$131,366,749
Net Economic Return	$1,329,882	$1,959,740	$5,173,616	$221,997	$475,191	$210,797	$77,895	$97,461	$9,546,579
Incremental Vessels v. Modelled Fleet Table 3.4)	(2)	0	0	0	2	(3)	20	5	22
Incremental Vessels v. Break-even Fleet Table 3.5)	(2)	(4)	(3)	(3)	(2)	(3)	(25)	(11)	(53)

Table 3.11	Summary of Break-even Analyses	
Table	Assumptions	Break-even Number of Vessels
3.4	Modelled inshore/offshore fleet	258
3.5	Break-even inshore/offshore fleet	333
3.6	Increase price by 10%	440
3.7	Increase catch by 25%	415
3.8	Decrease vessel value by 25%	391
3.9	Reduce investment horizon by 5 years	291
3.10	Increase required investment return by 5%	280

Conclusion from the Break-Even Analysis

Table 3.11 summarizes the break-even analysis. It is clear that the fleet as modelled in the inshore/offshore amendment (258 vessels) was relatively close to being fully capitalized. It is within 182 vessels of the break-even fleet shown for a 10% price rise which gives the largest break-even threshold. These break-even fleets must be contrasted to the current fleet which, in 1993, consisted of 435 vessels over 60' LOA and an additional 1,245 vessels less than 60' LOA. The Council indicates in their Problem Statement that many of the problems prevalent in the fishery are occurring because of the existence of this overcapitalized fleet. A fully or overcapitalized fleet will provide few opportunities for growth and new investment. Even if a moratorium or license program capped the fleet at its existing level, each existing vessel owner would attempt to maximize returns to the investments they have already made by trying to increase their share of the harvest. To increase harvest shares, they will need to invest in capital or labor on their existing vessels. Because the overall TAC is unlikely to increase in the short-run, this results in higher costs for the entire fleet without a consequent increase in total revenue. Unless the race for fish caused by the common-property nature of the fishery is eliminated, vessel owners will continue to make decisions which seem economically rational for themselves, but detrimental and irrational for the fisheries, and nation, as a whole. Neither the moratorium as approved by the Council, nor the license limitation alternatives appear to be able to eliminate the common property aspects of the fishery. Paradoxically, the no-action alternative may allow resolution of the problems facing the fishery sooner than if license limitation were implemented, because the time and administrative burden associated with implementation of a license program will likely delay progress on more comprehensive solutions. However, if potential fishery participants are expecting an eventual IFQ allocation, this may provide an incentive to enter the fisheries despite the economic irrationality of such a decision. This is one danger of the No Action alternative, unless the moratorium is resubmitted and approved.

3.1.3 Inshore/Offshore Allocation under the No-Action Alternative

The Inshore/Offshore Allocation sunsets on December 31, 1995. A new analysis of the continuation of inshore/offshore allocation is scheduled to begin in October 1994, regardless of the action the Council takes on the license limitation program. The No-Action Alternative does not appear to impact the Council's ability to take further action on the Inshore/Offshore Allocation.

3.1.4 Discards, Full Utilization, and Full Retention under the No-Action Alternative

The issue of discards and utilization in the groundfish fisheries in the North Pacific has recently drawn national attention. The Council has asked its analysts to prepare a document analyzing various programs which might lead to more complete utilization of the fishery resources which are harvested. Additionally, because the State of Alaska has proposed that the license limitation program be linked to a full-retention mandate, this section is included in the no-action alternative. The discussion will outline the issues around the "discard problem" in the North Pacific and briefly discuss whether the No-Action Alternative will preclude action leading to an acceptable solution.

Discards occur in the groundfish fisheries primarily for two reasons, regulatory and economic. An example of regulatory discards is the discard of halibut in the Pacific cod longline fishery. Regulations prohibit the retention of halibut in a hook-and-line fishery except during the open season for halibut. In the last few years, halibut openings have been 24 hours or less, while the Pacific cod fishery is open over a period of several months. Because halibut and Pacific cod are often on the same grounds, halibut are caught and, subsequently, must be discarded by regulation. An example of economic discard is found in the arrowtooth flounder fishery. Because the flesh of arrowtooth flounder is prone to turn to mush during preparation, there is little or no market, and most arrowtooth flounder are discarded.

To determine whether discards will be reduced under the no-action alternative, the question must be viewed from both the economic and regulatory perspective. From the regulatory perspective, the relevant question is: Will the no-action alternative help or hinder the development of regulations which might decrease the likelihood of discards? From the economic perspective, the relevant question is: Does the no-action alternative help or hinder the development of economic incentives to increase retention?

The Regulatory Perspective. Regulatory discards are those discards which occur because vessels are prohibited from keeping them by regulation. Primary examples are discards of halibut, salmon, and crab in the groundfish fisheries. Vessels participating in groundfish fisheries are prohibited from keeping catches of these highly valuable species. Regulatory discards also occur when the allowable harvest of one species is completed, but the harvesting activity for another species continues. If there is bycatch of the first incidental to the harvest of the second, then vessels may be required to discard those species. In most cases, NMFS attempts to manage closures such that discards are not mandatory, however this is not always possible.

The directed fishing standards (DFS) are the primary tool for regulating bycatch of species for which the allowable harvest is close to being met. When the harvest of a given species approaches a predetermined level, say 85% of the TAC, NMFS closes this fishery to directing fishing. It is at this point that the DFS are implemented. In order to discourage discards, vessels are allowed to keep a set amount of "bycatch" species in the other fisheries which remain open for directed fishing. If a vessel catches more of a given species than is allowed by the DFS, then it must discard some of the bycatch species to remain legal. Under the no-action alternative, this system will continue to exist and it is likely that discards will continue. An analysis of full-utilization alternatives is currently being undertaken by NMFS, and could be implemented under a separate amendment to the Groundfish plans, independent of the Council's ultimate decision on license limitation.

The Economic Perspective. Economic discards will occur whenever the revenue resulting from the net retention of the fish exceeds the net revenue achieved if the fish is discarded. With discards, the revenue difference is often found in the time saved from not having to deal with discarded fish. In this sense, economic discards may occur even if there are markets for the discard species. Discards of male rock sole in the rocksole fishery, and of rockfish in the directed halibut fishery, are two examples. Time is critical in fisheries where participants race to catch the available quota. Vessels that can catch fish fastest can control more of the product. Often this results in catching capacity exceeding processing capacity. This is the case for catcher-vessels delivering to shore-plants and motherships and for most catcher/processors, particularly trawler processors. When the catching capacity exceeds processing capacity and there is a race for fish, most of the conditions that result in economic discards are present. Finally, for economic discards to occur, the normal catch composition must have fish of a certain species, size, or sex which, if processed, would result in less overall revenue.[16]

In general, three conditions lead to economic discards: (1) There is a race for fish. (2) Catching capacity exceeds processing capacity on individual vessels as well as in the fleet overall. (3) The composition of the catch consists of fish of different relative value. Policy actions which reduce the likelihood that at least one of the necessary conditions for economic discards will occur, have the best chance for success. Mandate full

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[16]In this discussion it is implied that there are markets for the fish which are being discarded. Some fish of course cannot be sold at any price. Fishers and processors will tend to discard these fish even when the first of the two conditions are solved.

retention or utilization may reduce economic discards. It would tend to force catching capacity down, in order to match it to processing capacity, thereby slowing the race for fish. Other actions such as an IFQ system may also reduce the occurrence of discards. Either of these could be implemented without first implementing a license limitation program. The No-Action Alternative does not appear to preclude the Council from taking action on the discard issue.

3.1.5 Conclusions Regarding The No-Action Alternative

If the moratorium is resubmitted and no action is taken on license limitation, the fleet could draw from a pool of up to about 13,500 qualified vessels. If the Council revises the moratorium to eliminate the halibut and sablefish longline vessels associated with the IFQ fishery, then the moratorium fleet could draw from 4,000 vessels. Under the No-Action alternative, the economic incentives for these vessels to re-enter the fleet are unchanged. This potential fleet still is much larger than the 1600 to 1700 vessels that participated in 1993. Regardless of the size of the fleet, because most of the catching power is tied up in fewer than 500 vessels, the problems of excess capacity that contribute to the problems listed in the problem statement still will exist.

The break-even analyses conducted for the inshore-offshore and moratorium analyses demonstrate this overcapitalization. The moratorium analysis showed there were 20-25% more trawl vessels in the groundfish fishery than could be justified by the economics. Break-even analyses that were based on the fleet as modelled in the inshore-offshore analysis, and tested for sensitivity by varying input variables such as ex-vessel prices, product prices, catches, amortization schedule, desired return on investment, and vessel and permit purchase price, showed that the break-even fleet varies between 280 and 440 vessels. This contrasts to the current 1993 fleet of 435 vessels over 60 ft and 1,245 vessels less than 60 ft.

Despite the poor economic picture generated by the above break-even analyses, the industry may continue to invest capital in the fishery in an attempt to garner a greater share of the harvest. This could happen particularly if potential fishery participants expect an eventual IFQ allocation based on recent catch histories. This is the downside of the no-action alternative. And this could happen whether or not a moratorium is implemented. The downside of not resubmitting some form of moratorium is that the industry may perceive the next few years to be one last chance to get in "under the wire" regardless of cost, to establish some standing in the fishery. An advantage of pursuing the no action alternative is that if all efforts are dropped on license limitation, more attention could be directed more expediently to developing a more comprehensive solution to the overcapitalization problem.

As far as other ancillary issues such as inshore-offshore allocations, CDQs, and measures directed at waste and bycatch reductions, these all are possible under the no action alternative and most likely will be considered, with or without license limitation.

3.2 Alternative 2: License Limitation

3.2.1 Introduction and General Discussion of License Limitation

Section 3.2.1.1 discusses license limitation programs in general, emphasizing similar programs in existence around the world and their successes and failures. Section 3.2.1.2 deals with potential fleet reduction mechanisms, and Section 3.2.1.3 examines the basic economics of license limitation programs and their ability to address problems related to overcapacity. Detailed examination of the Council's license limitation alternatives is in Section 3.2.2.

3.2.1.1 Limited Entry and Effort Control: Issues and Examples

Controlling Effort along Unlimited Margins

Limited entry programs have been used to limit different features of fisheries, including the number of persons, vessels, or units of gear, indices of fishing capacity, and in some cases, a combination of these. In general, however, these measures are not capable of completely preventing increases in fishing effort because a fleet may bypass the intent of the restrictions and expand effort in other ways. This is called capital stuffing.[17]

The State of Alaska's limited entry program on salmon, herring, and certain other species, limits the number of persons who may operate gear. The salmon program run by the Canadian federal government in the waters off British Columbia initially limited the number of separate vessels.[18] The State of Florida has started a program in which individual lobster traps are subjected to limited licensing. The Australian federal government limits an index of fishing capacity in a prawn trawl fishery off of its northern coast. This index is based on measures of "under deck volume" and horsepower.

Some programs have limited more than one feature. For example, in the Australian northern prawn fishery, the limit on the fishing capacity index is accompanied by a limit on the number of vessels allowed in the fishery. As a practical matter, any system which combines a limited number of permit holders with a regulation fixing the amount of gear each permit holder may use, limits both persons and gear.

Each of these approaches to limited entry, however, leaves ways for fishermen to expand their fishing effort. Restrictions on persons, for example, can be undermined if persons are free to increase the number of gear units they use. Limits on the number of vessels may be bypassed by changing the size and shape of the vessels, the technology in use, the amount of gear used, or the number of crew. Restrictions on persons or vessels may also be bypassed by the introduction of supplementary units such as tenders, spotter planes, or additional skiffs.[19] Gear restrictions can be bypassed by upgrading the capacity of vessels or gear, or by cheating and fishing excess gear. Practical measurement problems mean that any index of fishing capacity will necessarily be a crude approximation to capacity and will miss ways in which the limited inputs can be supplemented. The index in use in the Northern Australia prawn fishery has been circumvented by the introduction of "...satellite navigators, Kort nozzles, coloured echo sounders, sonar, and new trawling gear..." (Haynes and Pascoe, 1988: 7).

Although limited entry cannot control effort perfectly, there are important reasons to believe that it can be a helpful element in fisheries management. Even if fishermen completely compete away the resource rents

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[17]"Capital stuffing" refers to the increased capital investment associated with each unit of the limited inputs. Capital stuffing is only one of the ways by which effort and fishing costs may be increased under limited entry.

[18]This program very quickly substituted a limit on the net tons allowed in the fleet for the limit on vessels (Wilen, 1988: 251).

[19]One of the most spectacular examples of the use of supplementary inputs was the use of helicopters to move drift gillnet vessels between open areas in the British Columbia herring sac roe drift gillnet fishery (Wilen, 1988: 254).

in the fishery, as they would be expected to do under open access, limited entry may slow down this process.[20] The present value of the rents preserved in the short run may be valuable and worth the cost of the program.

Beyond this, however, theoretical analyses suggests that, under plausible conditions, limited entry can increase or preserve fishery rents, even in the long run. Anderson (1985: 413-417)[21] showed that, when all fishermen were alike, a limited fishery could generate more rents than an unregulated, open access fishery. Limited entry would reduce costs as some vessels were taken from the fishery; these costs would be offset somewhat as the remaining vessels expanded their effort to compete for the rents that had been generated. However, as long as there were limits to the fleet's ability to substitute other costly inputs for the restricted input, limited entry could generate net benefits that could be sustained in the long run. In a fishery in which fishermen differed, perhaps due to differences in skill, Anderson found a somewhat more complex situation. Nevertheless, Anderson found that in this case, as well, a limited fishery entry could often generate more rents than an unregulated, open access fishery, even in the long run.

The assumption that inputs are not perfectly substitutable for one another is usually a reasonable one. At one extreme, inputs may be used in fixed proportions. To some extent, this may be the case under the Alaska limited entry program. In Alaska, gear operators are limited and the gear that they may operate is highly regulated. In some fleets, there may be little or no scope for the fleet to substitute increased gear inputs and offset the limit on the number of gear operators. Although there may be more potential for substitution between other inputs, few inputs are perfect substitutes for one another.

Campbell and Lindner (1990: 66) have extended Anderson's analysis and pointed out additional conditions that may be associated with the rent-generating capacity of limited entry. They reiterate Anderson's argument about the importance of input substitutability. The more easily the fleet may substitute unlimited for limited inputs, all other things being equal, the less capacity a program has to generate rents. They also note the importance of the "input intensity" for the limited input.[22] The more intensively the fishery uses the restricted input compared to other inputs, the greater the capacity of limited entry to generate rents. They note that high input intensity implies that the restricted inputs would be a "significant proportion of total factor cost." Finally, they suggest that the rent generating capacity of the program will be greater "if the economic pressure to exploit the fish stock is not too great."

These theoretical arguments that limited entry can help preserve rents are given some support in many limited fisheries by the existence of positive prices for limited entry licenses.[23] Permit prices should reflect the net present value of the future rents expected from permit ownership by the marginal fisherman, the fisherman who just finds it worthwhile to enter the fishery. The present value of this "resource rent"[24] would be zero in an unregulated, common property fishery. The present value would also be zero in a limited fishery, if effort in the fishery were not effectively constrained.

Permit prices have been positive, and even large, in many limited fisheries. Wilen (1988: 253) found that almost 20 years after the start of the British Columbia limited entry program in salmon, licenses were trading

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[20]Rents are the payments to the fishing operations greater than are necessary to keep the fishing operations in the fishery. They are an excess over the profits that are customary to an operation engaged in an activity of similar risk. Rents accruing to the superior skill of some fishermen may continue to exist under open access.

[21]Anderson discusses a program that actually reduces the number of operations active in the fishery. The same analysis would apply to a program that prevents an influx of operations that might otherwise occur.

[22]The term "input intensity" is taken from Ferguson (1969:100).

[23]Positive permit prices are not proof of rents generated by limited entry. There may, for example, be no rents in the present, but the fishermen may expect rents in the future. However, persistent positive limited license or permit prices are generally considered strongly suggestive of the presence of rents from limitation.

[24]As opposed to the "ability" rent earned by fishermen who are better than the marginal fisherman.

at about C$7,000 for each net ton. He noted that roe herring seine licenses leased for C$500,000 while herring sac roe gillnet licenses leased for C$80,000. Almost 20 years after the start of the Alaska limited entry program, many licenses in the original limited fisheries still trade for high prices. Some dramatic examples from early 1994 include the Cook Inlet salmon seine permit at $134,500, the Alaska Peninsula salmon drift gillnet permit at $391,900, the Bristol Bay drift gillnet permit at $171,100, and the Kodiak set net permit at $107,600 (Tingley, 1994: 2-3). Alaska salmon permit prices have tended to drop from highs reached in the late eighties and early nineties. Townsend cites numerous examples of limited fisheries with positive permit prices.

Both Anderson, and Campbell and Lindner note that under reasonable conditions, limited entry is likely to be a "second best solution." That is, the same amount of effort could be produced in a fishery at lower cost using alternative fleet structures. (Anderson, 1985:415; Campbell and Lindner, 1990:65) However, there may be many situations in which the available choices include limited entry, but do not include some of the solutions that could generate the higher rents. Many attractive management solutions may be ruled out by the biology of the fishery, the technical problems associated with enforcement, budgetary considerations, or the necessities of political compromise.

The implication of the discussion so far, then, is that limited entry may not be able to constrain effort very well because fishermen can substitute unlimited inputs for the limited inputs, thereby driving up their fishing effectiveness and their costs. Nevertheless, theoretical and empirical evidence suggests that it is possible to generate positive rents in a fishery using limited entry. In most cases, however, there are fleet configurations that would generate even higher rents than a fleet under limited entry.

The history of the British Columbia salmon limited entry system shows how effort can expand under limited entry. The commercial salmon fishery in British Columbia began during the nineteenth century. Since the fish were valuable and could be exploited at relatively low cost, excess effort soon posed problems. These problems led to a short lived limited entry program on the Fraser River as early as 1889. Excess effort continued to be a problem after this program ended in 1892. (Fraser, 1977:1-2).

At about the time the fishery was limited in 1969, it was estimated that as much as half of the gear in the fishery could be taken out "without appreciable reduction in effective fishing capacity."[25] Returns in the fishery were small just before the fishery was limited. With the costs of social subsidies, the net social benefit from the fishery was probably negative.[26]

At the start of the program, the British Columbia salmon fishing fleet was composed of seiners, gillnetters, and trollers. The criteria used to determine who would receive a limited license gave all operators, meeting certain catch thresholds, a permanent vessel license. 5,870 vessels received these "A" licenses. 1,062 vessels that had been fished at levels below the thresholds were given "B" vessel licenses. Initially, vessels with "B" licenses could not be replaced. In 1970, the "B" licenses were given a 10-year expiration date. The licenses were homogenous and did not distinguish between gear types. The capacity initially licensed into the fleet was greater than was needed to harvest the available resource. In fact, it was greater than the capacity that had been used in either of the preceding two years (Fraser, 1979: 757).

The number of vessels operating in this fishery has decreased under the program. 361 vessel licenses were removed in a buy-back program in the early seventies, and a further 26 were bought back in 1981 (Fraser, 1980: 7; Burlington and Associations, 1981: 15).[27] The temporary permits have expired. In addition, the

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[25]A conclusion reached by Crutchfield and Pontecorvo as summarized by Pearse and Wilen (1979:765). Presumably this means the capacity could be removed without affecting the ability of the fleet to harvest the available fish.

[26]From a cost-benefit perspective, and ignoring other social issues. (Pearse and Wilen, 1979: 765).

[27]The buy-back programs are discussed in section 3.2.1.5.

number of separate vessels has been reduced by the practice of pyramiding of licenses prior to 1980. This is the practice of combining licenses from smaller boats to introduce a larger vessel to the fishery.[28]

However, while the number of vessels has been reduced, the actual effort and capital used in the fishery appear to have increased. Vessels increased in size and physical capacity during this period. By 1977, the average horsepower had increased by 47% in the gillnet fleet, 43% in the seine fleet, and 36% in the troll fleet. Average vessel lengths had increased by 6% in the gillnet fleet, 10% in the seine fleet, and 11% in the troll fleet. Average net tonnages had increased 24% in the gillnet fleet, 11% in the seine fleet, and 17% in the troll fleet. Fraser suggests that real capital invested in the fishery had increased by 49% by 1977, and had continued to increase through 1979 (Fraser, 1979: 757). Pearse and Wilen provide estimates showing that the value of the capital invested in vessels and gear (not in licenses) rose from about $81 million 1971 dollars in 1969 to about $200 million in 1977 (Pearse and Wilen, 1979: 767).

While there was an overall decline in the overall number of vessels, the number of vessels licensed to use seine gear actually rose. 370 vessels were licensed for seine gear in 1969 and 514 were licensed by 1977 (Fraser, 1979: 761). The seiners tend to be the larger vessels in the fleet. The numbers of boats fishing more than one of the available gear types rose as well.. The number of vessels licensed to use more than one gear rose from 1,171 in 1969 to 1,923 in 1977. Fraser notes that the vessels fishing with more than one gear type tend to be more highly capitalized than other vessels (Fraser, 1979: 757,761).

Managers have had to make many adjustments to the program rules in order to constrain effort increases. Wilen described this process with the vivid metaphor of managers "chasing" fishing effort. The initial limitation measure in British Columbia in 1969 was a limit on the number of separate salmon vessels allowed in the fishery. Fishermen were allowed to replace vessels with larger ones. Almost immediately, 76 vessels with a combined 186 net tons were replaced by vessels with a combined 596 net tons (Wilen, 1988: 251).

In response in 1970, managers added a net ton for net ton replacement rule. This effectively replaced the limit on the number of vessels with a limit on fleet net tonnage. Vessels over 15 net tons are surveyed in Canada by law, so there were good figures on vessel net tonnage for these vessels. Most of the fleet, however, was composed of vessels under 15 net tons. For these vessels, the Canadians adopted a schedule relating net tonnage to vessel length. These rules, however, were not enough to constrain effort increases through upgrading so, in 1972, the Canadians added a rule limiting the length of a replacement vessel to the length of the vessel it replaced (Fraser, 1977: 31; Wilen, 1988: 251).

In subsequent years, managers continued to add restrictions to the program in an effort to constrain effort increases. In 1977, the practice of replacing two or more vessels by a single vessel over 50 feet was prohibited. In the same year, the conversion of gillnet or troll vessels into seine vessels was also prohibited. In 1980, the practice of pyramiding two or more vessels into a single vessel was finally prohibited in all cases (Wilen, 1988: 251).

Despite the history of effort increases, there are reasons to believe the program may have generated rents for the fishermen. Seine vessels are also used in the roe herring seine fishery and, to some extent, increasing capitalization in the herring fishery might lead to larger vessels in the salmon fishery without implying salmon overcapitalization (Fraser, 1979: 758). As noted earlier, license prices have been fairly high. In 1979, Fraser cited these as "a strong indication of some relative success." (Fraser, 1979: 758) Pearse and Wilen estimated that up to 1979, the effort increases had been slower than they would have been in the absence of limited entry. Prior to the program, capital in the fleet had been growing at an average rate of 5.7% a year, while after the program from 1969 to 1977, it grew at an average rate of 3.7% a year. This change did not appear to be related to changes in gross revenues, which grew at about the same average rate before and after limitation. There was evidence that limited entry had constrained the growth of capital in the fleet somewhat. In 1989, Wilen cited the positive market prices for the limited entry tonnage licenses in the salmon fishery as evidence that rents were being generated (Wilen, 1988: 253).

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[28]There were also reductions in the amount of labor used in the fishery, but neither Fraser or Pearse and Wilen believe these were sufficient to offset the increased effort and costs associated with greater capitalization discussed in the next paragraphs (Fraser, 1979: 757; Pearse and Wilen, 1979: 767).

Fleet Heterogeneity

Prior to the limitation of effort, fishermen may pursue different fishing strategies. If so, their levels of effort and output may differ considerably. For example, some fishermen may be "life style" fishermen using the fishery to obtain a small amount of cash to supplement a subsistence lifestyle. These fishermen may compete in the fishery with other, capital intensive, higher volume, fishing operations. These two different types of fishermen may have very different levels of production in the fishery.

Differences in strategies may also be caused by differences in diversification. Some operations in a fishery may have historically specialized in the harvest of a particular species. Other operations may have been more diversified, fishing the target species as well as others. Specialization may also be associated with gear use. Pot fishermen may have targeted a particular groundfish species while trawl fishermen may have targeted a complex of groundfish species. Different market strategies may also drive differences in fishing activity. Some fishermen may be moving small volumes of high quality fish to fresh markets while others may be moving larger volumes of lower quality fish to processed markets.

Faced with these differences in fishing strategies, and consequent differences in effective effort and production, managers must decide how to define the limited entry permits. Considerable care must be taken in defining the relevant fishery and the limited entry permits.

A classic example of the problems raised by heterogeneity of fishing strategies is provided by Alaska's limitation of entry into the Alaska Peninsula salmon seine, drift gillnet, and set gillnet fisheries in the mid-seventies. These fisheries were among the first limited under Alaska's limited entry law. In the early seventies, fishermen in the Alaska Peninsula area fished for salmon using a variety of different gear strategies. Some fished seine gear, some drift gillnet gear and some set gillnet gear. Most fishermen fished a combination of the gear types.

At this time, the state tended to define a separate permit for each gear type. It thus defined three permit types, purse seine, drift gillnet, and set gillnet. The number of permits for each gear type was based on the highest number of units of that gear to have recorded even one landing in any of the four years prior to 1973.

Because most participants fished a combination of these gears prior to limitation, opting to fish different gears at different times, this meant that some fishing operations were included in the determination of the number of permits for more than one of the fisheries defined for limitation purposes. It also meant that many participants were able to qualify and receive permits for two or more gear types.

After limitation, when conditions in the fisheries had improved and permit prices had risen, the opportunity costs of holding one or more permits idle for portions of a salmon season rose considerably. As a result, persons with more than one permit tended to concentrate their efforts on one gear type and sell off their excess permits to new participants who could use them on a full-time basis. At initial issuance, 235 individuals received 392 permits in the Alaska-Peninsula salmon fisheries. By year-end 1988, 361 different individuals owned the remaining 390 permits.

Under Alaska's program, the number of permits issued in a fishery depends upon the definition of the fishery. For example, if Alaska had limited a Peninsula-Aleutian salmon fishery (any legal gear type), the number of permits to be issued for that combined gear type fishery would have been less than the sum of the number issued in the three gear specific sub-fisheries which were actually limited. Fewer total permits would have been issued.

However, a single combined gear type fishery also might have resulted in post-limitation increases in effort. The number of permits in a combined fishery would likely have been greater (given the rule used to set the number of permits to issue) than the number actually issued in any of the three individual fisheries. Thus, for example the number of vessels which could use seine gear would have been greater under a combined fishery permit than the number which can use seine gear today. Defining a single combined gear type fishery may have created as many ways for effort to expand after limitation as creating three separate fisheries.[29]

More recently in the Southeastern Alaska king and Tanner crab fisheries, the state opted to take a new approach to dealing with the fishery definition problem. At the time, the main fisheries segregated for management purposes were the Tanner crab fishery, red king crab fishery, and the brown king crab fishery. Blue king crab was mostly caught incidentally in the red king crab fishery. An examination of the data revealed that, while some participants concentrated on only one of these species, most had fished and landed two or more of the species.

The system adopted and defined three fisheries: red/blue king crab pot fishery, brown king crab pot fishery, and Tanner crab pot fishery. In each case, the number of permits to issue was based upon the highest number of units of gear fished in the last season completed prior to the qualification date.

However, to avoid post-limitation increases in participation similar to those occurring in the Peninsula-Aleutian salmon fisheries, the state adopted regulations to issue a single non-severable, integrated resource permit to those who qualify for a use privilege in more than one of these three fisheries. An integrated resource permit conveys whatever combination of use privileges (in these three fisheries) for which the applicant qualifies. The holder cannot sell the use privileges separately from the combined permit, the integrated permit must be sold with all the use privileges embodied in it.

The permit options adopted in the Southeastern Alaska king and Tanner crab fisheries will reduce the number of permits issued relative to what would have been issued under a three fishery option without non-severable integrated permits. It should also help prevent post-limitation increases in participation levels.[30]

Even more recently, the Pacific Fisheries Management Council used a similar approach in its limitation in the west coast groundfish fishery. West coast groundfish are harvested with a variety of gears and strategies. Bottom trawls are used to harvest Dover sole, arrowtooth flounder, thornyheads 1 sablefish; midwater trawls are used for Pacific whiting and widow rockfish; pots are used for sablefish, longlines are used for sablefish, rockfish, and ling cod; set nets are used to harvest rockfish, white croaker, and halibut off of California. Factory trawlers have not been active in this fishery to date (PFMC, 1992: 5-41 to 5-61).

Limited entry was imposed on this fishery, effective January 1994. Fishermen were given a standard limited entry license which was endorsed for the different gears they were entitled to use. There were separate endorsements for pot, longline, and trawl gear. No distinction was made for the different types of trawl gear in use. A fishermen was issued one or more of the endorsements depending on his participation with the different gear types during a qualifying, or window period. Endorsements cannot be separated from the permit to which they are attached. A fisherman who wants to diversify into new gear types must buy a new permit with the gear endorsement desired, or can sell the permit he holds and buy a new permit containing the desired gear endorsements.[31]

Even if fishery definition issues are not important, or once they have been decided, issues are still raised by the differences among the fishermen within a defined fishery. If all fishermen are given permits that provide

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[29]This discussion of the Peninsula-Aleutians salmon limitation follows Schelle and Muse (1989:18-21).

[30]This discussion of the Southeast Alaska crab limitation follows Schelle and Muse (1989:21-22).

[31]Four classes of endorsements were issued for each gear type. "A" endorsements went to vessels meeting minimum landings requirements for the gear during the landings window. "Provisional A" endorsements went to vessels under construction during the window. "B" endorsements went to vessels that operated, but didn't meet landings minimums during the window (these expire after a short period). "Designated species B" endorsements are meant for vessels to be used to harvest currently under-utilized species. (PFMC, 1992: 2-5). The licenses also carried a vessel length endorsement. This is discussed later in this section.

of fishery attributes and the types of design considerations which might affect the net economic benefits of a license limited entry program.

Anderson (1985a) demonstrated theoretical conditions where a license limitation program can result in efficiency gains. Campbell and Linder (1990) found that efficiency gains from a license limitation program were possible as long as non-restricted inputs could not be substituted easily for restricted inputs, and as long as restricted inputs are a significant proportion of the total cost of fishing effort.

Wilen (1988b) noted that the creation of rents in a limited fishery may depend upon fishing technology and the interaction between fishermen and regulators. He also argued that in many limited fisheries, constraints on the unit of gear are probably the most binding restriction which discourages an individual from upgrading their vessel to increase fishing capacity.

Wilen suggested that the appearance of economic rents, as evidenced by limited entry license values, are probably more dependent upon fixing the number of units of gear rather than fixing the number of units of vessel capital. If the terminal gear was sufficiently constrained, he felt that it would be relatively fruitless to expand vessel fishing capacity beyond a certain point although additional rent dissipation could occur through excessive in-season movement, searching, and etc.

Hannesson (1988) concluded that limited entry programs may be better than their reputation and should not be dismissed outright. He also suggested that if the substitutability of components of fishing power is not great, then a limited entry program might be successful.

The political economy of many limitations tends to support the initial issuance of a greater than optimal number of units of gear in the fishery (Townsend 1992). Political considerations may sometimes lead to the initial issuance of more licenses, rather than less, to reduce the number of persons opposing the program. Increasing the number of licenses initially allocated may also increase the number of persons who cannot be excluded without compensation.

If a limited entry program can control the number of units of gear in a fishery and adequately contain the growth of fishing capacity of each individual operation, then it might be possible to generate increases in economic benefits from further fleet reductions. Nevertheless, many programs have never attempted fleet reductions and the fleet reduction programs which have been tried have had mixed results at best.

Buy-back programs are often "voluntary," meaning that a license holder does not have to surrender a license (and sometimes vessel and gear) unless the holder considers the compensation offered as adequate. However, license holders are sometimes taxed to provide the underlying funding for the buy-back program.

In such circumstances, license holders who want to remain in the fishery would want the present value of the increase in their net benefits to exceed the present value of their buy-back taxes. If a buy-back program could achieve this, both those exiting the fishery and those remaining in the fishery would be made better off or at least no worse off.

Whether or not a buy-back program can achieve such a result may depend upon the nature of the fishery and the rules of the program. In some cases, a significant portion of the licensed fishing capacity may already be idled and large quantities of use-privileges may need to be purchased before the remaining active fleet obtains benefits from additional catch.

The decision rules of the buy-back program may impact the cost of removing fishing capacity. Some programs remove vessel and gear as well as the underlying license. In some cases, the vessel is resold with restrictions that it can no longer be used in certain fisheries. In other cases, the vessel may be destroyed. While these actions may help to protect the vessel values of the remaining license holders, the rules may result in a drain in buy-back funds and hence the purchase of less fishing capacity than would a buy-back program which purchases the underlying license only.[36]

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[36]Sometimes the destruction of a vessel purchased or the resale of the vessel with restrictions on its (continued...)

Programs which purchase and resell vessels and/or gear can also drain buy-back funds for other reasons. A substantial portion of real administrative costs can become tied up in the tasks involved in purchasing and disposing of the vessels. Vessel and equipment appraisals, negotiation of purchases, storage of the purchased equipment, maintenance of the purchased equipment, and sale commissions for resales are some of the types of administrative tasks which need to be done, but which consume available funding.

Resale values are reduced by placing restrictions on the future use of the vessel and can be lower if an inordinate number of vessels are placed upon the market at the same time. Spreading the sales out over time may require longer storage periods and increase the probability that the vessel will deteriorate in storage if not maintained properly. This may also increase storage and maintenance costs and/or reduce resale value.

The removal of fishing capacity through buy-back programs may also be hampered by the expectations which such programs may generate. If a buy-back program is expected to increase the future net benefits and license values of the remaining fleet, some license holders who might otherwise opt to sell to someone in the absence of the program may opt to hold onto their license in the hope of obtaining a higher price in the near future. This problem may not be large if there is a significant risk of "missing out altogether" by waiting.

Persons interested in designing buy-back programs to achieve the largest reduction in fishing capacity, given the available funding, may have to consider many factors in deciding upon the best procedures and decision rules to follow. Such decisions may be more difficult, the more complex the licensing scheme and the more diverse the vessels in the fleet.

This section provides a few illustrative examples of attempts to reduce fleet sizes through buy-back programs. The examples help to illustrate the types of issues and problems which may arise and provide some information on what was accomplished under the program. This section also describes two other approaches to reducing fleet sizes. The two other approaches are area licensing and fractional licensing.

The information in this section has been drawn from existing literature. No attempt has been made to provide updates on programs beyond the information provided in the literature cited.

3.2.1.2.1 Buy-back Programs: Issues and Examples

The Norwegian Purse Seine Fishery Buy-back Program

Hannesson (1986) provided an example of a fleet reduction program in the Norwegian purse seine fishery. The fleet consisted of vessels which varied widely in size from 90 feet or less to 200 feet or more. The fleet targeted pelagic species such as capelin, herring, mackerel, and blue whiting.

Hannesson indicated that the power block was introduced in the early 1960s and that this had greatly increased the fishing capacity of the vessels. Harvests of the pelagic species increased rapidly over the 1963-1967 period and the Atlanto-Scandio herring stock was brought to near collapse.

A ban on the introduction of new purse seine vessels was introduced in 1970. This stopped the growth in the number of the larger vessels. However, total fishing capacity continued to grow. Owners of smaller vessels had been permitted to replace them with larger vessels up to 6,000 hectoliters (hl) of cargo capacity. Other vessels were also modified to increase their fishing capacity.

In 1973, a formal license limitation program was introduced. The license allowed a particular person to operate a particular vessel of a given cargo capacity. The goal was to limit fishing capacity through restricting cargo capacity.. However, vessels could be replaced or altered and eventually licenses could be transferred between persons or vessels with the approval of the Ministry of Fisheries.

(...continued)
use have been justified as a means to prevent "spill-over effects" into other overcapitalized fisheries which aren't covered by the buy-back program. See Section 3.2.1.4 for a discussion of how limited entry on a piecemeal basis may result in spill-over effects into unlimited fisheries.

Hannesson noted that the fishing capacity of a vessel could still be increased through alterations and better equipment. Similarly, increases in fishing capacity could occur upon vessel replacement. Moreover, small vessels were exempt from the licensing system. As a result of this, there was a growth in fishing capacity under the licensing restrictions.

In 1979, the government began a buy-back "grant" program to reduce fishing capacity. The program was operated by a fisherman's bank created by the government. Hannesson reports that the program halted the growth in cargo capacity and led to an 18% decline over the 1979-1984 time period. He indicates that this was less than the capacity reduction needed to maximize economic rent in the fishery.

Grants were given in return for destruction of the vessel, subsidizing the sale of a vessel to foreign buyers, and for subsidizing the sale of the vessel to a domestic buyer who was converting it to another purpose. The limited license was eliminated with the grant transaction.

The amount of the grant was determined by set rules, and owners could voluntarily decide if they wanted to participate. As the program evolved, the maximum potential amounts of the grants were increased to draw out more volunteers. Increases occurred in August 1979, November 1979, July 1980, and July 1982. The July 1982 guidelines apparently brought in new factors to be considered in the awarding of grants.

Hannesson indicates that the program appeared to be pulling out the cheapest licenses first, but it was unclear if the tendering process was best. He notes that the successive increases might cause fishermen to adapt their expectations and wait for the grant amounts to be increased further. He also notes that the procedure draws out the process over time.

Did the grant buy-back scheme produce net economic benefits? Hannesson asked the question in the following two ways:

(1) Did the retirement of licenses so improve incomes for the remaining vessels that they could have paid for the cost of the licenses and still be left with a net gain?

(2) Did the cost savings achieved by the retirement of vessels outweigh the amount paid for retirement?

Based upon available data and some seemingly reasonable assumptions, Hannesson concluded that the answer to both questions was yes, and the present value of the benefits from the buy-back program appeared to outweigh the costs.

The British Columbia Salmon Buy-back Programs

The British Columbia salmon limited entry program was discussed in the previous section on limited entry programs. This section briefly describes two buy-back programs that were used in the British Columbia salmon fisheries. The information for the description comes from Campbell (1973), Pearse (1982), Fraser (1980), and Schelle and Muse (1984).

The first buy-back program began in 1971 funded by an increase in fees on Class A licenses, and by the resale of vessels purchased. A buy-back committee of industry members was charged with program development and program implementation.

The program ran on a "first-come, first-served" basis. No fleet reduction target was established and no attempt was made to balance expenditures across gear groups. License holders could submit non-binding applications to the program. They were offered an appraised value for the vessel and license, plus a 5% bonus. The costs of the bonus and the resale of the vessel were absorbed by the program.

The vessels that were purchased were stripped of their license and resold with the stipulation that the vessel could not be used in any fishery on the west coast of Canada. The reasons given for the stipulation were to avoid spill-over effects into other Canadian overcapitalized fisheries and to prevent the remainder of the fleet from upgrading more easily by purchasing an auctioned vessel.

The use-restriction probably also helped maintain the market value of vessels remaining in the salmon fleets. However, the stipulation helped to drain buy-back funds as the average resale value of the vessels (excluding commissions) represented approximately 43% of the vessel and license purchase price. Other factors which may have contributed to lower resale values were deterioration in storage and the auctioning of large quantities of vessels at one time (Schelle and Muse, 1984).

This buy-back program was terminated in 1974. The buy-back "fixed" annual license fee had remained unchanged while the number of Class A licenses fell. Thus, buy-back revenues from licensing fell. More importantly, improved salmon runs and higher ex-vessel prices in 1973 led to a considerable increase in license values. Thus, vessel and license asking prices were rising and few operations could be purchased with the available funds. As a result the program was terminated.

When the program was terminated, 361 vessels had been retired representing approximately 6% of the licensed Class A Fleet. Vessel and license purchases had cost about six million Canadian dollars. A large portion of the program's administrative costs were resale commissions. Resale commissions averaged 8.5% of the resale value.

For the most part, a "first-come, first served" decision rule was used to decide which vessels to purchase. The question arises as to whether or not a different decision rule would have resulted in a greater reduction in fishing capacity (or current production) than the rule chosen, given the same level of buy-back revenues.

Since the salmon licenses were restricted in terms of net tons, one might suggest ranking the offers by their cost per net ton. However, the use-restriction placed upon the vessel upon resale complicates matters, as vessels may have varying percentage declines in their resale values because of the new use-restriction. Under the buy-back program, appraisals were based upon the current uses of the vessel. Vessels were purchased based upon the appraisals and later resold with restrictions on the use of the vessel.

Declines in resale value due to the use restrictions will depend upon the other alternative potential uses for the vessel. Thus, if the goal was to remove the maximum amount of fishing capacity, it is not entirely clear what decision rules would have maximized the "bang for the buck" given the constraints of the first buy-back program.

A second and smaller buy-back program was implemented in the British Columbia salmon fisheries in 1981. An industry committee and some government representatives implemented the program. The funding of approximately 2.9 million Canadian dollars came from federal sources and needed to be spent before the fiscal year ended in March 1981. In the short time available, approximately 2.5 million Canadian dollars were spent.

Applications were taken from mid-February to March 1. Despite a $100 application fee, 351 applications were received. There was time to complete appraisals on 111 vessels and offers to buy were made to 32 fishermen. The offers were accepted by 26 fishermen. The vessels, which were purchased for about 2.5 million Canadian dollars, were resold at auction for $(C)660,000. Pearse (1982) indicated that the vessels had deteriorated after a long period of storage and had been auctioned into a weak market. The money from vessel resales went into the Canadian government's general fund.

The buy-back committee apparently had a great deal of discretion in making their decisions on which vessels to purchase. Purchasing the maximum fishing capacity with the funds available, purchasing a balanced fleet mix (in value terms) at a low cost per ton, and "equity considerations" such as the health and age of the vessel owner" were some of the criteria used in the decision-making process.

The committee also had some discretion with respect to offer prices. While vessel appraisals were used, the committee could modify their offer prices based upon the size and age of the vessel and personal knowledge of the vessels by individual committee members.

The Australian Northern Prawn Fishery Buy-back Program

Wesney (1988) reported on the evolution of a license limitation program in the Australian Northern Prawn Fishery (NPF). According to Wesney, the catch in the fishery varied widely on an annual basis, but averaged about 9500 tons and was usually worth from $100 to $150 million in export value which made it Australia's largest export earner. Several species of prawns were involved.

The fleet consists of trawlers from 19m to 23m in length, many of which are "state of the art" freezer boats. The fleet was limited in 1977 to 292 licenses and had a restrictive vessel replacement policy. Despite limited entry and the vessel replacement policy, fishing capacity continued to increase.

Smaller vessels which were less than 21m or less than 150 gross construction tons could be replaced with vessels up to those limits. Larger vessels could be replaced as long as they did not exceed their original length and gross construction ton measurements.

Wesney indicated that other increases in vessel size (non-constrained dimensions) could not be enforced. This factor, coupled with technological innovations in boat design, construction, and engine power led to increases in fishing capacity upon replacement. Improvements in navigational aids, fish-finding aids, fishing gear, and equipment also played a role.

In the early 1980's, the profitability of the fleet was in decline for these and other reasons. An IFQ quota management program was not considered to be feasible. The availability of banana prawns, a key portion of the prawn resources, was highly variable and unpredictable from year to year. As a result, it was not practical to set an annual quota and stick to it.

The fishery harvested several species of prawns worth different market prices, which also made an IFQ program less feasible. Additionally, there were several aspects of the fishery which might make IFQ enforcement a difficult endeavor.

Instead, fishery managers decided to go to a more elaborate program of input controls coupled with a fleet reduction program. A "boat unit" measurement was defined as a proxy for a unit of fishing capacity. A vessel's total boat units were derived by adding together the vessel's under-deck-volume and the manufacturer's specified maximum continuous kilowatts brake power of the vessel's engine.

In 1984, when the program began, there were 131,769 "boat units" called "Class A" units assigned to the fleet of 292 vessels. The number of these units could decline but could not increase. The original right to a limited entry endorsement was assigned as a "Class B" unit. There were 292 of these. The number of Class B units could also decline but could not increase.

To decrease the number of both Class A and Class B units in the fishery, industry proposed a buy-back program called the "Voluntary Adjustment Scheme" (VAS). The VAS that was established was managed under an agreement with the Australian government and the NPF Trading Corporation, LTD. A buy-back trust fund was established and funded by an annual levy on all NPF fishermen.

Wesney indicated that the annual levy on an average-sized trawler of 400 Class A units was about $18,000 and that the levy on all boats was bringing in about 3.8 million Australian dollars. A government-created National Fishery Adjustment Scheme organization also loaned 3 million dollars to the NPF trust fund to assist the VAS. This loan has to be repaid by the levies on fishermen.

The goal of the VAS was to reduce the Class A units from 131,769 to 70,000 by 1993. Fishermen wishing to exit the fishery could sell their units to the buy-back authority. While the vessel owner is responsible for disposing of the boat, apparently the NPF Trading Corporation is responsible for helping to negotiate the sale of the boat to foreign buyers where there is a market for the trawlers used in the fishery.

In addition, anyone who wanted to replace a vessel must surrender one Class B license and the number of Class A units by which the replacement vessel exceeds 375. The replacement rules and VAS began in 1985. Other management measures included in the management mix were permanent closures of prawn nursery grounds, seasonal closures to optimize prawn size, and closures to prevent exploitation during critical recruitment periods.

In 1986, gear restrictions and other measures were introduced in response to evidence that the tiger prawns were being overfished. Further conservation measures were taken in 1988. In addition, greater emphasis was placed upon the VAS system.

Wesney provided information as of March 1988 on progress under the VAS and vessel replacement programs. The number of Class B units had been reduced from 292 to 254 and the number of Class A units had declined from 131,769 to 114,091.

Wesney was optimistic about the success of the program. He noted that the program had the support of industry even though the average trawler was paying an annual levy of $(A)18,000 toward the VAS fleet reduction. 1987 was a profitable year for fishermen and Wesney felt that they would soon be receiving dividends from their buy-back investment. Most of the idle capacity and some operational units had been removed from the fleet.

Wesney noted, however, that the market price of Class A units had risen to $(A)450 to $(A)650 from approximately $(A)120 at the start of the program. This suggests that removing additional units might become increasingly expensive.

Joseph Haynes and Sean Pascoe (1988) were less optimistic about the long-term outcome of the VAS. Using a mathematical programming model, they analyzed several different management policies and scenarios for the fishery. They concluded that under sole ownership, the optimum size of the fleet would be much smaller than that which VAS had targeted as a goal. They also saw few benefits to the vessel replacement policy and thought that it was actually retarding consolidation.

The model simulation of the VAS did achieve positive rents under middle and high price scenarios (but not the low price scenario) if the cost of financing the VAS were ignored. They felt that the VAS would have a better chance of success if the levy were placed on effort rather than Class A units. The authors noted that the VAS might be beneficial from society's viewpoint. This might occur if an ongoing positive rent can be generated, resources which leave the fishery can earn positive returns elsewhere, and resources which remain in the fishery can accrue greater returns than they did previously.

Haynes and Pascoe noted that their analysis assumed that fishing power per Class A unit would remain constant. However, there were likely many ways that fishing capacity could increase per Class A unit over time as substitution of inputs occur. Thus, the authors felt that the positive rent result from the simulations of the VAS policy should be viewed with caution.

Washington's Salmon Fishery Buy-back Programs

Buy-back programs in the Washington state salmon fisheries occurred in the late seventies and early eighties (Jelvik 1986, Schelle and Muse 1984). Reduced allocations to non-Indian commercial fisheries due to the Boldt court decision and subsequent court decisions played a large role in limited entry and buy-back funding decisions.

In 1974, the State of Washington enacted a three-year moratorium on new salmon fishery licenses and permits in commercial salmon fisheries. The moratorium had been under consideration for several years but the court case helped motivate the action. Licenses were issued to owners of vessels which had landed salmon from January 1970 through May 1974, and also to some vessels which had been under construction. The licenses were transferable and not tied to the vessel.

In 1977, the moratorium was extended until 1980 and charter boats were placed under the system. After 1979, the commercial license moratorium was made permanent and vessels had to land fish in the previous year to continue to be licensed.

In 1975, Washington implemented legislation to implement a gear reduction program and received a grant from the Economic Development Administration (EDA) of which $2,700,000 was eventually used for gear reduction programs.

Washington's first buy-back program began in January 1976. The vessel, gear, and license were all purchased under the program. Applicants were handled on a first come-first served basis. The state offered to purchase the license for a fixed nominal fee, the vessel and equipment for appraised value, and nets according to a fixed schedule. The vessels purchased were to be resold with the provision that the vessel could not be used in Washington State.

No attempt was made to allocate buy-back funds among different fleets to achieve a balanced reduction across fleets. The first buy-back program purchased 253 vessels of which 244 were Puget Sound gillnetters. There were substantial administrative costs associated with the purchase, maintenance, storage, and resale of vessels and equipment. On average, only about 42% of the vessel's purchase price was recovered upon resale. Many of the vessels deteriorated in storage prior to resale and a few sunk at the docks.

The separation of electronic equipment from the vessels appeared to lower the resale value of both vessel and equipment. In some cases, both the vessel and electronic gear were damaged during the separation. Resale values were also lower because of the stipulation that the vessel could not be used in a Washington fishery, and may have been lowered by the practice of auctioning the vessels 30 to 50 at a time.

A federal audit of the program over the June 1976 through June 1979 time period indicated that marginally productive operations rather than serious fishermen were being removed. The program manager indicated that this part of the program had not been very successful at reducing fishing effort. He felt that the program had been successful in removing non-producing licenses but had resulted in little impact on the amount of gear fished.

In the Spring of 1979, with about $800,000 left to spend, the program was changed. Applications for the new (second) program were taken for a two-week period. The applicant could apply for one of two options.

Under the first option, the applicant could sell the license to the program at its estimated 1978 market value. Under the second option, the applicant could opt to sell vessel, license, and gear. Persons selecting the first option would be taken before those selecting the second option.

Under the second option, the program offered to pay for the license and gear in accordance with a schedule, where the payment for the license was less than under the first option. Again, the vessel price was based upon appraisals.

This part of the buy-back program saw the first extension of the program to the fisheries outside of Puget Sound. This included gillnet fisheries in Willapa and Grays Harbor as well as the ocean troll fishery. Again, there was no attempt to target a portion of the funds to a particular gear group. This portion of the program was dominated by purchases from trollers.

A third buy-back program began in late 1980 based upon a Congressional appropriation to purchase licenses only. Under the program, the state offered to pay a fixed fee equal to the estimated market value of the license calculated from recent transfers. A $500 bonus was offered if the application was received before a given date.

Under this phase of the program, not enough money was available to purchase licenses from all of the applicants. To decide which offers to accept, applicants were ranked by the length of time they held their license. Enough money was available to purchase licenses that had been held for five or more years. Licenses were purchased from 198 of 325 applicants.

A fourth program began in October 1981, again using federal funding. Under this part of the program, only fishermen who held their licenses prior to December 1980 were able to apply. The fourth program offered two options both of which avoided the actual purchase and resale of vessels.

Under the first option, the state would purchase the license only at the state's estimated market value from the previous year. Under the second option, the state would purchase both the license and a promise not to use the vessel in Washington's commercial salmon fisheries for 10 years. The restrictions placed upon the future use of a vessel were purchased at 30% of the vessel's appraised value.

The fourth program was the first one which tried to achieve a balance across the different fisheries by allocating a portion of the buy-back funds to each fishery. Through December 1983, 141 licenses had been purchased under the first option and an additional 170 licenses and vessel restrictions had been purchased under the second option at a total cost of $6,180,333. The purchases were distributed over all fisheries.

<u>Oregon's Columbia River Drift Gillnet Buy-back Program</u>

Oregon implemented a moratorium on new licenses in the Columbia river drift gillnet fishery in 1980. Approximately 572 permits were issued under liberal grandfathering rules (Schelle and Muse 1984). In 1981, the moratorium was made permanent and the permits were made transferable.

In 1981, the U.S. Congress made provisions for the purchase of vessels and permits from Columbia River drift gillnet fishermen impacted by the Belloni court decision in 1977. Based upon experiences elsewhere, a "permit-only" buy-back program was implemented in 1983. Thus, the real costs associated with purchase and resale of vessels and equipment were avoided.

The mechanics of the buy-back program were fairly simple. Permit holders could submit "offers to sell" during an application period. The administrator would then rank the offers to sell in ascending order and pick a "cut-off" point. Offers at or below the cut-off point would then be accepted.

The first application period occurred in approximately a one month period in mid-1983. Thirty-five offers to sell were received and a cut-off point of $5500 was picked. Twenty-five permits were purchased at an average cost of $3600, which was above the previous year's estimated market value.

A second application period was held in early 1984. Sixty-five applications were received and a cut-off point of $5450 was picked. Thirty-one permits were purchased at an average cost of $4900. There appeared to be some evidence of strategic behavior during the second application, as many offers to sell were near or at the cut-off point from the first application period.

3.2.1.2.2 Other Fleet Reduction Methods

Area Licensing

MacGillivray (1986) reported on an another method of achieving fleet reductions that has been used in the British Columbia roe herring fisheries. The method was called "Area Licensing" and represents a possible alternative to buy-back programs for reducing fleet sizes in overcrowded limited fisheries.

The hectic roe herring fishery was first limited in 1974. However, the numbers of licenses granted made the fishery very difficult to manage. Moreover, additional investments by license holders after limitation led to further increases in the fishing power of individual operations.

In 1979, herring populations declined and the likelihood that the vast majority of the fleet would be concentrated at each opening increased. This caused concerns about the manager's ability to control the harvest. Prior to the 1981 fishery, a number of new management options were discussed with industry groups. These included not opening the fishery, individual vessel quotas, vessel pooling, and area licensing. The majority of the industry groups favored area licensing.

Prior to the 1981 season, a seine or gillnet roe herring license allowed a vessel to participate in all open areas in the waters off British Columbia. Beginning with the 1981 season, each license holder was required to choose one of the three herring areas to fish in for the year. Safeguards had been put into the system in case too many fishermen applied for a particular area. These were not needed however as an adequate distribution across areas occurred by giving all fishermen a license for their preferred area.

In 1982, the program was changed to allow for fleet consolidation through "multiple licensing." Again, each fisherman was allocated a license for a single area only. However, by leasing a license for a different area from another fisherman, a license holder could use his vessel in more than one area. In this "multiple licensing" process, some fleet consolidation could occur and total harvesting costs could be reduced.

The original goal of area licensing had been to make the fishery more manageable by reducing the concentration of gear at any particular opening. With the "multiple-licensing" regulation introduced in 1982, the area licensing program also became a means to reduce fishing costs through consolidation of licenses onto a single vessel.

As the result of this area licensing scheme, MacGillivray reported that the number of vessels participating in the British Columbia roe herring fishery declined by approximately 30% over the 1982 through 1985 time period. The number of vessels fishing in multiple areas increased in each of these years as consolidation occurred through private contracting.

Presumably, both license holders who opted not to fish and leased out their licenses, and persons who leased a license to fish in an additional area were made better off by this consolidation. MacGillivray provided survey and hearsay evidence suggesting that real cost savings had occurred through the consolidation process.

vessels in the hypothetical redfin fishery. A total of $30,000 of profit is being generated per year per vessel, and $1.5 million for the fleet as a whole.

Now assume that one additional vessel enters the redfin fishery[42] as shown in Scenario 2. Under the same TACs, product prices, and costs, the profit or producer surplus accruing to each vessel and to the entire fleet is cut. This is because the new vessel's fixed costs added to the total fleet cost of prosecuting the fishery, while the fleet revenue stayed the same. Each of the original 50 vessels are still profitable, however ,the extra profits they were earning have been have been cut in half.[43] Because there are profits in the redfin fishery, even with 51 vessels, additional entrants are a possibility. If another vessel enters the redfin fishery the fleet profits fall to zero as seen in Scenario 3. Each vessel is still economically viable, as they have covered their fixed, variable, and opportunity costs, but no extra profits are to be had. If the 53rd vessel started fishing (Scenario 4) none of the vessels can cover all of their fixed and opportunity costs, and depending on their ability to withstand losses, one or more vessels will eventually leave the fishery. In the process, profits to the fleet will be negative. Scenarios 5-8 show that in order for the redfin fleet to break-even with 53 vessels, variable costs would have to decrease or revenues increase by $7.50/mt, the TAC would have to increase by 1,923 mt (the break-even catch level with 52 vessels), or opportunity and fixed costs fall by over $14,000.

[42]For simplicity, we assume that the new vessel already exists, and incurs no cost in changing over to the redfin fishery. Any change-over cost would of course lessen the profit earned by that vessel and the fleet as a whole.

[43]The fact that per vessel profits were reduced by over 50 percent is a result of the numbers used for this example. In actuality, the per vessel decrease in profits will vary depending the relative variable and fixed costs and revenue.

Table 3.12

Hypothetical Redfin Fishery

		Total Harvest	No. of Vessels	Ex-Vessel Price	Total Revenue	Variable Costs	Opportunity & Fixed Costs	Total Cost	Total Rent
Scenario 1	**Status Quo Starting Point**								
	Each Vessel	2,000	1	$750	$1,500,000	$720,000	$750,000	$1,470,000	$30,000
	Fleet	100,000	50	$750	$75,000,000	$36,000,000	$37,500,000	$73,500,000	$1,500,000
Scenario 2	**Status Quo With Entry Of One Additional Vessel**								
	Each Vessel	1,961	1	$750	$1,470,588	$705,882	$750,000	$1,455,882	$14,706
	Fleet	100,000	51	$750	$75,000,000	$36,000,000	$38,250,000	$74,250,000	$750,000
Scenario 3	**Status Quo With Entry of Two Additional Vessels**								
	Each Vessel	1,923	1	$750	$1,442,308	$692,308	$750,000	$1,442,308	($0)
	Fleet	100,000	52	$750	$75,000,000	$36,000,000	$39,000,000	$75,000,000	($0)
Scenario 4	**Status Quo With Entry of Three Additional Vessels**								
	Each Vessel	1,887	1	$750	$1,415,094	$679,245	$750,000	$1,429,245	($14,151)
	Fleet	100,000	53	$750	$75,000,000	$36,000,000	$39,750,000	$75,750,000	($750,000)
Scenario 5	**Status Quo With Variable Cost Decrease of $7.50/mt and Entry Of Three Additional Vessels**								
	Each Vessel	1,887	1	$750	$1,415,094	$665,094	$750,000	$1,415,094	$0
	Fleet	100,000	53	$750	$75,000,000	$35,250,000	$39,750,000	$75,000,000	$0
Scenario 6	**Status Quo With Fixed Cost Decrease of $14150.94/Vessel and Entry Of Three Additional Vessels**								
	Each Vessel	1,887	1	$750.00	$1,415,094	$679,245	$735,849	$1,415,094	$0
	Fleet	100,000	53	$750.00	$75,000,000	$36,000,000	$39,000,000	$75,000,000	$0
Scenario 7	**Status Quo WithTAC Increase of 1,923mt and Entry of Three Additional Vessels**								
	Each Vessel	1,923	1	$750.00	$1,442,308	$692,308	$750,000	$1,442,308	$0
	Fleet	101,923	53	$750.00	$76,442,308	$36,692,308	$39,750,000	$76,442,308	$0
Scenario 8	**Status Quo With Price Increase of $7.50/mt and Entry of Three Additional Vessels**								
	Each Vessel	1,887	1	$757.50	$1,429,245	$679,245	$750,000	$1,429,245	$0
	Fleet	100,000	53	$757.50	$75,750,000	$36,000,000	$39,750,000	$75,750,000	$0
Scenario 9	**50 Vessel License Limitation [illegible]gram**								
	Each Vessel	2,000	1	$750	$1,500,000	$720,000	$750,000	$1,470,000	$30,000
	Fleet	100,000	50	$750	$75,000,000	$36,000,000	$37,500,000	$73,500,000	$1,500,000
Scenario 10	**50 Vessel License Limitation Program With Price Increase of $7.50/mt**								
	Each Vessel	2,000	1	$757.50	$1,515,000	$720,000	$760,200	$1,480,200	$34,800
	Fleet	100,000	50	$757.50	$75,750,000	$36,000,000	$38,010,000	$74,010,000	$1,740,000
Scenario 11	**50 Vessel License Limitation Program WithTAC Increase of 1,923mt**								
	Each Vessel	2,038	1	$750	$1,528,846	$733,846	$750,000	$1,483,846	$45,000
	Fleet	101,923	50	$750	$76,442,308	$36,692,308	$37,500,000	$74,192,308	$2,250,000
Scenario 12	**50 Vessel License Limitation Program With Variable Cost Decrease of $7.50/mt**								
	Each Vessel	2,000	1	$755	$1,510,000	$705,000	$750,000	$1,455,000	$55,000
	Fleet	100,000	50	$755	$75,500,000	$35,250,000	$37,500,000	$72,750,000	$2,750,000
Scenario 13	**50 Vessel License Limitation Program With Fixed Cost Decrease of $14150.94/Vessel**								
	Each Vessel	2,000	1	$750	$1,500,000	$720,000	$735,849	$1,455,849	$44,151
	Fleet	100,000	50	$750	$75,000,000	$36,000,000	$36,792,453	$72,792,453	$2,207,547
Scenario 14	**License Limitation With 2 Licenses and Entry Of One Additional Vessel**								
	Each Vessel	1,961	1	$750	$1,470,588	$705,882	$750,000	$1,455,882	$14,706
	Fleet	100,000	51	$750	$75,000,000	$36,000,000	$38,250,000	$74,250,000	$750,000
Scenario 15	**License Limitation With 52 Licenses and Entry of Two Additional Vessels**								
	Each Vessel	1,923	1	$750	$1,442,308	$692,308	$750,000	$1,442,308	($0)
	Fleet	100,000	52	$750	$75,000,000	$36,000,000	$39,000,000	$75,000,000	($0)
Scenario 16	**Single Vessel Improvement Under Status Quo or License Limitation**								
	Improved Vessel	2,196	1	$750	$1,647,000	$790,560	$780,000	$1,570,560	$76,440
	Other Vessels	97,804	49	$750	$73,353,000	$35,209,440	$0	$35,209,440	$38,143,560
	Fleet	100,000	50	$750	$75,000,000	$36,000,000	$780,000	$36,780,000	$38,220,000
Scenario 17	**All Vessels Make Improvements Increasing Fixed Costs by $30,000 Under Status Quo or License Limitation**								
	Each Vessel	2,000	1	$750	$1,500,000	$720,000	$780,000	$1,500,000	$0
	Fleet	2,000	50	$750	$75,000,000	$36,000,000	$39,000,000	$75,000,000	$0

Obviously, the redfin fishery is an example built to show the impacts of vessel entry in an open access fishery. In reality we know that costs, catch, and revenues vary widely across fishing fleets. Under any given scenario, it is likely that one or more vessels will earn positive profits. It is also very likely that with each additional vessel average fleet variable costs will increase due to crowding on the grounds, and the more intense race for the remaining fish. It also seems obvious that limiting the number of vessels allowed to fish would be an effective way to ensure that the remaining fleet remains profitable.

Suppose that a license limitation program had been in place in the hypothetical redfin fishery prior to the entrance of the 51st vessel. Further, assume that there were only 50 licenses and that each of the existing vessels had a license. The 51st vessel would not be allowed to enter the fishery unless the owner was willing to purchase a license from an existing vessel. Scenario 9 shows the 50 license situation with no changes to costs or revenues. Scenarios 10-13 show the impacts of the license program under the same changes to costs an revenues. Under each of these scenarios, the existence of the license limitation program preserved the profits in the fishery and society was most likely better off, at least in the short run.

Now suppose the license program made 52 licenses available, then the license limitation program would have had no impact on the eventual entrance of the 51st and 52nd vessels (Scenario 14 & 15) and net benefits to society due to the policy change to a license limitation regime would be negligible. In the absence of the changes in costs or revenues discussed in Scenarios 5-8, the 53rd vessel would not have entered the fishery under the status quo, and could not have entered under the license program. The license program with 52 licenses did not constrain the status quo entrance into the fishery and therefore it has little if any net benefit to the nation.

If however, there existed the possibility of price or TAC increases or of cost decreases then a license limitation program would have barred the 53rd vessel from entering the fishery even though profits were to be had. Therefore, it can be argued that in the absolute sense license limitation can provide some benefits to the nation even if the impacts are not immediately felt. It should be noted, however, that these benefits are lessened by the fact that there is uncertainty whether there would be changes in costs or revenues and when they actually occurred. If, for example, a TAC increase occurred ten years into the future, the actual benefits in today's dollars would be nil.

Clearly, the prospect of "profits" today and into the future in a given fishery is the determinant of entry and exit of vessels into that fishery. On the surface, it appears that the extent to which a license program constrains entry into a fishery, determines the program's impact. It was exactly this logic which prompted many experiments with license limitation; experiments which as history has shown have largely failed.

The specter of increased profits in the future, and the likely increase of vessels into the fleet as a result, has prompted the Council to approach license limitation. The likelihood of increased profits under open access is a function of the likelihood of increased prices and/or lower costs. It appears however, that the Council is heading down the path toward Individual Fishing Quotas (IFQs), a market driven alternative to the current race for fish. Because IFQs are likely to bring about increased profits to the recipients, the incentive to enter the fleet now is high. It was the fear of speculative entry which brought the Council to the Moratorium, and it appears that the same threat is leading the Council toward a limited entry program. Following their action on the Moratorium, the Council approved the following notice to the public, which was published in the Federal Register on June 21, 1993 [Federal Register, 1993].

> The North Pacific Fishery Management Council (Council) intends to develop a comprehensive rationalization plan (CRP) for the management of fisheries in the Council's area of authority. The Council has adopted and publicized a control date of June 24, 1992, after which any person or fishing vessel that enters the groundfish, halibut, or crab fisheries under the Council's management authority will not be assured of future access to those fishery resources if a CRP plan is implemented that limits the number of participants or vessels in those fisheries. The Council has also published possible eligibility criteria for access to the groundfish, halibut, and/or crab resources. The Council is not prevented from selecting any other date for eligibility in these fisheries or another method of controlling fishing effort from being proposed and implemented. The Council's intention in announcing this control date is to notify the public that speculative entry into those fisheries after the control date will not assure continued access to those fishery resources if a limited access system is implemented.

Most license programs have failed however, even those that constrained entry, because they did not eliminate the principle cause of over-capitalization: common property which leads to a race for the resource. This last statement is the centerpiece of the Council's problem statement and bears further examination.

Gordon [1954] in his seminal work describes the "The Economic Theory of the Common Property Resource." In fisheries, because no individual has control over a given amount of the resource and because the capture of more of the resource leads in theory to greater returns to each individual, each fisher will have incentives to fish as hard and as fast as possible. In unregulated fisheries, this leads to overfishing and depletion of the stocks. In fisheries where the total harvest is limited, these incentives lead to shorter seasons and greater costs to harvest the allowable catch. One of the most cost efficient ways to increase one's harvest share in a regulated fishery is to use an additional vessel. Other ways to increase one's share include, increasing the catching power of existing vessels, increasing the actual fishing time per day, and improving one's ability to find the fish.

In Scenario 1 of the hypothetical redfin fishery, there were 50 vessels each catching 2,000 mt and each earning profits of \$30,000. Eventually, each independent fishing company will come to the realization that more profits could be earned if its vessel's catch could improve relative to the other vessels. Scenario 16 assumes that one company discovers a technological improvement which allows its vessel to catch 10% more fish per day than in the past. To utilize this improvement, the vessel must increase its annual fixed cost by \$30,000. By catching 10% more fish per day, the improved vessel increases it total profit to over \$76,000 but, because the TAC is reached sooner and the average catch for the other vessel decreases, the profit accruing to each of the other vessels falls to \$28,000. Overall, the fleet spends \$30,000 more to catch the same amount of fish, and to generate \$30,000 less in producer surplus. This is a loss in the net benefits to society accruing from the redfin fishery.

There will be incentives to make the kind of improvements as shown above under either open access or license limitation.[44] Assuming vessels were available at prices equal to their earning potential in the fishery,[45] it is likely that before long each vessel will have incorporated the technological change. This will result in each vessel's catch returning to 2,000 mt but since each vessel will have to increase its fixed cost by \$30,000 per year, each vessel and the fleet as a whole will be earning zero profits. This will also result in a shorter fishing season, raising safety and other concerns. This is shown in Scenario 17. In the end, the result is the same under either open access or under license limitation: Overall catch and revenues will not improve but fleet expenditures will increase to the point were all profits are dissipated.

3.2.1.4 Conclusions Regarding License Limitation Programs in General

From the examples, it is clear that there may be some gains in profits earned by the industry in the short-run with the implementation of a license limitation program.[46] Those gains will only come about if the number of licenses is set such that it constrains entry into the fishery. It is also likely that capital stuffing will occur, even under a license program which constrains entry. Capital stuffing is the "Catch 22" of license limitation programs. In order to be effective, a license limitation program must constrain the number of vessels in the

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[44]It is also possible that the license limitation program will make feasible capital improvements which under open access were not feasible. Assume the fishing company has the know-how to double its vessel's catch per year by investing in improvements in the engines, fish-finding electronics, nets, and crew quarters. Further assume the improvements are an all or nothing investment. The improvements, beside doubling the catch and revenue, increase the vessels average variable costs by \$145/mt to \$505/mt, and increase annual fixed costs by \$250,000 per year to \$1,000,000. Under open access with 50 vessels in the fishery, the investment is not feasible; the company would do better by bringing in an additional vessel.

[45]Assume however that a license limitation program with 50 licenses was in place. At this point the investment appears feasible.

[46]It should be noted that the benefits described above do not include the costs of administering, implementing, monitoring, and enforcing the license program. These costs will further diminish the net benefits to the nation of a license program.

The Nature of Licenses has a major impact on the potential for increased capacity, on fleet mobility, on the complexity of the program, and on enforcement. The Nature of Licenses does not impact the initial fleet size, except in the last two of the eight defined qualifying periods. Therefore in the discussions of each component, we will dwell mainly on the four qualitative attributes most impacted.

Qualitative Attributes					
	Initial Fleet Size	**Potential Increased Capacity**	**Mobility**	**Complexity**	**Enforcement**
Nature of Licenses (100,000-800,000)	Neutral except 700,000 & 800,000	Major	Major	Major	Major

A Single License for All Fisheries and Areas (Option 100,000). This element would issue a single 'umbrella' license for each qualifying vessel as depicted in Figure 3.2. It would allow the vessel to fish in any area for any species available under the current FMP. Thus, this option will not limit vessel mobility or the ability to enter new fisheries. This alternative appears to be the simplest of the eight to regulate, and in-season management would differ little from the current regime which requires all vessels fishing for groundfish in the EEZ to have a federal permit. The major difference between this alternative and the status quo is that the number of licenses will be strictly limited. Whether a license program of this nature will be effective or bring about net benefits to the Nation will depend on other components of the license program, particularly the number of licenses issued, and any restrictions on their use.

FIGURE 3.2

Assigning single umbrella licenses may be the easiest of the eight alternatives because of the 'once and for all' characteristic of the qualifying scheme. The same is true for monitoring and enforcement. Enforcement will be based on the ability of the license holder to prove that they have a license, rather than having to prove, under several other alternatives, that they have a directed fishery on a specific species. Tracking transfers will be critical. NMFS officials maintain that a transferred license will not be fishable unless it is first approved by the Regional Director. Implementation, monitoring, and enforcement of the license alternatives are discussed further in Section 4.0.

Licenses for FMP Areas: GOA and BSAI (Option 200,000). This element would issue licenses granting FMP area-specific fishing privileges for all species in the GOA or BSAI groundfish plans. Licenses for FMP areas would be given to vessels which participated in fisheries during the qualifying period and met the landings requirements. This option restricts, in a limited manner, the mobility of the fleet and its ability to expand operations. If a vessel fished in both areas it would be given licenses for both areas. This could be treated as an endorsement under a North Pacific-wide umbrella license as depicted in Figure 3.3a, or under stand alone 'umbrella' licenses as in Figure 3.3b. The actual number of licenses allocated remains the same under either approach. There are, however, serious implications on transferability and long-term effectiveness of the program. A system with an umbrella license to which endorsements are attached (Figure 3.3a) will result in far fewer licenses available for transfer than a system with separate licenses at more discrete levels

(Figure 3.3b). The downside of having more area licenses is that more vessels and capacity may enter the fisheries as shown in Figure 3.3b.

In terms of management and regulation, FMP licenses are very similar to an exclusive registration regime except that the number of participants in any area is strictly limited. The Council passed an exclusive registration program for Pacific cod in April, 1993, but voted to rescind that action two months later [NPFMC, 1993], reasoning that single species exclusive registration was too complicated to manage and enforce and perhaps created more problems than it was worth. According to NMFS enforcement officials, area licenses will not require much more enforcement effort than a single umbrella license. Each vessel operating in an area will have to prove their license includes that area. Vessels which are found operating without the appropriate license will be subject to penalties. As in a single umbrella license, a license tracking

FIGURE 3.3A

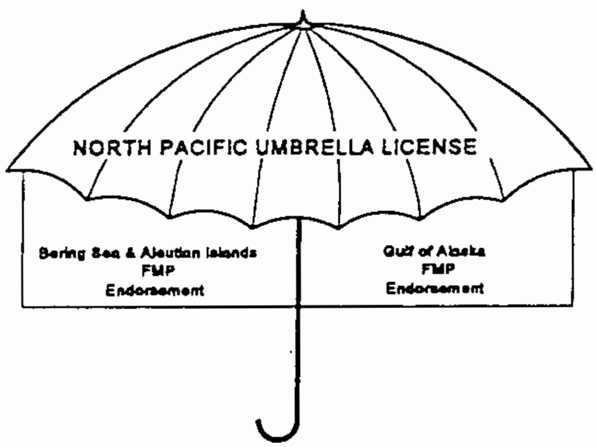
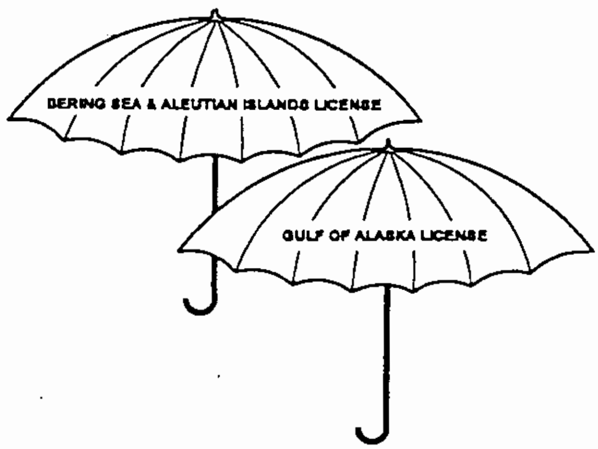


FIGURE 3:3B



system is necessary. From the perspective of the initial assignment process, area licenses represent significantly more work, though probably not proportional to the number of areas.[1] From the monitoring perspective the important issues of transferability and separability once again arise.

Licenses for FMP Sub-Areas: EG, CG, WG, BS, and AI (Option 300,000). This element is like the previous element, but FMP areas are further sub-divided into sub-areas. There are four possible configurations: Figure 3.4a shows an additional layer to the FMP area endorsement configuration. Figure 3.4b shows a configuration with separate licenses for each FMP sub-area. Figure 3.4c drops the middle layer—FMP area endorsements, and Figure 3.4d drops the North Pacific umbrella and creates separate FMP umbrellas with sub-area endorsements.

[1]Though there are two areas it will be unlikely that there will be twice as much implementation work. If there were three areas the work would not be three time as great, but could conceivably be greater by twice that of a single license.

FIGURE 3.4A

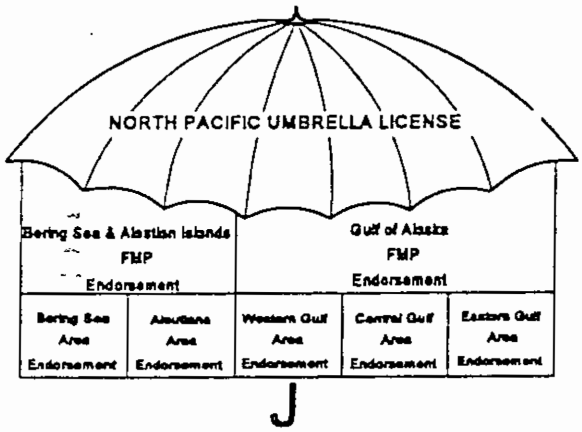
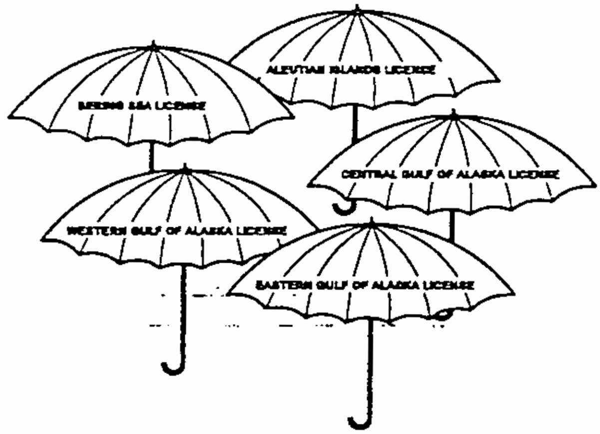


FIGURE 3.4B



The fleet will be more restricted in mobility by FMP sub-area licenses than a single license for all areas (option 100,000) or an umbrella license with endorsements for FMP areas (option 200,000). This last point may be illustrated by an example. A vessel that fished only in the Aleutian Islands during the qualifying period would receive a license to fish anywhere under option 100,000. It would be allowed to fish anywhere in the Bering Sea or the Aleutian Islands under option 200,000, but would only be allowed to fish in the Aleutian Islands under option 300,000.

FIGURE 3.4C

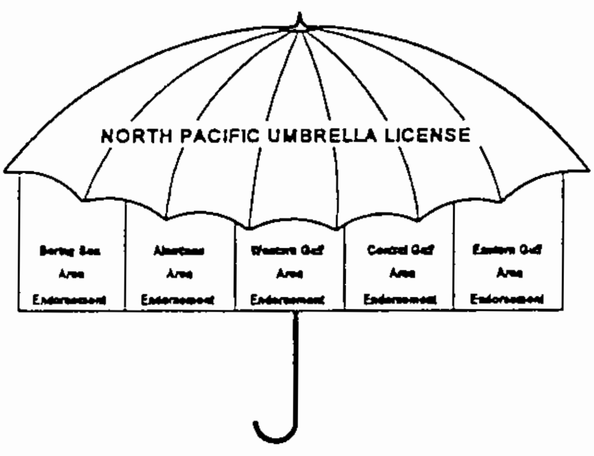
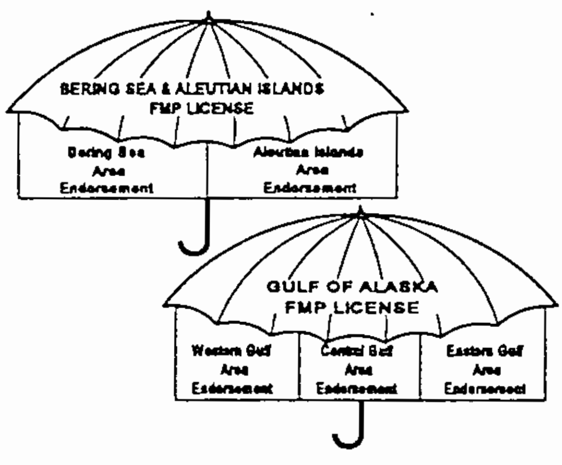


FIGURE 3.4D



The choice of umbrella/endorsements configurations (Figures 3.4a-3.4d) affects the long-term restrictiveness of the license program after transfers have begun. The fewer the number of umbrellas created, the more restricted the fleet mobility. For example, a vessel with a history in both the Bering Sea and Central Gulf sub-areas would receive a single North Pacific umbrella license with Bering Sea and Central Gulf endorsements if the system was configured as in Figures 3.4a, or 3.4c, but would receive two umbrella licenses if the system was set up as in Figures 3.4b, or 3.4d. If licenses were freely transferable, then additional vessels could enter the fisheries.

The allocation process will be somewhat more complicated if there are a greater number of endorsement layers. Monitoring of transfers will also be somewhat more complex if there are more layers. There would be no reason to assume that the monitoring of catch will be any different under this option than under any of the previous options or under the current regulations. Enforcement should not vary significantly with the number of layers particularly with regard to FMP area or sub-area endorsements; regardless of the number of layers, a vessel will have to prove that it has a license for the area in which it is operating.

Licenses for Pollock, Pacific Cod, Flatfish, Rockfish, and Other Fisheries (Option 400,000). In January 1994, the Council discussed an alternative which would issue licenses by "species." In consultation with NMFS fishery managers and enforcement officers, it was determined that licenses by individual species would be extremely difficult to manage, monitor, and enforce. For example, petrale sole, Dover sole, yellowfin sole, starry flounder, arrowtooth flounder, flathead sole, Alaska plaice, and various other flatfish could be caught while fishing for rock sole. Without a license for any of the additional species, a fisher would be required to throw them back, exacerbating the discard problem. Therefore, it was determined that a license by fishery was probably more what the Council intended. Five fisheries (Pollock, Pacific cod, Flatfish, Rockfish, and Other) were defined by Council and NMFS personnel on the basis of directed fishing definitions and on the availability of catch data which consistently track the various species over time.[2]

Under Option 400,000 (and options 500,000 and 600,000), all species managed under the groundfish plans (with the exception of Demersal Shelf Rockfish in the S.E. Outside management area, currently managed by the State of Alaska, and sablefish caught with fixed gear IFQs), would fall under one of the licensed fisheries. Licenses would give the holder the right to fish in the specified fishery and to catch and retain any species and amount of bycatch as allowed by each of the definitions created for each fishery. These definitions would need to be determined, perhaps along lines similar to the directed fishing standards that already are in current regulations. Table 3.13 shows which species would fall under the different fishery licenses. Potential Fishery Definitions are discussed separately in a section that follows. It should be noted that more specific fishery definitions are included under the options 700,000 and 800,000, which were added in June. It should also be noted that the Council could, if it chose, specify more or fewer fisheries to be included. This of course would require additional analysis.

Table 3.13

Fishery Licenses	Species/Species Groups within each Fishery License
Pollock	Pollock
Pacific cod	Pacific cod
Rockfish	Pacific Ocean Perch, Thornyheads, Other Red Rockfish, Pelagic Rockfish, Northern, Sharpchin, Shortraker, Rougheye, Other Rockfish
Flatfish	Rock Sole, Yellowfin Sole, Flathead Sole, Deep water Flats, Rex sole, Greenland Turbot, Arrowtooth, Other Flatfish, Shallow Water Flatfish
Other Species	Atka Mackerel, Sablefish, Squid, All Other Species

A fishery-specific license system potentially could be quite restrictive in terms of mobility and future expansion of capacity depending on the numbers of layers and qualifiers. For example, it would prohibit vessels which had only fished pollock from entering the flatfish fishery and vice-versa. If separate fishery licenses were issued without a North Pacific Umbrella license then the number of active vessels potentially could increase. As with FMP area licenses, there are two choices on the number of layers to include in the

[2]The Council document entitled "Potential Elements and Options of Individual Fishing Quotas or License Limitation Programs in the North Pacific Groundfish and Crab Fisheries," dated June 15, 1993, details the reported species over time.

system. Figure 3.5a depicts fishery endorsements under a North Pacific umbrella licenses, while Figure 3.5b shows a single layer of fishery licenses.

FIGURE 3.5A

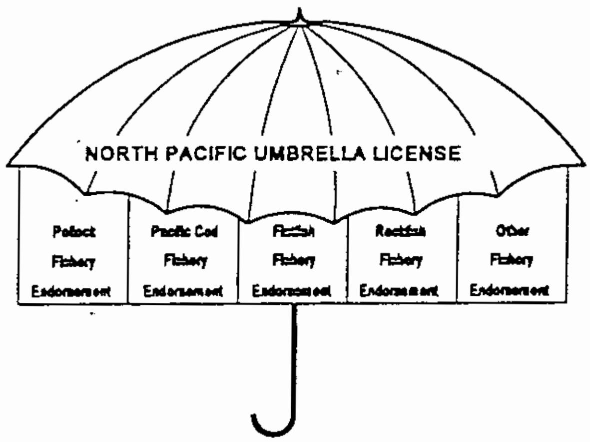
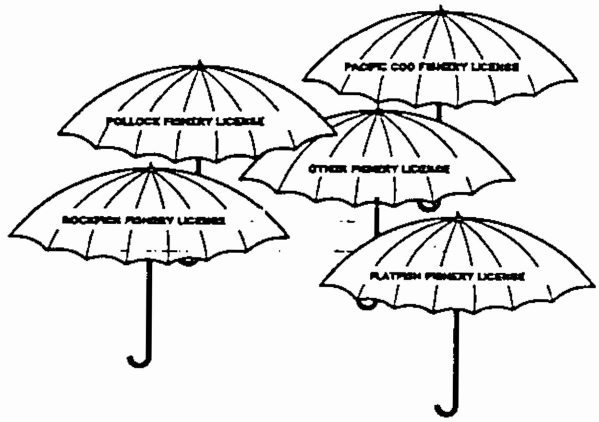


FIGURE 3.5B



Implementation and administration of fishery licenses will not be significantly more difficult than area licenses, particularly if the number of defined licenses remains small. However, it may be difficult to determine if a vessel qualified in a particular year for a specific fishery because species reporting has changed over time. Enforcement of fishery-specific licenses will mean year-round monitoring of individual vessels to determine whether they are fishing within the bounds of their licenses. Retained catch standards for each of the fisheries licenses would have to be determined and enforced on the individual license holder throughout the year. Recent Council consideration of Directed Fishing Standards acknowledged the problems with enforcing those standards. According to NMFS enforcement officers, fishery licenses have the potential to be as difficult and costly to enforce as would an IFQ system, perhaps even more difficult because more enforcement would be required at-sea and in-season. It is clear that monitoring and enforcement will be very expensive to be effective. Unless the license program reduces the number of vessels participating from that under the status quo, there will be little increased benefits to offset increased costs. Table 3.14 briefly compares potential enforcement aspects of umbrella or area licenses, fishery licenses, and IFQs.

Table 3.14

Area or Umbrella Licenses	Fishery Licenses	IFQs
	Pre-Season Enforcement Activities	
Each vessel will be issued a license stating areas of legal operation.	Each vessel will be issued a license stating the fisheries in which the vessel may participate. The license may also show the species for which the vessel does not have a license and the amounts on a percentage basis of those non-licensed species it may retain without violation.	Each IFQ recipient will be issued documentation showing the species and the absolute amount of each it may retain from a given area for the year.
	At-sea Monitoring and Enforcement	
Vessels observed operating in the EEZ will be checked against license rolls. Vessels in violation will be subject to penalties. No boardings will be necessary to check for compliance.	All as to left. In addition, vessels may be boarded to see whether the retained species on board are within the vessel's licenses. Vessel compliance with the license may vary from tow to tow, therefore rules regarding the timeliness for compliance may have to be developed.	Same as umbrella licenses. In addition vessels may be boarded to see whether retained species and amounts are within remaining IFQ amounts. Determining violations is absolute; once a vessel exceeds its quota there is no way to come back within compliance.
	Monitoring of Catch Reporting	
All catch reports will be monitored. Any catch reported from areas not within the vessel licenses will be subject to penalties.	Catch reports will be monitored for license violations. Rules will have to be developed determining which reports to use and the level of aggregation to check for violations; tow records, trip records, weekly reports, annual totals.	Catch reports will immediately show violations. Once an excess of a given species is reported the vessel is in violation. Rule determining the appropriate reports to use for determining IFQ catch will have to be developed.

Potential Target Fishery Definitions

NMFS now uses two types of "Target" fishery definitions: (1) Directed Fishing Standards, which are used to ensure that vessels do not fish for target species which are approaching or have exceeded the annual harvest quota (TAC), and (2) Observer Program/Vessel Incentive Program target fishery definitions, with which the NMFS determines level of observer coverage, and compliance to VIP standards.

The Directed Fishing Standards (DFS) are geared to prohibit vessels from "targeting" a species which has been closed to fishing. Because DFS are used to prevent bycatch in excess of the "unavoidable bycatch rate," they are defined in the negative. A vessel is not in violation unless it exceeds an applicable directed fishing standard for a species which is closed to fishing. It is technically incorrect to apply DFS for any species which is open at the time. For example, a vessel which is actually targeting on pollock while the pollock season is open, will never be "Directed Fishing" for pollock. Thus, using the DFS to define fishery licenses would mean that the DFS would be applied only to those species for which the vessel did not possess a license. In order to discuss the implications of this further, it will be necessary to describe the current DFS fully. These are shown in the table on the next page. The DFS, following the recent regulatory amendment, are defined the same regardless of FMP area or gear with the exception that some species or species groups are defined specific to the different FMPs.

Table 3.15 Current Directed Fishing Standards

Bering Sea and Aleutian Islands Directed Fishing Standards												
	Pollock	P. cod	Atka mackerel	Arrow tooth	Yellowfin sole	Other flatfish	Rock sole	Greenland turbot	Sablefish	Aggregated rockfish	Squid	Other species
Pollock	na	20	20	35	20	20	20	1	1	5	20	20
P. cod	20	na	20	35	20	20	20	1	1	5	20	20
Atka mackerel	20	20	na	35	20	20	20	1	1	5	20	20
Arrowtooth	0	0	0	na	0	0	0	0	0	0	0	0
YFS	20	20	20	35	na	35	35	1	1	5	20	20
Other flatfish	20	20	20	35	35	na	35	1	1	5	20	20
Rocksole	20	20	20	35	35	35	na	1	1	5	20	20
Greenland turbot	20	20	20	35	20	20	20	na	15	15	20	20
Sablefish	20	20	20	35	20	20	20	35	na	15	20	20
Rockfish[3]	20	20	20	35	20	20	20	35	15	15	20	20
Squid	20	20	20	35	20	20	20	1	1	5	na	20
Other	20	20	20	35	20	20	20	1	1	5	20	na

Gulf of Alaska Directed Fishing Standard												
	Pollock	P. cod	Deepwater flatfish	Rex sole	Flathead sole	Shallow water flatfish	Arrow tooth	Sable fish	Aggregated rockfish	DSR Southeast Outside	Atka mackerel	Other species
Pollock	na	20	20	20	20	20	35	1	5	10	20	20
P. cod	20	na	20	20	20	20	35	1	5	10	20	20
Deep flatfish	20	20	na	20	20	20	35	15	15	1	20	20
Rex sole	20	20	20	na	20	20	35	15	15	1	20	20
Flathead sole	20	20	20	20	na	20	35	15	15	1	20	20
Shallow flatfish	20	20	20	20	20	na	35	1	5	10	20	20
Arrowtooth	0	0	0	0	0	0	na	0	0	0	0	0
Sablefish	20	20	20	20	20	20	35	na	15	1	20	20
Rockfish[4]	20	20	20	20	20	20	35	15	15	1	20	20
DSR S.E. Outside	20	20	20	20	20	20	35	15	15	na	20	20
Atka mackerel	20	20	20	20	20	20	35	1	5	10	na	20
Other species	20	20	20	20	20	20	35	1	5	10	20	na
Aggregated non-groundfish species	20	20	20	20	20	20	35	1	5	1	20	20

To determine whether a vessel is in violation, i.e., it is "directed fishing" for a closed species, divide the amount of the particular closed species into the total amount of all species which are currently open, i.e., if species W and X are closed and species Y and Z are open then the bycatch % of X is checked against the DFS of X as follows: Bycatch% of X = Xmt ÷ (Ymt + Zmt). Note that the catch of W is immaterial to the consideration of the bycatch of X.

[3]Includes other rockfish, other red rockfish-Bering Sea, Pacific ocean perch, sharpchin/northern-Aleutian Islands, and shortraker/rougheye-Aleutian Islands.

[4]Includes Pacific ocean perch, shortraker/rougheye, other rockfish, northern rockfish, pelagic rockfish, and thornyheads.

As noted earlier, DFS are only applied to species which are closed to fishing. As an example, assume fishing is closed for flathead sole, and that the Coast Guard has boarded a vessel with the following catch on board: Pollock 40 mt, D.W. Flatfish 40 mt, Flathead sole 20 mt, Rex sole 21 mt. The vessel is not in violation because its bycatch percentage of flathead sole is below the DFS at 19.9% (i.e., 20 ÷ [40+40+21]). If the rex sole fishery were also closed then the vessel would be in violation for both flathead and rex sole because the basis for determining bycatch has changed; flathead sole is 25% of the open species (i.e., 20 ÷ [40+40]) and rex sole is 26% of the open fisheries, both of which exceed the 20% DFS for those species. The Coast Guard would determine that the vessel was engaged in directed fishing for both flathead sole and rex sole and could cite the vessel.

Directed Fishing Standards species categories are more specific than the five fisheries license definitions used in this alternative. These would need to be aligned. One approach would be to create Fishery License Standards (FLS) which would aggregate species or species-groups used in the DFS to match the fishery licenses. Pollock and Pacific cod would remain defined as in the DFS, i.e., at 20%. All flatfish species including arrowtooth and turbots could be grouped together, as could all rockfish species including POP and thornyheads. The remaining species including sablefish, Atka mackerel, and squid would fall into the Other Fishery License. Flatfish, rockfish, and other species FLS could be set independently, but for discussion are assumed to be 20%. The FLS would limit the percentage amount of all species within that license group that may be retained by non-licensed vessels. Additionally, any catch of individual species within the fishery group could not exceed the DFS for that particular species, unless the vessel held a license for that fishery. Note that some adjustments of the DFS would have to occur. Such a license system is shown in Table 3.16.

Table 3.16

Fishery License Standards (FLS)	Pollock ≥20%	Pacific Cod ≥20%	Rockfish ≥20%	Flatfish ≥35%	Other ≥20%
Directed Fishing Standards for Species Groups Within Fishery Licenses					
Rockfish DFS	POP ≥15%	Thornyheads ≥15%	Pelagic ≥15%	Other Red Rockfish ≥15%	
	Shortraker/Rougheye ≥15%		Sharpchin ≥15%	Northern ≥15%	Other ≥15%
Flatfish DFS	R. Sole ≥20%	YF.Sole ≥20%	Flathead ≥20%	D.Water ≥20%	S.Water ≥20%
	G. Turbot ≥35%	Arrowtooth ≥35%	Rex sole 20%	Other Flat 20%	
Other Species DFS	Atka Mack. ≥20%	Sablefish ≥15%	Squid ≥20%	All Others ≥20%	

To understand how such a system might work, let's examine a potential scenario whereby a vessel has a license for the pollock fishery. Further assume that the vessel has just been boarded and it has been discovered that the vessel has a total of 171 mt of fish on board composed of the various species shown in Table 3.17 below. The vessel would not be cited in this case, because it has not exceeded the DFS for any individual species nor has it exceeded the FLS, even though its retained catch of pollock was just 52% of its total catch.

Table 3.17

Pollock 101mt	P.Cod 20mt	POP 5mt	Thornyheads 5mt	O.Rockfish 5mt	O.Red R'fish 5mt
Rock Sole 20mt	Squid 20mt	Rex sole 15mt		Total 196mt	

The example demonstrates a prominent characteristic of the license standard we have defined: it will always be the case that any vessel with a single fishery license (with the exception of a flatfish license) will not be required to have more than 51.5% of its total retained catch in its license category. (For a vessel with only a flatfish license the requirement climbs to 56%.) It should be noted that the actual percentage (51.5%) is a function of the allowable retention for non-licensed species. In general, the minimum allowable catch of the licensed species will never be required to be greater than a fixed percent of the total catch. That percentage will be equal to 1÷ [100%+∑non-licensed %], in this case 1÷195% = 51.5%. If the FLS were tightened to 10% for all fishery licenses, then single license vessels would have to ensure that the licensed species made up at least 71.4% (i.e., 1÷140%) of the total retained catch on board.

For vessels with multiple licenses, the same FLS would apply. For example, if a vessel had both a pollock license and a Pacific cod license, then it would be able to retain as much pollock and Pacific cod as it wished as long as the season remained open. With regard to retained catch of non-licensed species, the same formulas would hold. Specifically, the DFS would apply to all non-licensed species and the retained catch of each non-licensed Fishery group (flatfish, rockfish, and other species) would have to remain below the FLS. The vessel depicted above would be able to retain an additional 6 mt (using 20% as the FLS, with 35% for flatfish of non-licensed species), 2 mt from each group, as long as the DFS were not exceeded. In general, it will always be true that vessels with multiple licenses will need a greater percentage of licensed species on board. The vessel with both pollock and Pacific cod licenses would now need at least 57.1% of its total retained catch to be pollock or Pacific cod. This would increase to 76.9% if FLS were set at 10%.

It should be pointed out that DFS would still be invoked for licensed operators when a particular species was closed. For example, if sablefish closes to directed fishing, then the only vessels directly affected would be those with licenses for the Other Species fishery. For these vessels, retained sablefish could no longer exceed a set percentage of the total of their catch of licensed species. Finally, it should be noted that the Regional Director would maintain the authority to declare any species a "prohibited" species during the season.

One problem with using FLS as a standard for licenses is that DFS for a given bycatch species vary depending on the target species. For example, the allowable bycatch of sablefish in the pollock and Pacific cod fisheries is set at 1%, while in the rockfish fisheries it is 15%. For the FLS to work as outlined, bycatch allowances under DFS would have to be set consistently for each directed fishery. If this is something the Council would rather not do, then an alternative exists as defined below.

A Defined Target System for Fishery Licenses

An alternative way to define fishery licenses would be to specify acceptable bycatch rates of each non-licensed species (or Fishery Group) for each License type in a Defined Target System (DTS). This would allow more specificity when setting allowable bycatch rates. A hypothetical example of such a system is shown in the table below.

Table 3.18

Target	Allowable Bycatch as a Percent of the Target						Target as a % of Total Catch
	Pollock	P.Cod	Rockfish	Flatfish	O. Species	Bycatch Total	
Pollock	100.00%	15.00%	5.00%	5.00%	5.00%	30.00%	76.9%
P.Cod	20.00%	100.00%	5.00%	20.00%	20.00%	65.00%	60.6%
Rockfish	10.00%	10.00%	100.00%	10.00%	20.00%	50.00%	66.7%
Flatfish	10.00%	10.00%	10.00%	100.00%	20.00%	50.00%	66.7%
O. Species	10.00%	10.00%	10.00%	10.00%	100.00%	40.00%	71.4%
Note the allowable bycatch rates are defined in terms of the amount of the target species on board.							

The difference between the DTS and the FLS/DFS system is the specificity in defining bycatch rates. The DTS requires bycatch rates for each target fishery. Under the FLS/DFS, bycatch rates were set uniformly for all fisheries. Obviously, there are pros and cons for each system. Primarily, there is a tradeoff between complexity and precision. With the benefit of added precision under the DTS comes greater complexity for fishers, regulators, and enforcement officers. This same complexity was cited as the primary reason for redefining DFS in 1994. [DFS EA/RIR, 1994].

Discards, Full Utilization, and Full Retention under Fishery Licenses

The State of Alaska has proposed linking the license limitation program to a full-retention mandate. This section will discuss discard issues as outlined in Section 3.1.4 and their relationship to fishery licenses.

As Section 3.1.4 notes, there are three causes of economic discards: (1) there is a race for fish, perhaps resulting from imposing TAC or PSC limits, or from behavioral characteristics of particular species; (2) catching capacity exceeds processing capacity; and (3) the catch consists of fish of different relative value. License limitation does not appear to address any of the three causal factors consistently. Therefore, license limitation with or without fishery endorsements cannot be expected to significantly reduce economic discards.

As discussed above, fishery endorsements will require some system of directed fishing standards on individual vessels. This will undoubtedly mean greater amounts of regulatory discards if the vessel is to remain legal. It has been that proposed full-retention be mandated as part of the license limitation program. Under a system of fishery licenses and fishery license standards of the type discussed above, it would be virtually impossible to remain within the bounds of both the license and the full-retention mandate unless: (1) each vessel was licensed to participate in every fishery, or (2) fishing patterns and practices changed dramatically from those under the status quo. If the first scenario were true, there would be no point in having fishery endorsements. The second scenario is one of the results intended by the proposers of the full-retention mandate, which is being analyzed fully on a separate track.

General Licenses with Endorsements for Each Fishery and FMP Area (Option 500,000). This alternative combines the concepts of FMP area endorsements and fishery endorsements. Recipients would be allowed to participate in a given fishery within an FMP area only if they qualified in that FMP for that particular fishery. As discussed above, fishery licenses will have to be defined either using the FLS/DFS system or the DTS. If the Council wished to specify different allowable bycatch rates by FMP, either the FLS or the DTS could be used. Again, the trade-off between precision and complexity should be noted.

As with previous elements within this component, there are several ways to configure the system. Figure 3.6a depicts a three layer system with a North Pacific Umbrella License, an FMP area general license, and FMP

FIGURE 3.6A

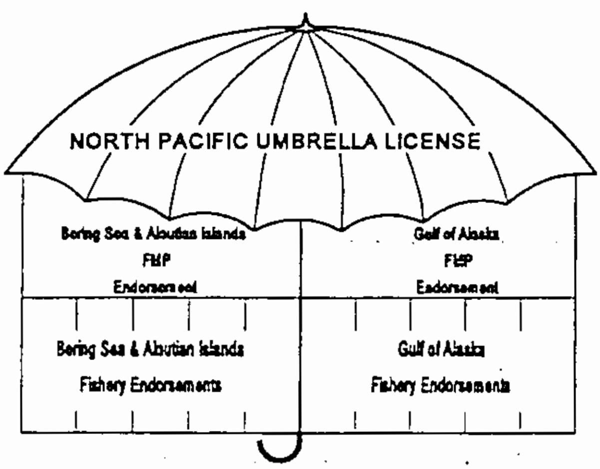
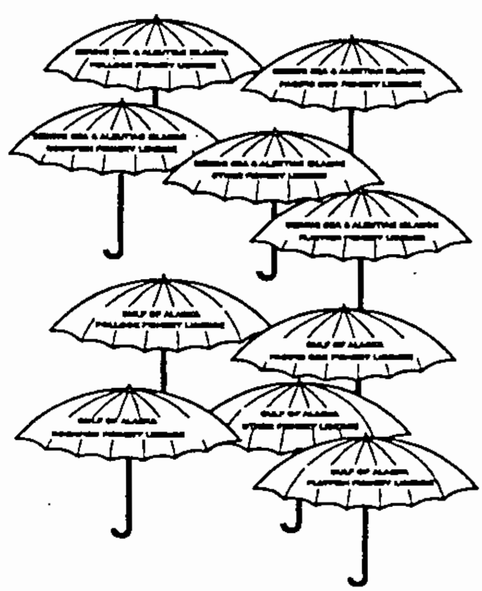


FIGURE 3.6B



specific fishery endorsements. Alternatively, Figure 3.6b depicts FMP specific fishery licenses without any additional layers. Figure 3.6c drops the middle layer of endorsements creating FMP specific fishery endorsements under a North Pacific umbrella license. Finally, Figure 3.6d shows a system which drops the North Pacific umbrella, and creates FMP umbrella licenses with FMP specific fishery endorsements. As with earlier elements, the configuration of the license system in terms of the number of layers does not really impact the number of licenses issued, but rather the transferability and the potential number of vessels that may enter the fisheries in the future. These issues will be discussed in more detail in Section 3.2.2.7.

Assuming a multi-layered system under a North Pacific umbrella license, FMP specific fishery licenses will be more restrictive in terms of mobililty and future expansion of fleet mobility than any of the previous options. They will also be more complicated in terms of implementation, monitoring, and enforcement than any of the previous alternative elements. It is the fishery-specific nature of the license which adds the greatest amount of complexity.

FIGURE 3.6C

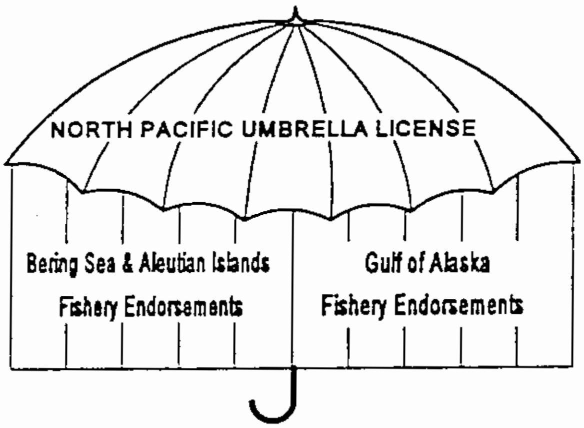
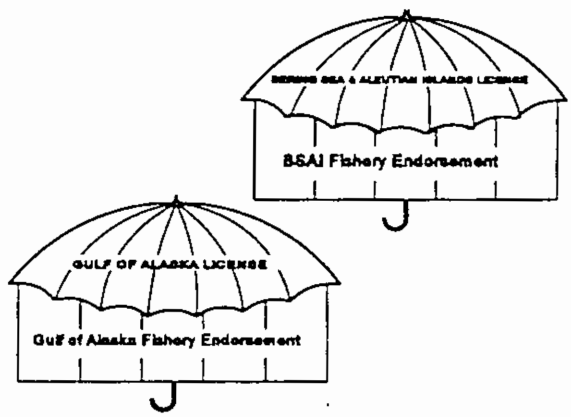


FIGURE 3.6D



General Licenses with Endorsements for Each Fishery and FMP Sub-Areas (Option 600,000). This alternative has greater potential to restrict mobility of the fleet and future expansion of capacity than any previous alternative. Given the dynamics of fish populations and seafood markets, this may not necessarily

FIGURE 3.7A

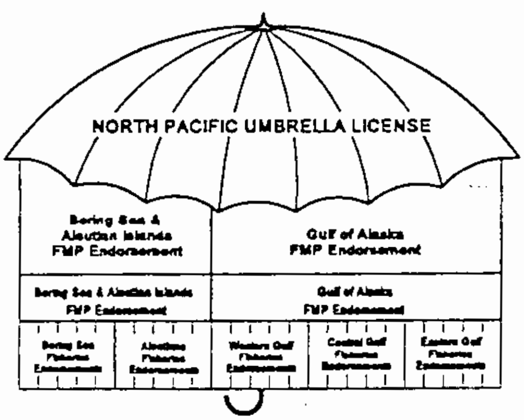
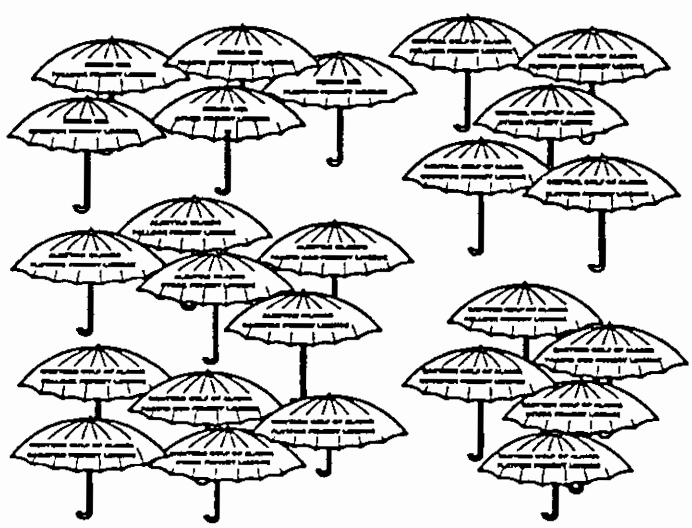


FIGURE 3.7B



be a positive attribute. It also would be most difficult and expensive to implement, monitor, and enforce. Configurations 700,000 and 800,000 restrict mobility and flexibility even more because their licenses are more specific.

As with the other elements, the number of layers embedded in the system is an important variable, particularly with regard to transferability and ultimately the number of vessels that may enter the fishery following implementation. Figure 3.7a depicts a four-layer system with a North Pacific Umbrella License, FMP area endorsements, sub-area endorsements and finally sub-area specific fishery endorsements. Alternatively, Figure 3.7b uses only sub-area specific fishery licenses. Figure 3.7c depicts a system which drops the layer of sub-area endorsements while keeping the sub-area specific fishery endorsements. Figure 3.7d drops the FMP endorsements keeping the North Pacific umbrella licenses, sub-area endorsements, and sub-area specific fishery endorsements. Figure 3.7e drops the North Pacific Umbrella, while keeping the FMP umbrella license with sub-area endorsements and sub-area specific fishery endorsements. Figure 3.7f drops the sub-area layer from the previous configuration. Finally, Figure 3.7g uses a sub-area umbrella license with sub-area specific fishery endorsements.

FIGURE 3.7c

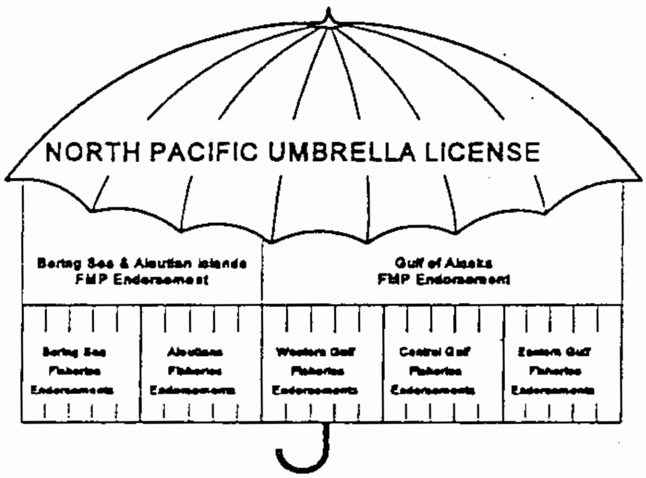


FIGURE 3.7d

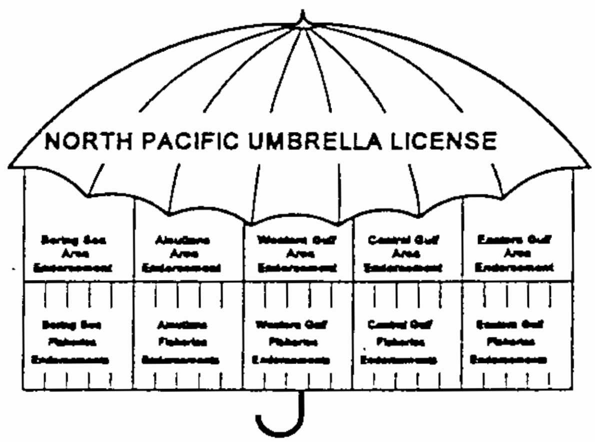


FIGURE 3.7e

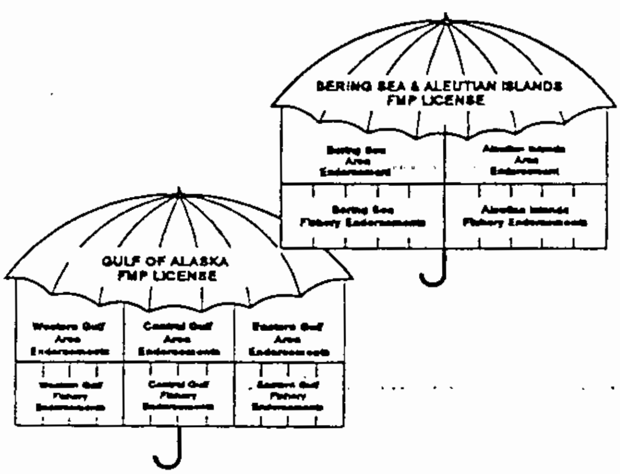


FIGURE 3.7f

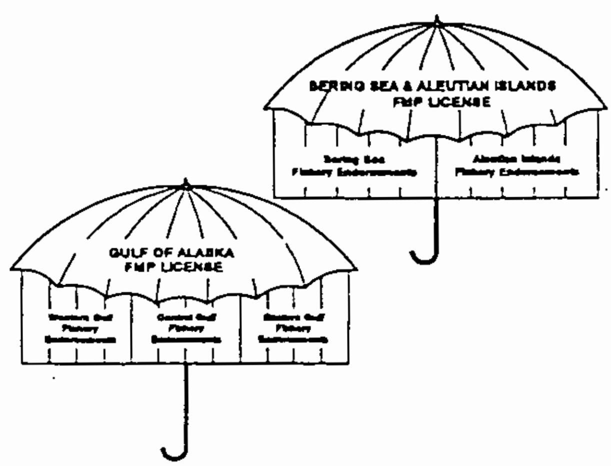
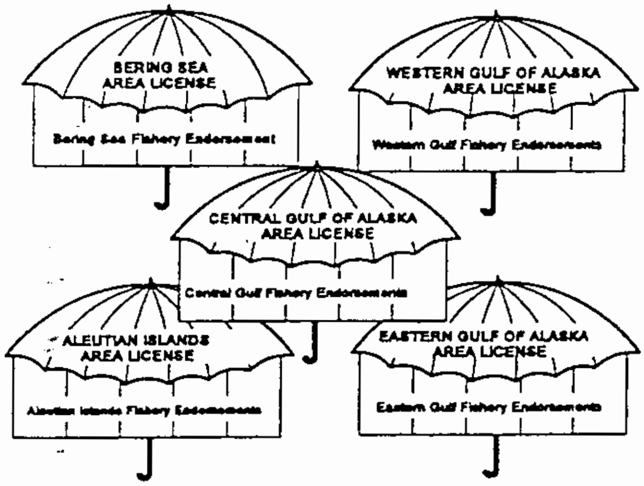


FIGURE 3.7G



Licenses for Specified Fisheries by FMP Sub-Areas (Option 700,000). This element is very similar to the previous element, including the depictions in Figures 3.7a-g showing the different potential layers of endorsements. The main difference is that fisheries are defined more precisely than in the earlier options. Additionally, several fisheries currently managed under the Groundfish FMPs would not be included under the license system. Table 3.19 below shows the fishery defined under this element.

Table 3.19

Fisheries For Which Licenses would be Issued Under License Nature Options 700,000 and 800,000					
Bering Sea and Aleutian Island Fishery Licenses				GOA Fishery Licenses	
Pollock	Pacific Cod	Atka Mackerel	Yellowfin Sole	Pollock	Pacific Cod
Other Flatfish	Rockfish	Squid (Fixed Gear)	Rocksole	Deep Water Flats	Shallow Water Flatfish
Turbots				Atka Mackerel	

Conspicuously absent are: (1) arrowtooth flounder fisheries in both FMP areas, (2) rockfish, flathead sole, and turbot fisheries in the GOA, and (3) the sablefish trawl fishery in the Bering Sea. Also, the BSAI squid fishery is changed from being non-gear specific (open to both trawling and fixed gear) to a fixed gear only fishery. These omissions have several ramifications. First, reducing the number of licensed fisheries will tend to reduce the complexity of the program. Adding the fisheries back in would result in the licensed fisheries shown in Table 3.20.

Table 3.20

Fisheries For Which Licenses would be Issued Under License Nature Options 700,000 and 800,000				
Bering Sea and Aleutian Island Fishery Licenses			GOA Fishery Licenses	
Pollock	Pacific Cod	Atka Mackerel	Pollock	Pacific Cod
Other Flatfish	Rockfish	Squid (All Gears)	Deep Water Flats	Shallow Water Flats.
Turbots	Arrowtooth	Sablefish	Atka Mackerel	Turbots/Arrowtooth
Yellowfin Sole	Rocksole		Rockfish	Flathead Sole

This system would be more restrictive to fleet mobility and flexibility than a more general fishery license system particularly if species endorsements were required. In that case, fewer vessels would have the right to pursue a species than under the more general system. Another drawback with a more specific species license would come in the development of standards for allowable bycatch under the different licenses, (see the discussion on FLS and DTS above) and complexities in the regulations and enforcement of the system.

Second, if the species omitted were to remain under open access, they probably will be harvested by both licensed and non-licensed vessels. If the fisheries are in fact over-capitalized, leaving some fisheries open will do little to protect them which could lead to additional problems. In the case of the arrowtooth fishery, under-utilization has been caused by the lack of markets and by high bycatch rates of halibut. If this fishery were the only opportunity for non-licensed vessels then it would be likely that they would fish rather indiscriminately with regard to halibut bycatch. This could cause both the unlicensed arrowtooth fishery and other licensed fisheries to be closed early.

Potential benefits of eliminating the arrowtooth fisheries could be found in the potential elimination of halibut bycatch for a fishery with a low economic return per halibut caught. Potential benefits of eliminating the flathead sole fishery may be along the same lines. Potential benefits of eliminating the BSAI trawl sablefish fishery are somewhat difficult to find, unless it is making more sablefish available to the fixed gear IFQ fishery. In that case, a more appropriate approach may be to amend of the BSAI FMP to change the trawl/fixed gear allocation of sablefish.

Potential benefits of converting the BSAI squid fishery to fixed-gear only are also difficult to assess. Currently, the fixed gear take of squid is less than 0.3% of the total squid harvest in an average year. Additionally, the squid TAC has not been fully taken. The restriction proposed would guarantee future access to fixed gear fishers. The following section discusses more fully some of the potential benefits and costs of eliminating these fisheries, with particular emphasis on the Gulf rockfish fisheries.

Exclusion of *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder in the GOA

The economic ramifications of excluding *Sebastes* rockfish, flathead sole, and arrowtooth flounder in the Gulf of Alaska are summarized in the following discussion. Information and considerations leading to these conclusions are presented more fully in Appendix VI. A larger fleet fishes on rockfish (includes Pacific ocean perch, shortraker/rougheye, other slope, Northern, pelagic shelf, and thornyheads for purposes of this discussion) in the Gulf of Alaska than on either flathead sole or arrowtooth flounder. The rockfish fleet in 1993 had 22 catcher/processors (15 trawlers and 7 longliners) and about 212 shore-based catcher vessels. The shore-based fleet included 164 longliners, 5 trawlers, and 43 vessels using other gear.

The following catch statistics refer only to catch totals associated with vessels which harvested rockfish, flathead sole, and arrowtooth flounder in the Gulf for the 1993 period. Catcher processors caught over 88% of the rockfish and 24% of the demersal shelf rockfish harvested in 1993. One hundred percent of the flathead sole and over 80% of Pacific cod, pollock, and shallow water flatfish were harvested by shore-based catcher vessels. The rockfish fishery in the Gulf contributes 36% of the weight and ex-vessel value of the catcher-processor fishery, but only 1% of the ex-vessel value for shore-based vessels. Trawlers account for 87% of the catcher processor harvest and 58% of their ex-vessel value, and pollock and rockfish are their primary species. Catcher/processor longliners mainly target Pacific cod and sablefish. The longline fishery for rockfish amounted to less than 1% of the total harvest or ex-vessel revenue in the Gulf of Alaska.

The shore based catch was dominated by trawlers also. They took 88% of the harvest and 54% of the value, with pollock and Pacific cod being their primary targets. Shore-based longliners depended heavily on sablefish; rockfish were a minimal part of the harvest or ex-vessel revenue.

Nearly all of the harvest is taken by 15 vessels and 9 companies. Of the 237 vessels that participated in the rockfish fishery in 1993, 15 accounted for 99% of the total catch, with the top four vessels capturing 51% of the total catch. Nine companies accounted for 98% of the total catch and the top four garnered 80%. These companies and vessels will have to curtail their fisheries if rockfish is eliminated as directed fisheries. The net wholesale value of the rockfish catch totals about $14 million. *Sebastes* bycatch adds another $2.6 million to that net wholesale value.

Some bycatch of rockfish will be taken even if not provided for with a specific license in the GOA. Because rockfish is such a valuable species, it is possible that a significant number of all vessels operating in the GOA might 'top off' with rockfish while prosecuting other directed groundfish fisheries. With the current 15% directed fishing standard, and using 1994 TACs, as much as 30,000 mt of rockfish could be taken as bycatch, far exceeding actual TACs available for rockfish. This, although theoretically possible, is highly unlikely given the halibut bycatch rates in other fisheries where rockfish are found.

Other Considerations

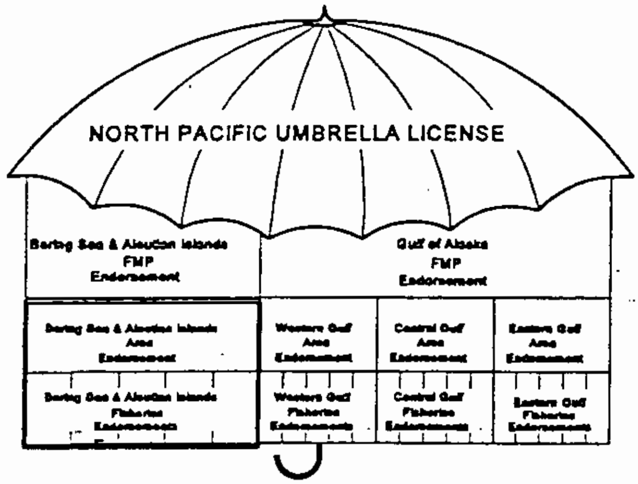
An alternative to deleting subject species from licenses would be to issue licenses for them, but make them bycatch only at the appropriate allowable retention rate. The rationale for this approach would be to avoid contentious allocational decisions in the future, if it is determined that directed fishing could resume on these species. For example, if problems are overcome with arrowtooth flounder flesh consistency, or if it becomes a viable surimi base, there may be incentive for fishermen and fisheries managers to begin directed fishing on these species. If licenses are issued up front, as part of the current CRP process, the field of players in these fisheries will already be determined, thereby simplifying the transition. This is simply an alternative approach if the Council determines that directed fishing on these species is not a desirable practice at this time.

An additional factor, when considering deletion of these species from directed fishing, is the potential impact on halibut bycatch in the GOA. Directed rockfish fisheries have, in the past, accounted for a significant portion of the overall 2,000 mt halibut PSC cap in the GOA. From 1990 through 1993, the amount of halibut bycatch mortality has been 768 mt, 789 mt, 486 mt, and 266 mt respectively. The lower rates in 1993 may be a result of a combination of factors including the delay of the directed rockfish fisheries until July 1, lower amounts of effort on these species, and lower overall TACs for these species. In any event, there are potential halibut bycatch mortality savings associated with the elimination of directed fisheries for rockfish. These savings may impact the extent to which other fisheries are fully prosecuted, depending upon the extent to which the halibut PSC cap is a constraining factor for the other fisheries. It should be noted however that the next best opportunity for the displaced vessels may be deepwater flatfish, which also has a high bycatch of halibut. If more effort is put into these or other flatfish fisheries then any savings of halibut bycatch may be lost.

If it is assumed that species not specified in the license program will no longer have directed fishing, then we can conclude that this element will be less likely to lead to increased overall utilization of the fishery resources. For the species included in the program, the increased specificity of the fishery definitions will make it the most restrictive of the elements examined. The precision which makes this a restrictive program also leads to a very complex system for fishers, administrators, and enforcement officers.

A final issue worth mentioning is the proposal to make squid fisheries in the BSAI a fixed gear only fishery. Currently, the TAC for squid is 3,110 mt, with only 224 mt taken through mid-August of this year. All 224 mt was taken by trawl gear and virtually all of it was discarded. In 1993, 683 mt was taken from an available DAP apportionment of 1,700 mt. Again, this was all taken by trawl gear and most (approximately 85%) was discarded. Although designation of this fishery to fixed gear only would not appear to impose hardships or significant costs on the trawl fleet, such designation has no apparent benefits either, unless fixed gear fisheries are developed which target on, and retain, these squid.

FIGURE 3.8



Licenses for specified fisheries by the following areas: EG, CG, WG, BSAI (Option 800,000).

This element differs from the previous element only by the area definitions used. Rather than divide the BSAI in to sub-areas, the FMP area remains intact, and the endorsements are BSAI specific. This option with four layers of endorsements is shown in Figure 3.8. The same configuration variants as under the previous two elements are possible.

In terms of mobility, this alternative is slightly less restrictive than the previous element; all vessels which qualified to fish in the Bering Sea would also be allowed to fish in the Aleutian Islands. In terms of overall complexity, this element would require a different system of regulations for the BSAI and the GOA. Because of this, it is likely that the system would be more complex for fishers, regulators and enforcement officers than the previous element.

Nature of Licenses Conclusions From The Distributional Tables

The options under Nature of Licenses generally do not influence the initial size of the fleet, though they do have significant ramifications on how big the fleet might be in the long run if many different types of licenses are issued initially. Table 3.21 shows how many vessels would receive licenses under variations of the three reference configurations. The table draws on the separate tables for each configuration in the Groundfish Table Appendix (bound separately). The numbers of vessels that would receive licenses under any variant of the current or universal reference configuration would be 1,679 and 2,954, respectively. This underscores the point that it is the seven options under the Qualifying Period component which significantly influence the initial numbers of licenses, not the Nature of Licenses component (Note that changes in Qualifying Period options are reflected in changes in the third number from the right in each configuration number; influences of the Qualifying Period on initial fleet size will be discussed in Section 3.2.2.4).

The Explicit configuration presents an exception to the general rule that initial fleet size is not influenced by the Nature of Licenses options. Table 3.21 shows that initial fleet size varies from 1,501 to 1,536 depending on the Nature of Licenses option chosen. This is caused by an interplay between the area/fisheries specificity of the licenses and the more selective qualifying period schemes within the State of Alaska's proposal. The qualifying criteria would be that a vessel had to land in each of the three calendar years from 1/1/90 to

6/27/92 and 365 days prior to final Council action, except for fixed gear Pacific cod which would use 6/23/91 to 6/27/92 (Option 700 as depicted in Table 3.23 in Section 3.2.2.4). Because this forces a higher level of performance to meet the standards, slightly fewer vessels would qualify. Under these multiple qualifying period criteria, more vessels may qualify initially if the Council broadens the scope or "umbrella" of the license. As an example, assume a vessel fished for pollock in the Bering Sea in 1990, and the Central Gulf in 1991 and 1992. The vessel qualifies under options 100,000 and 400,000 because it participated in each calendar year in the pollock fishery. It would not qualify under any of the other options.

Changing the nature of the licenses from a single umbrella license (option 100,000) to more highly specified licenses, constrains the mobility of the licensed fleet and the ability to expand in the future into areas and fisheries different from those used during the qualifying period. Option 100,000 allows each recipient to participate in any area for any fishery. It most closely reflects the mobility that vessels would have under the moratorium. The second option restricts the recipient and fisheries within specific FMP areas. Each successive option through option 600,000 further "pigeon holes" the recipient. The last three options are highly specific, identifying the areas a vessel may fish and upon which fisheries it may target.

In order to compare the different options one needs a consistent parameter. For example, directly comparing the number of licenses issued under option 100,000 and option 600,000 might lead the reader to an incorrect conclusion. Referring to the set of "current" tables (in the Groundfish Table Appendix), under option 100,000 (configuration 115X11) there are 1,679 licenses, and under option 600,000 (configuration 615X11) there are 5,475 licenses. A direct comparison of the two numbers might lead the reader to say that the former was more limiting than the latter. This is not the case because under a single license the vessel may fish anywhere. Since there are 5 sub-areas and at least 5 fisheries in each area, this gives the recipient, at least theoretically, 25 fishery/subarea possibilities. Multiplying the number of opportunities by the number of licenses results in a total of 41,975 fishing opportunities. Under option 600,000 the number of fishing opportunities are strictly defined by the nature of the license, and as seen in the table (615X11), only 5,475 opportunities were used in the current fishery. Thus issuing licenses for sub-area fisheries is much more limiting in terms of the number of opportunities each vessel has open to it, affecting fleet mobility and the ability of the fleet to expand in the future. While, it may be argued that a vessel does not need any new opportunities, the dynamics of fish populations and markets suggest otherwise.

The table below summarizes the impacts on fleet mobility by estimating fishing opportunities as the nature of license changes, using the current, universal and explicit reference configurations. Fishing opportunities are defined as the potential or actual number of fishery/sub-area combinations which are possible under each of the configurations shown, using the kind of calculations made above. From the table it is clear that as one rolls down through the options for the nature of licenses, the number of opportunities decreases. The right-most column shows the percent reduction from the total available opportunities shown in the first row of each section. Under each of the configuration sets (current, universal, and explicit) the reduction percentages are remarkably consistent. Since each of the sets varies only by the qualifying period one can be reasonably sure that changing the qualifying period does not impact the general trend in the reduction of fishing opportunities as one tightens the definition of the nature of the license.

Table 3.21

Potential Fishing Opportunities					
Configuration	Vessels	FMP Areas	Sub-areas	Fisheries	Reduction %
Current					
115X11	**1,679**	*3,358*	*8,395*	*41,975*	100%
215X11	**1,679**	**1,916**	*5,404*	*27,020*	64%
315X11	**1,679**	**1,916**	**2,229**	*11,145*	27%
415X11	**1,679**	*3,358*	*8,395*	***19,355***	46%
515X11	**1,679**	**1,916**	*5,404*	***12,301***	29%
615X11	**1,679**	**1,916**	**2,229**	**5,475**	13%
715X11	**1,679**	**1,916**	**2,229**	**4,001**	10%
815X11	**1,679**	**1,916**	#N/A	***5,177***	12%
Universal					
115211	**2,954**	*5,908*	*14,770*	*73,850*	100%
215211	**2,954**	**3,518**	*9,777*	*48,885*	66%
315211	**2,954**	**3,518**	**4,352**	*21,760*	29%
415211	**2,954**	*5,908*	*14,770*	***33,085***	45%
515211	**2,954**	**3,518**	*9,777*	***22,354***	30%
615211	**2,954**	**3,518**	**4,352**	**10,114**	14%
715211	**2,954**	**3,518**	**4,352**	**7,638**	10%
815211	**2,954**	**3,518**	#N/A	***9,681***	13%
Explicit					
115711	**1,536**	*3,072*	*7,680*	*38,400*	100%
215711	**1,527**	**1,727**	*4,788*	*23,940*	62%
315711	**1,501**	#N/A	**3,520**	*17,600*	46%
415711	**1,536**	*3,072*	*7,680*	***16,660***	43%
515711	**1,527**	#N/A	*7,635*	***9,907***	26%
615711	**1,501**	#N/A	**1,900**	**3,942**	10%
715711	**1,501**	#N/A	**1,900**	**3,658**	10%
815711	**1,502**	#N/A	#N/A	***4,851***	13%

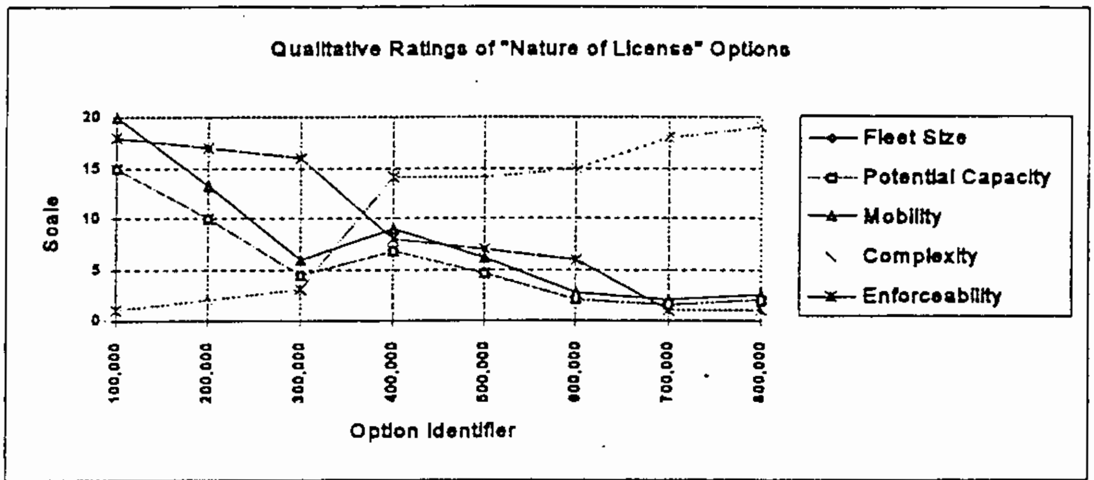
Notes: **BOLD** numbers are taken directly from the tables in the back of the section.
ITALICIZED numbers are calculated using adjacent cells and #'s of available opportunities.
BOLD ITALICIZED numbers are calculated directly from the tables in the back of the section.

Summary of Qualitative and Quantitative Assessments of the Nature of Licenses Alternatives.

For each of the eight elements, we have discussed the relative impacts on the potential for initial fleet size, potential for expansion of capacity, mobility, administrative complexity, and enforcement. The table and chart show ordinal values, using a 20 point scale, placed on each of these four attributes for each of the different nature of license elements. Since the Nature of Licenses is neutral on the initial fleet size, no scores will be issued at this juncture. Scores will have the following meanings:

Attribute	**Meaning of High Scores**
Initial Fleet Size	Greater initial fleet size
Potential for Increased Capacity	Greater potential for increased capacity
Mobility	Greater mobility for fishers
Complexity	Greater administrative complexity and cost
Enforcement	Greater enforceability/lower costs

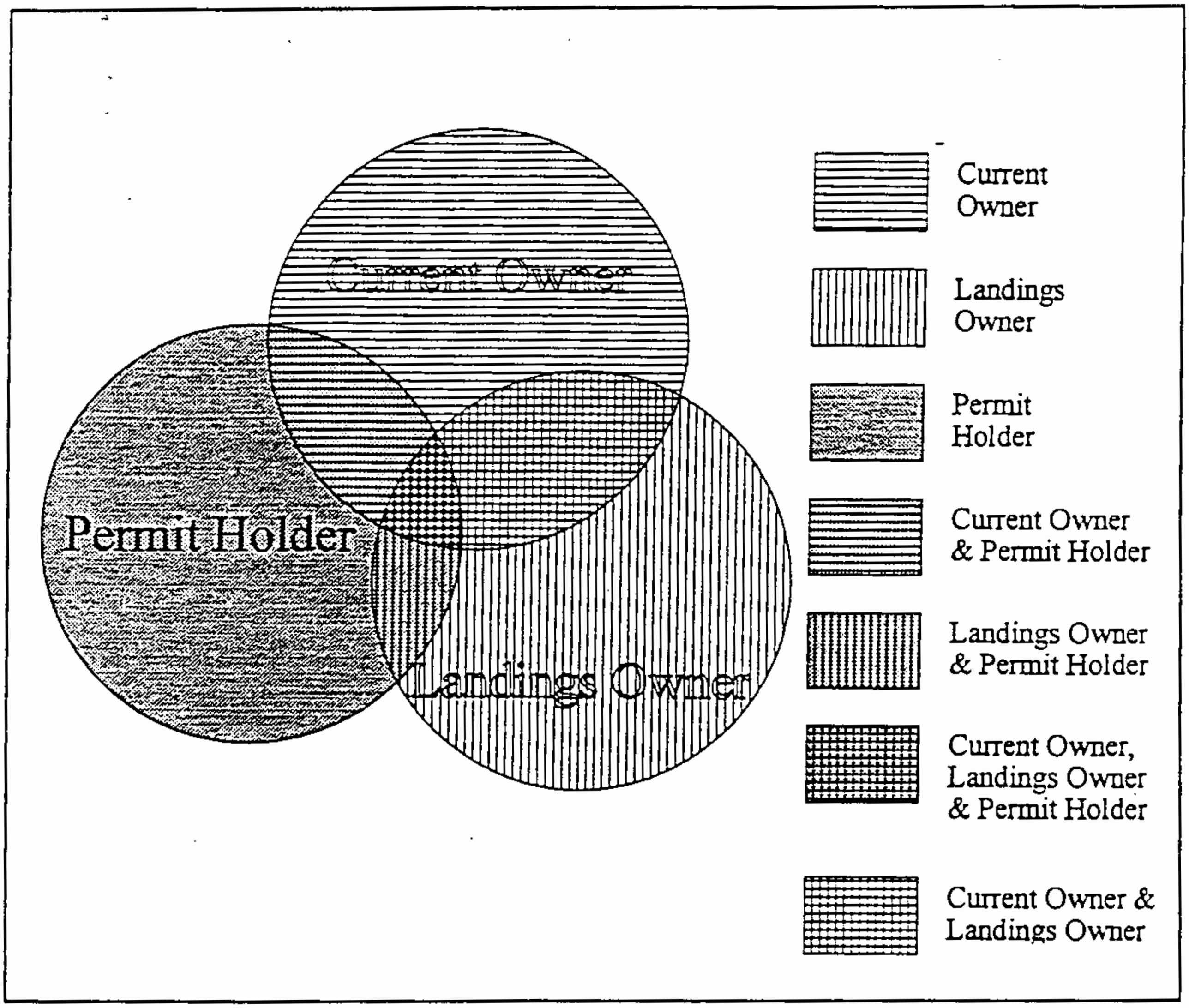
Option #	Fleet Size	Potential Capacity	Mobility	Complexity	Enforceability
100,000	Neutral	15	20	1	18
200,000	Neutral	10	13	2	17
300,000	Neutral	4	6	3	16
400,000	Neutral	7	9	14	8
500,000	Neutral	5	6	14	7
600,000	Neutral	2	3	15	6
700,000	Neutral	2	2	18	1
800,000	Neutral	2	3	19	1



3.2.2.2 License Recipients

In January 1994 the Council specified three groups of potential license recipients: current vessel owners, vessel owners at the time of landings, and permit holders. These are overlapping sets of recipients as shown below in Figure 3.9.

Figure 3.9



For an owner-operated vessel which has not changed ownership during the qualifying period, all three sets of recipients may be the same individual. Many larger vessels that have changed hands will have different owners than the permit holders and the vessel owner at the time of landings may also be different; thus the three sets do not overlap. The Council stated its preference that at minimum, it wanted the current owner to receive a permit. The Council also noted that they may want to give licenses to one or two of the groups, but not necessarily all three. This introduces a precedential aspect into initial issuance. And, finally, there is the issue of whether to give out multiple licenses that are based on the activities of a single vessels, i.e., the case where none of the sets overlap and licenses would be issued to individuals in each set for a particular vessel.

To give the Council a range of choices (and precedence) regarding license recipients and whether they would receive one or multiple licenses, the analysis will examine four alternatives:

1. Allocate only to current owners of qualifying vessels.

2. Allocate first to current owners, then to qualifying vessel owners at the time of landing, and then to permit holders, but no more than one license per recipient for the same vessel.

3. Allocate first to current owners, then to permit holders, and then to qualifying landing owners, but no more than one license per recipient for the same vessel.

4. Allocate to all current owners of qualifying vessels, to all qualifying owners at the time of landing even if they have received licenses as current owners; and to all qualifying permit holders even if they received licenses as current or landings owners. Recipients may receive more than one license for the same vessel.

Below, the four options are shown in the "analysis" format with their numbering scheme. Under options 20,000 and 30,000 the Council may choose to exclude the third group, and under option 40,000 the Council could choose from among the three, alone or in combination.

License Recipients

Allocate only to current owners 10,000
Allocate to current owners, then owners at the time of landing, then permit holders (no duplication/vessel) 20,000
Allocate to current owners, then permit holders, then owners at the time of landing (no duplication/vessel) 30,000
Allocate to all current owners, owners at the time of landing, and all permit holders (no duplication/vessel) ... 40,000

It is assumed that licenses issued to these different groups will entitle the recipients to identical privileges. Further, licenses are assumed to be freely transferable across groups. Issuing licenses to these different groups may be viewed as a potentially effective way of developing a market driven method to reduce fleet size if the Council develops a "fractional" license scheme. This was discussed in Section 3.2.1.3.1 on potential "buy-back" plans and is discussed again below.

Assessment of Options

Choosing who to issue the license to, current owners, qualifying owners, and/or permit holders will set the number of licenses to start the program and will influence how fleet capacity expands over time after the program commences. As noted earlier, we think the major impacts of choice of recipient will be on initial fleet size, expansion of capacity, and complexity of the program. The choice recipient alone will not have much effect on mobility or enforcement.

	Initial Fleet Size	Potential Increased Capacity	Mobility	Complexity	Enforcement
License Recipients (10,000-40,000)	Major	Major	Neutral	Major	Neutral

These aspects are discussed more fully below, and the qualitative analysis is summarized at the end by assigning a relative score for each alternative.

Allocations to Current Owners vs Owners at Time of Landing. The Council awarded QS to owners of vessels at the time of landing in the sablefish and halibut IFQ program. An alternative being considered for the license program would issue licenses only to current vessel owners.[1] Qualifying calculations would be based on all landings made by that particular vessel during the qualifying years regardless of the vessel owner at the time of landing. Using current vessel owners would make the analysis and implementation much easier

[1]Issuing licenses to current vessel owners can be viewed as nearly synonymous to issuing licenses to vessels.

because staff would not be faced with the task of matching catch records to ownership record. Additionally, issuing licenses to current vessel owners would eliminate the process of applicants having to document vessel ownership in the past. This is anticipated to be a time consuming and costly effort for the sablefish and halibut IFQ program. Finally, many in industry have noted that some recent sales of vessels presume that some form of limited entry based on catch history will be forthcoming. Therefore, clauses are being inserted into sales contracts retaining all catch rights with the seller.

Vessel Catch Data. Most catch data identifies the harvesting vessel.[2] Calculating the landings of a vessel usually is easy, though sometimes vessel identifiers may be mis-keyed and catch will be attributed to the wrong vessel. Vessel owner information is in different files and can be matched to catch vessels using a common vessel identification number. Problems occur more with data accuracy than ability to merge the data.

Ownership Information. Title tracking systems, such as for automobiles and real estate, do not exist for vessels. Recently, the State of Alaska and NMFS have required fishing vessels to be registered or permitted. Both documents ask for ownership but neither require proof of ownership. Therefore, the information is not completely reliable. Additionally, all vessels over 5 net tons are required by the U.S. Coast Guard to be documented. This documentation includes the owner of the vessel, and the U.S. Coast Guard does not recognize a person as a vessel owner until the documentation has been changed. The Coast Guard believes that, given adequate time and money, it can construct a record of vessel ownership for most vessels over time. Though this work is not in progress, its importance is being recognized.

Confidentiality Restrictions. Current Federal and State of Alaska law prohibits the release of "confidential" data to persons other than those who actually submitted the data. Since 1978, catch data have been reported in three basic forms: ADF&G fish tickets, NMFS weekly processor reports, and observer reports of joint venture harvesting activities. The State of Alaska officially recognizes the Commercial Fisheries Entry Commission (CFEC) permit holder specified on the fish-ticket as the submitter of those data. NMFS has recognized the vessel owner as listed in the Federal Fishing Permit as the submitter of weekly processor reports and joint venture records.

The State of Alaska Attorney General has found that releasing ADF&G fish-ticket information to the vessel owners at the time of landing (without a signed waiver of the permit holder) would be a violation of confidentiality laws. If the vessel owner at the time of landing cannot have access, then it is unlikely that an entirely unrelated person (if the vessel has been subsequently sold) would be given access to that information. Under a license program, confidential information may not have to be released to verify landings, though this issue remains unresolved. There have been requests because of the sablefish and halibut IFQ program and the Moratorium to revisit State confidentiality regulations. Attorneys for NOAA and NMFS are currently debating this issue for weekly processor and joint venture reports. Data have been released in the past to vessel owners at the time of landing and, therefore, they may have legal access to catch records. It is much less likely that current owners would gain access to confidential data while the vessel was owned by another person. Clearly, it would be easiest, in terms of the administration of the application and allocation process, to issue quotas to the officially recognized submitter of the data, i.e., the permit holders.

Transferring Catch Histories. If contracts transferring catch histories to current vessel owners exist, and the contracts are found to be valid, courts of law may issue orders compelling previous owners and/or permit holders to release that data to the current owner or to transfer quota once allocated. If the contracts are valid, then it may also be presumed that documentation of vessel ownership for the period existed, partially mitigating problems with allocating quotas to other than current vessel owners.

[2]The exceptions to this are found in vessels delivering to at-sea processors whether delivering to domestic or foreign processors.

Who owns the catch history? Most of the industry recommendations to the Council have advocated allocation to current vessel owners. The rationale for this recommendation seems to rest, at least partially, in the premise that current vessel owners are the ones with the investment and stake in the fisheries 'today', and that they are dependent on the fisheries in that they require landings of fish to maintain the operations they have established by virtue of that vessel ownership. This premise certainly makes sense on the surface. Further support for this alternative lies in the fact that the application, appeals, and allocation of licenses will be much simpler and straightforward under this alternative. Records of catch are tied to vessels more directly than to vessel owners; records of vessel ownership through time are much more difficult to reconstruct as previously noted in this paper. Allocations based on catch history of a given vessel will go to 'one entity' rather than several, and the qualified entity will be much easier to ascertain. This logic ignores, for the moment, potential confidentiality problems.

Allocating to current owners presumes that fish landings are associated more with a vessel than a vessel owner; previous owners of a given vessel are excluded from allocations based on that vessel's historical performance. This presumption is consistent with the fishing privileges which were created under the Council's moratorium; i.e., rights to continue fishing are vessel specific and depend on the past performance of that vessel. Fundamental differences, however, are that the moratorium rights would have remained with a vessel (not vessel owner) unless otherwise specified in legal contract.

It can be argued that the default assumption should be the opposite. Based upon the Council's sablefish/halibut program, licenses should be allocated to vessel owners at the time of landing, not necessarily to current vessel owners. That program implied that catch history is tied to the vessel owner, not to the vessel itself. In fact, in instances where vessels have been traded, the catch history credit will remain with the vessel owner unless specified differently under private, legal contract. It is likely that some groundfish and crab vessel transactions have been conducted based on that assumption.

The precedence in the sablefish/halibut program, does not preclude the Council from structuring a different allocation mechanism for groundfish and crab licenses. These are very different fisheries subject to a very different range of considerations. In making this decision, the Council should consider additional factors and be cognizant of the impacts to affected persons of either alternative.

Allocating to current vessel owners - Who wins and who loses? If licenses are allocated to only current vessel owners, and those owners receive the entire catch history of the vessel upon which to base their licenses and eventually QS if they are implemented, then those vessel owners are obviously the 'winners' in the context of a win/lose scenario. To the extent that the landings owner is no longer in the fishery, it could be argued that he neither wins nor loses, but perhaps forgoes a windfall profit. However, not all landings owners have exited the fishery. The most obvious example of a 'loser' under this alternative is someone who has a long catch history with a given vessel, has recently sold that vessel, and continued fishing with a new vessel. In this example, the person with a long history in the fishery will lose that catch history and perhaps not receive certain licenses, and eventually may lose QS if an IFQ program is implemented. The person acquiring the vessel with the long catch history may be a new participant in the fisheries, which means that a person with little historical participation comes out a 'winner', while a person with a long history of participation may come out a 'loser' in the allocation process.

The Magnuson Act requires Councils to take into account historical participation when considering limited entry programs. It also mandates consideration of current participation and dependence on the fisheries. This issue creates somewhat of a dilemma in reconciling these mandates. It needs to be pointed out that the example above is very simplistic and does not take into account other possible nuances. For example, the person that sold the vessel (and its catch history under this alternative) may not necessarily end up a loser, if that person happened to acquire a 'new' vessel which had its own catch history, particularly if that catch history was greater than the owner's previous vessel. Under that scenario, he comes out a 'winner' under this alternative. The possibilities are further complicated by the fact that some vessel transactions in recent years have involved explicit transfers (or explicit retention) of catch history by one party or another.

In order to quantify the number of affected persons, either adversely or positively affected, it would be necessary to (1) track the ownership of all vessels through time with catch associated to various owners, (2) have knowledge of the specifics of all contracts which either transfer or retain specific catch histories as part of the vessel transaction, (3) ascertain whether a given owner is still involved in the fisheries or not, and (4) make comparisons of each potential qualified recipient to what they would receive under the other alternative, (allocation based on ownership at time of landings). This information is unavailable at this point, and it is likely that some of this information will never be available to analysts on this project. It is therefore impossible to estimate impacts in the context of whether someone is still in the fisheries or not, after having sold a vessel.

Allocating to landings owners - Who wins and who loses? Another alternative is to allocate to the person who owned the vessel at the time qualifying groundfish (crab) landings were made. In terms of winners and losers, a person will be unaffected if he/she has been the only owner throughout the qualification history of the vessel. In cases where vessel owners have exited the fishery, but still fit in the qualification window, licenses will be awarded to persons who are no longer active in the fishery. These persons would certainly be categorized as winners in the sense of windfall profits if they chose to sell the licenses.

Enforcement Considerations--Are vessels or persons licensed? The NMFS enforcement office has voiced concerns over whether persons or vessels will be licensed. In their view, licensing persons creates a much more difficult enforcement situation, and potentially allows more vessels to engage in fishing activity. Consider the following example, whereby a person is licensed for groundfish on a 60'-124' vessel. Under the status quo there is a certain amount of down time for every vessel, especially among shore based vessels. It is feasible that persons holding licenses will be able to change vessels once the landing is made, go back out, fish and make another landing, and switch back to the original vessel. This will essentially allow two vessels to fish under one license. If licenses have a value on the market, persons with more than one qualifying vessel may choose to sell one of their licenses and use the remaining license on both vessels. This is really a form of the "capital stuffing" issue that looms on the horizon of any license limitation program.

This particular problem could be handled by issuing the licenses to persons with an endorsement which states that it can only be used on a given vessel. In order to change vessels, the license holder would have to go through the normal transfer procedures, and would be required to await an official recognition of the transfer before changing vessels. For licenses issued to permit holders or to owners of vessels at the time of landing, the application process would most likely require them to specify the name of the vessel on which the license would be fished. If the license holder does not have a vessel in mind, the license will be issued but it will not be valid until it was officially linked to a vessel in a NMFS-approved action.

Qualitative Discussion of Specific Options Included in the Analysis.

Allocate Only to Current Owners (Option 10,000). Under this option, a license for each qualifying vessel will be issued to its current owner. The number of licenses issued to current owners of qualifying vessels will equal the number of qualifying vessels. Therefore, this alternative will be the most effective in limiting fleet size over each of the qualifying periods. It should be noted that the current owner of a fishing vessel which qualified in the past, may not currently be involved in fishing. If, for example, an investor purchases a large fishing vessel and converts it into a pleasure cruiser, and the vessel qualifies, the current owner will receive a fishing license, and if the license has value, the license recipient will receive a windfall. Similarly, current vessel owners may be banks or other non-fishing institutions which have repossessed a vessel in default.

The application and allocation process for issuing licenses to current vessel owners only, will be the easiest of the four alternatives because current records are more easily obtained than past records. Since fewer licenses will be issued in this alternative, monitoring and enforcement also will be the least costly. This option has little impact on enforcement issues.

Allocate to Current Owners, Then Owners at the Time of Landing, and Then Permit Holders (No Duplication) (Option 20,000). Under this alternative, licenses would be issued to the current owners of qualifying vessels. This option then would allocate licenses to vessel owners who did not receive licenses as current vessel owners, but who owned a qualifying vessel during the qualifying period. A landings owner will receive no more than one license (or one suite of endorsements if they are issued), regardless of the number of vessels owned during the qualifying period,[3] This is because it is presumed that landings owners are included as an option because they may not receive licenses as a current owner of a vessel. Under this option, the Council could also choose to allocate licenses to any permit holders who would not have received licenses as current or landings owners. In order to qualify, all landings recorded in the permit holder's name during the qualifying period, regardless of the vessel or vessels on which the landing was made, will be added together. If the landings meet the qualification criteria then the permit holder will be issued a single license (or suite of endorsements if issued), regardless of the number of vessels used during the qualifying period. In the Groundfish Tables Appendix, the tables concerning Option ~~20000,~~ show the total licenses issued if they are allocated to current owners and landings owners without duplication as option A. The total resulting from adding in permit holders who are neither current owners or landings owners is shown as option B.

Questions of who should be the "rightful" recipient aside, it is clear that allocating to both the current owners and to landings owners will increase the number of licenses issued and, therefore, make it less likely that the license program will constrain the size of the fleet. Adding permit holders will further increase the number of licenses. On the other hand, an allocation to owners at the time of landing (or permit holders) can be viewed as a way to acknowledge the stake these persons may have in the fishery.[4]

The convoluted nature of ownership patterns in the fishery is less of an issue under license allocations than under an allocation of IFQs. This is because the question is not how much was landed but rather was a landing made. Therefore implementation problems under this alternative will not be intractable though they are expected to be significantly greater than under an allocation to current owners only. If it is assumed that licenses result in the same privileges regardless of the recipient, then monitoring and enforcement will be affected only by the number of additional license recipients. This assumption of equal privileges for all three types need not be the case, however. It would be possible to use this element to create a fractional license program as is discussed below.

Fractional Licenses as a Market Driven Method to Reduce the Fleet. Many license limitation programs are initiated with the idea that the fleet can be reduced via a buy-back program. Whether industry or the government pays for the buy-back program, few, if any, successful programs have been established. An alternative to the buy-back programs is the concept of fractional or stackable licenses. The Pacific Fishery Management Council under Amendment 6 to their groundfish program has instituted a stackable program whereby a large vessel which did not receive licenses in the initial allocation may purchase a given number of small vessel licenses and obtain a license enabling it to enter the fishery. The same concept may be used with respect to current vessel owners, vessel owners at the time of landing, and permit holders.

Assume that the license program issued licenses under a three-year qualifying window to current owners, landings owners, and permit holders. Under this scenario, unless every qualifying vessel fished in the current year, there would be more licenses issued to current vessel owners than currently fish. Additionally, since owners at the time of landing, and permit holders also receive licenses there will most certainly be more

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[3]If a current owner qualifies for pollock in the Central Gulf, and had qualifying landings for pollock in the Bering Sea and Aleutian Islands as well as the Central Gulf as a landings owner, then under option 20,000, three endorsements would be issued. Under option 40,000, four endorsements would be issued, one for activities as a current owner and three for activities as a landings owner.

[4]This option (as well as option 30,000, and 40,000) could be viewed as a starting point for a fractional license program.

licenses available than the current number of vessels. Because the license program does not constrain the current fleet, its effectiveness will be limited.

Now suppose that each current vessel owner was issued a certificate worth 10 license points, each owner at the time of landing was issued a certificate worth 6 points, and each permit holder was issued a certificate worth 3 points. If there was a regulation requiring that at least 15 points are needed in order to use the license on a vessel, then a market for license points would be created, and the number of effective licenses would decrease. If further reductions in the number of licenses were desired, the Council could stipulate that 20 points might be required. If the Council wished to implement an orderly fleet reduction process, they could stipulate a point schedule over a period of years. Suppose the Council wished to cut in half the number of vessels allowed to fish over a six-year period. Also, assume the point system above resulted in an allocation of 20,000 points. If, in the first year, 10 points were required to fish then conceivably 2,000 vessels would be allowed to participate. If, over the next five years, 12 points, 14 points, 16 points, 18 points, and finally 20 points were required to fish, then the fleet could be reduced to a maximum of 1,000 vessels.

Unless there was a perfect market for points it would be very unlikely that the license point buyers and sellers would be able to match up. To facilitate the development of the market, a sophisticated transfer monitoring system would have to be implemented. However, it is likely that this could be funded by a transfer fee. Further, it might be advisable to allow single points to be traded. For example, a permit holder might sell one point to one person and two points to another.

Allocate to Current Owners, Then Permit Holders, and Then Owners at the Time of Landing (No Duplication) (Option 30,000). Under this alternative, licenses would be issued to the current owners of qualifying vessels. This option would also allocate licenses to permit holders who would not receive licenses as current vessel owners. In order to qualify, all landings recorded in the permit holder's name during the qualifying period, regardless of the vessel or vessels on which the landing was made, will be added together. If the landings meet the qualification criteria then the permit holder will be issued a single license regardless of the number of vessels used during the qualifying period. Under this option, the Council could also choose to allocate licenses to qualifying landings owners if they have not received licenses as current owners of qualifying vessels or as permit holders. This option differs from the previous option in the order of precedence. This option explicitly allows the Council to allocate licenses to qualifying permit holders, without the necessity of first allocating to "past" vessel owners.[5] In the Groundfish Tables Appendix, the tables concerning Option 30000, show the total licenses issued if they are allocated to current owners and permit holders without duplication as option A. The total resulting from adding in landings owners who are neither current owners or landings owners is shown as option B.

Two types of permit holders exist in the groundfish fisheries: Commercial Fishing Entry Commission (CFEC) permit holders, and Federal Groundfish Permit holders. Federal Groundfish Permits are required by the NMFS for vessels operating in the groundfish fisheries in the EEZ off Alaska. However, unlike CFEC permits, the vessel owner is the permit holder. Issuing licenses to Federal Groundfish Permit holders is therefore the equivalent of issuing licenses to vessel owners at the time of the landing. Therefore, it is assumed that by "permit holders" the Council meant CFEC permit holders, rather than Federal Groundfish Permit holders.

The CFEC issues permits to all fishing vessel skippers participating in fisheries off the Coast of Alaska. For vessels making deliveries to shore based processing facilities, the permit holder is required to present a current permit card. The permit number is entered on the fish-ticket and the landing becomes official. The permit holder is considered the "submitter" of the fish-ticket data, and therefore the only person, outside of governmental agencies, who is allowed access to the "confidential data" on the record. In most cases, the

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[5]This option also yields different results than option 20,000 if the Council were to choose to develop a fractional licensing program. In that case it is presumed that different points would be awarded to licenses if they were allocated as "past" owners or as permit holders, and therefore the order of the allocation process becomes a factor.

permit holder is the skipper of the vessel, but any person on board with a valid permit may make the landing under their name. Since 1990, vessels making deliveries to motherships outside state waters have not been required to submit fish tickets, although in most cases the skipper of the vessel will hold a valid CFEC permit. Offshore deliveries are monitored by observers and by the Weekly Processing Reports submitted, not by the delivery vessel but by the processors. Therefore few, if any, offshore deliveries will qualify a permit holder for a license. The same holds true for skippers and other CFEC permit holders on catcher/processors. Since these vessels are not required to submit fish tickets few CFEC permit holders will qualify from the catcher processor fleet. Therefore, an allocation to permit holders may be viewed as an unequitable allocation particularly by skippers of vessels operating offshore, who, although they participated in the fisheries and most likely had CFEC permits, were not required to submit catch data under their name.

Allocate to All Current Owners, All Owners at the Time of Landing, And/Or All Permit Holders (Duplication Allowed) (Option 40,000). Under this alternative, licenses-would be allocated to current owners for each qualified vessel. Additionally, this option would allow the Council to allocate additional licenses to all landings owners. In this case most current owners would be both current owners and owners at the time of landings, and therefore could receive additional licenses. This option could also be used to allocate licenses to permit holders. Any qualifying permit holder would receive a license regardless of whether that person would also receive a license as a current or landings owner. All current and landings owners who were also permit holders could qualify for additional licenses. In the Groundfish Tables Appendix, the tables concerning Option 40000, the license totals for three sub-options are shown. Option A shows the sum Current and Landings Owners. Option B show the total licenses issued if they are allocated to both current owners and permit holders. Finally, Option C sum all current owners, landings owners and permit holders.

This option would issue licenses to each owner or permit holder during the qualifying period. Obviously, the number of licenses recipients is greatest under this alternative. This alternative will impact the initial allocation of licenses as well as the monitoring and enforcement because of the sheer numbers of recipients. However, since almost every owner or skipper, past or present, could receive a license there will be less contention in the allocation process and perhaps fewer appeals and court battles. This option could be seen as an equitable measure of participation if fractional licenses were to be created.

The three figures below depict the different options under the "License Recipients" using a hypothetical distribution of vessels, owners, and permit holders, and a simple umbrella license program. Figure 3.10a shows this hypothetical distribution. In this example "landings owner" refers to the owners at the time landings were made. Only included are those vessels, owners and permit holders who would qualify for a license under the hypothetical system. The number of current owners is less than the number of vessels, some owners are assumed to own more than one vessel. Figure 3.10b shows the number of licenses allocated under each of the options.

Figure 3.10c shows the number of different persons who would receive licenses. Comparing this figure to the previous, the reader can see the impact of individuals who receive multiple licenses. The number of vessels and the number of current owners that receive licenses remains the same under each option. This is because under each option, the allocation to current owners of qualifying vessels is included. The important features to glean from these figures are the number of additional licenses that are created under the various options, and who would receive them.

FIGURE 3.10A

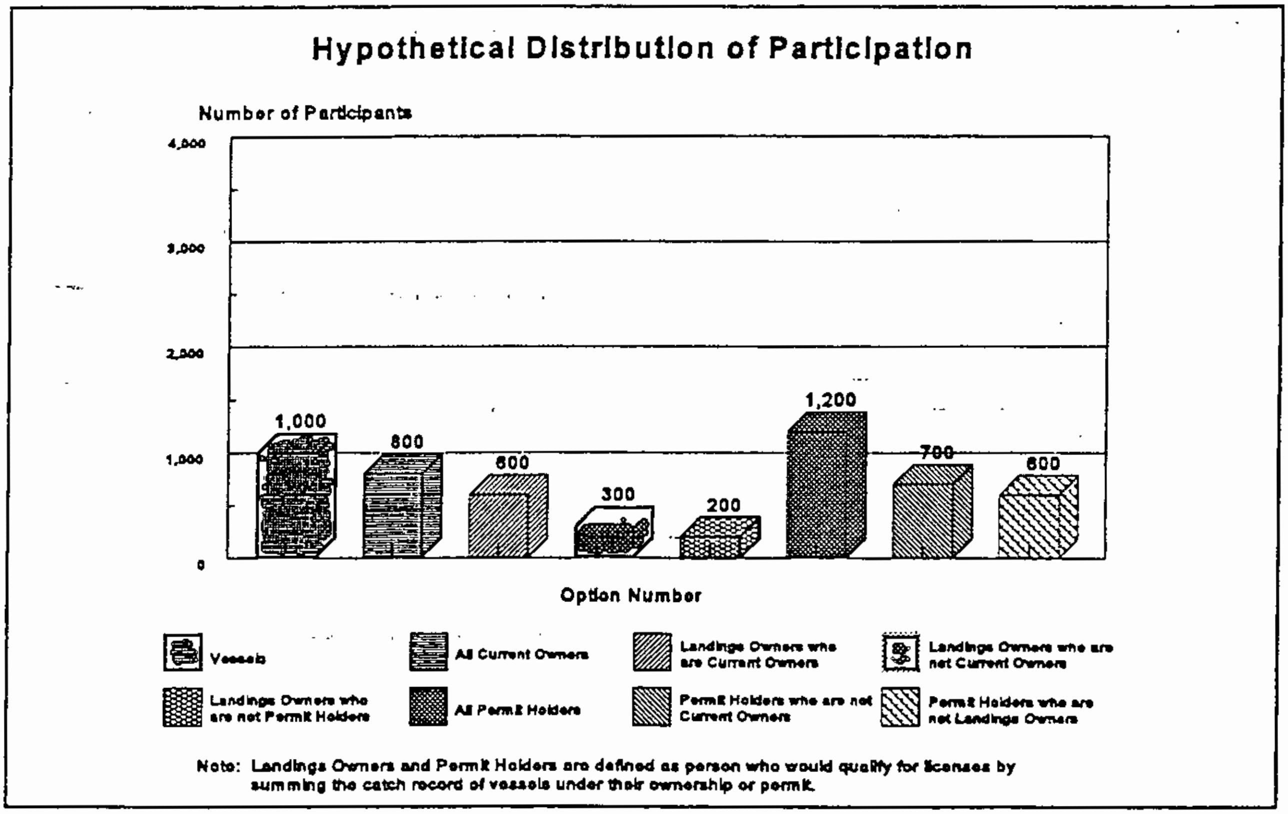


FIGURE 3.10B

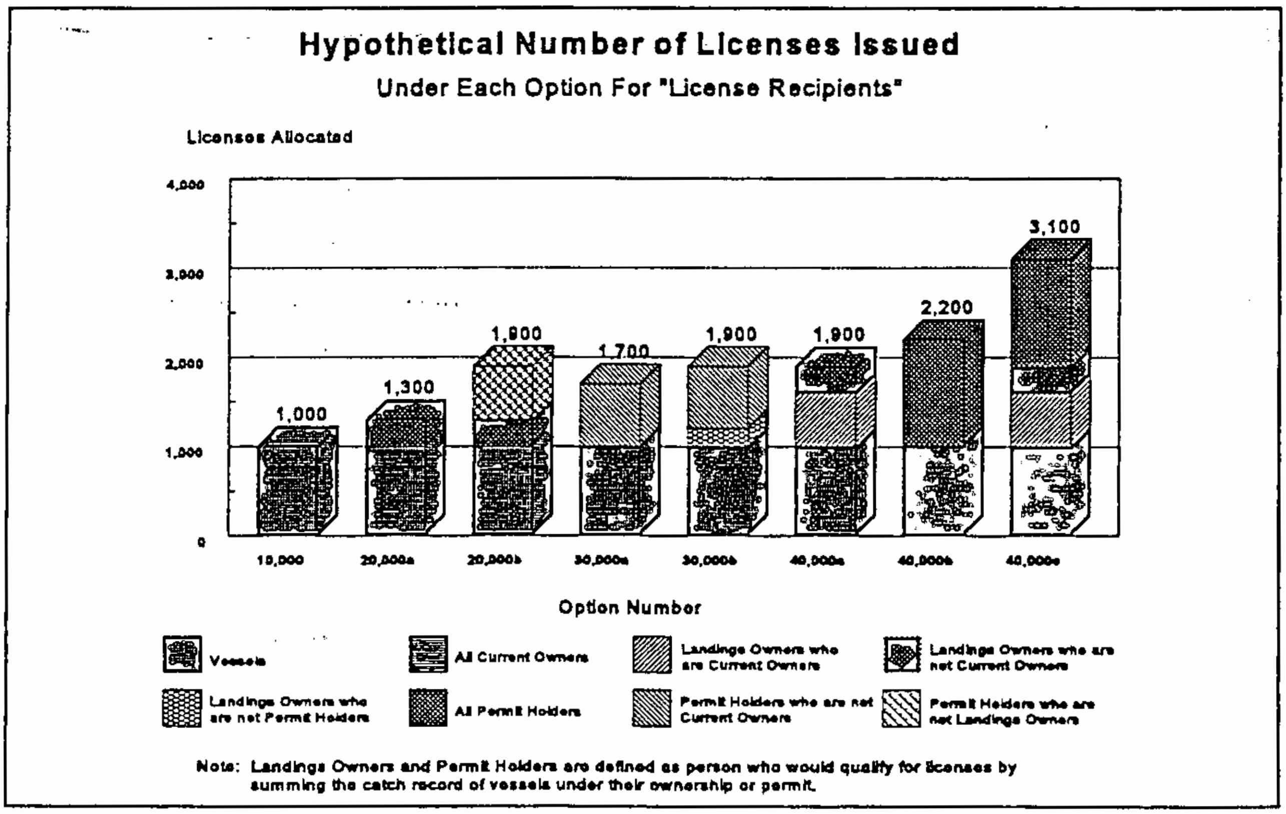
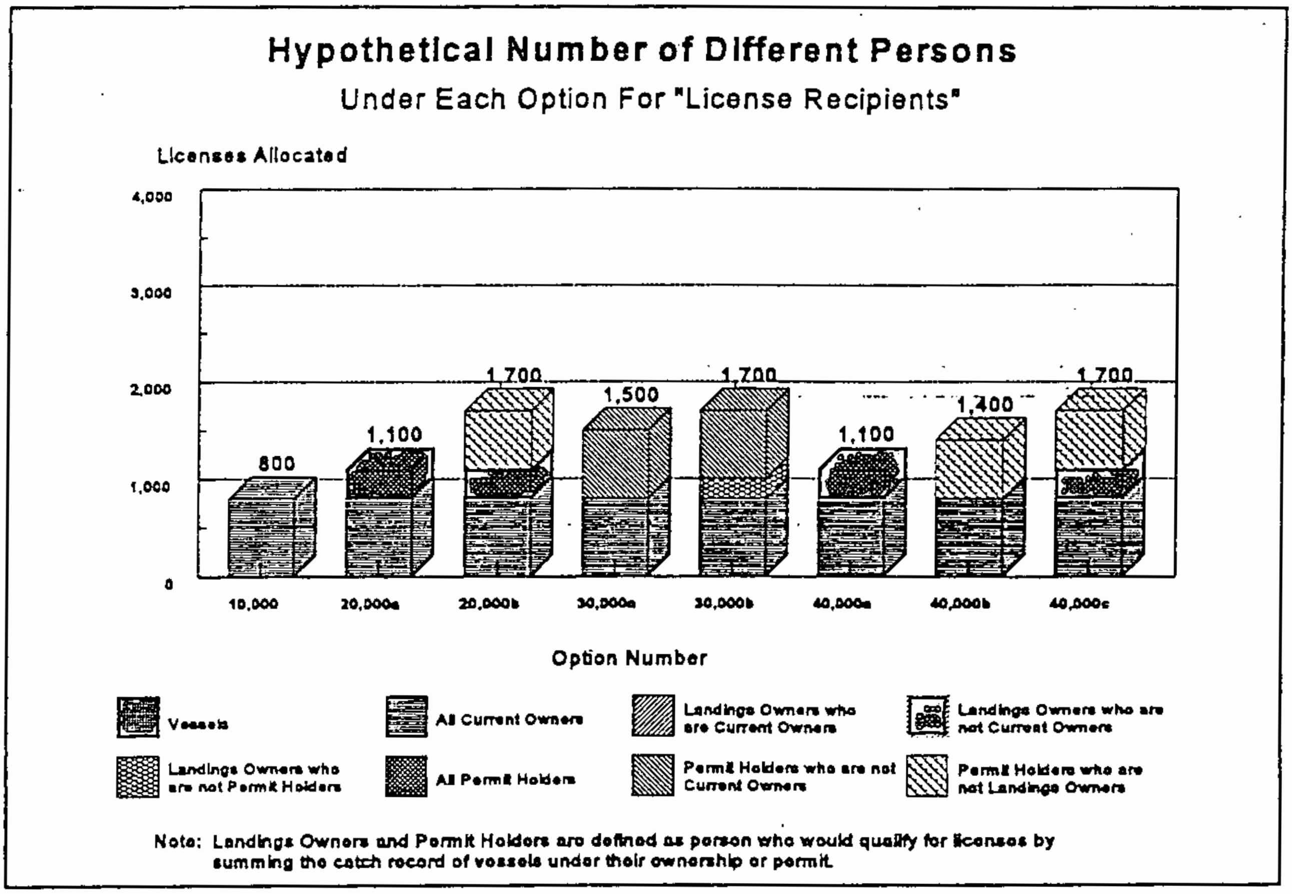


FIGURE 3.10c



Conclusions Regarding License Recipients.

Issuing licenses to current owners only will yield the smallest initial fleet of the four alternatives for this component, and produce the most effective license program in terms of addressing overcapitalization. Issuing licenses to additional permit holders and/or owners at time of landings will increase the pool of licenses and degrade the effectiveness of the license program. Any licenses that were not strictly attached to a particular vessel could be applied to a new vessel, thus allowing for significant expansion of the fleet.

Allocation to permit holders is also complicated by the fact that since 1990, catcher processors have not been required to submit fish-tickets, which is the best source for permit holder data. If the Council desires to issue some form of license to other than current owners, and also desires to constrain fleet size, then consideration should be given to a fractional license scheme and also identifying licenses very closely with individual vessels.

The Tables Appendix contains tables describing the license recipient options. These allow us to estimate how the license pool, and presumably the fleet could expand if more than just current owners are issued licenses. Table 3.22 below draws on the Universal reference configuration to show trends seen under all three configurations. Table 3.22 summarizes the total numbers of licenses that would be issued under the four options, by region, vessel size class, and catcher or processor designation. The total number of current owners is 2,954, of which 2,185 are from Alaska and 769 are from other areas. Issuing licenses to unique landings owners as in 20000 (option A) increases the total number of licenses by 15% to 3,385. Issuing licenses to unique permit holders and landings owners increases the license pool to 4684 licenses for option 20000 and 4436 for option 30000. This is a 59% gain in the number of licenses. Issuing licenses to all three groups and allowing duplication as shown in 40000 option C, the pool of licenses jumps to just over 9000 because, a current owner might receive one license for being current owner, another for having past landings, and a third for being a permit holder.

Table 3.22

A Comparison of Licenses Issued to Recipients Under the Universal Core Based on, June 28, 1989 - June 27, 1992, Catch History.

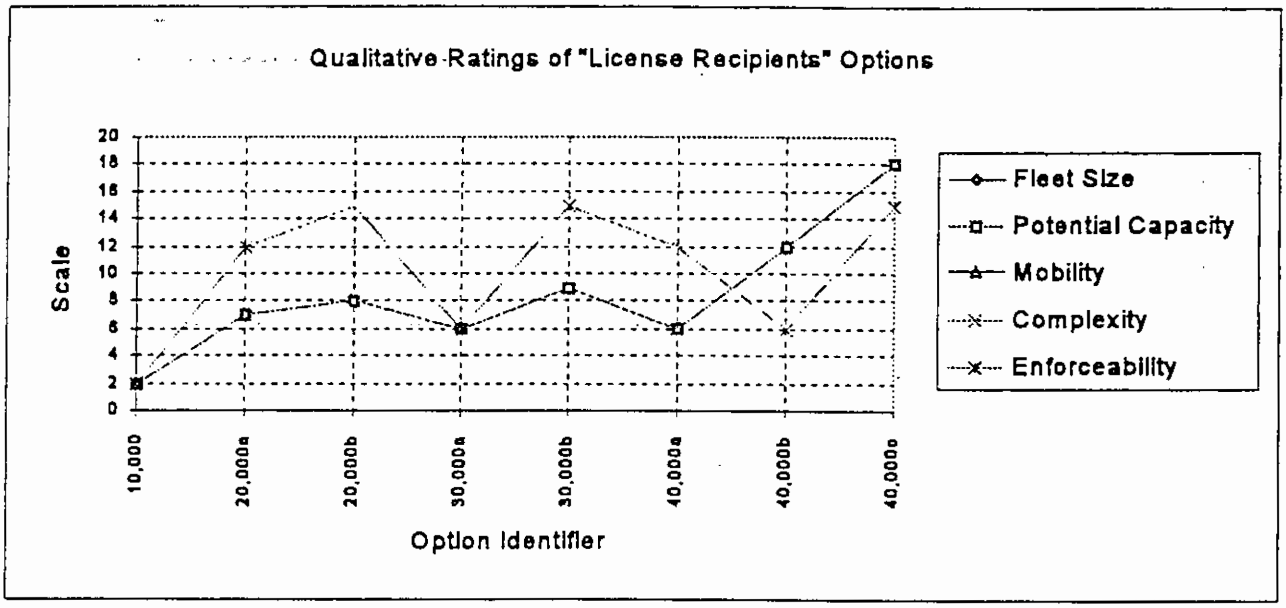
	Current Owner's State of Residence																	
	Alaska						Non-Alaska						Total					
	CV						CV						CV					
	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total
10000																		
Licenses (a)	1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954
20000 (option A)																		
Licenses (b)	2,176	186	8	2,370	92	2,462	452	268	50	770	153	923	2,628	454	58	3,140	245	3,385
Percent Increase (b/a)-1	12%	17%	33%	13%	15%	13%	13%	24%	11%	16%	43%	20%	12%	21%	14%	13%	31%	15%
Change in Licenses (b-a)	236	27	2	265	12	277	51	52	5	108	46	154	287	79	7	373	58	431
20000 (option C) and 30000 (option C)																		
Licenses (c)	2,616	387	19	3,022	149	3,171	552	483	103	1,138	375	1,513	3,168	870	122	4,160	524	4,684
Percent Increase (c/a)-1	35%	143%	217%	44%	86%	45%	38%	124%	129%	72%	250%	97%	35%	132%	139%	50%	180%	59%
Change in Licenses (c-a)	676	228	13	917	69	986	151	267	58	476	268	744	827	495	71	1,393	337	1,730
30000 (option A)																		
Licenses (d)	2,519	370	18	2,907	141	3,048	515	441	98	1,054	334	1,388	3,034	811	116	3,961	475	4,436
Percent Increase (d/a)-1	30%	133%	200%	38%	76%	39%	28%	104%	118%	59%	212%	80%	30%	116%	127%	43%	154%	50%
Change in Licenses (d-a)	579	211	12	802	61	863	114	225	53	392	227	619	693	436	65	1,194	288	1,482
40000 (option C)																		
Licenses (e)	5,733	637	30	6,400	280	6,680	1,022	699	142	1,863	470	2,333	6,755	1,336	172	8,263	750	9,013
Percent Increase (e/a)-1	196%	301%	400%	204%	250%	206%	155%	224%	216%	181%	339%	203%	189%	256%	237%	199%	301%	205%
Change in Licenses (e-a)	3,793	478	24	4,295	200	4,495	621	483	97	1,201	363	1,564	4,414	961	121	5,496	563	6,059

All classes of vessels show increased license numbers moving from option 10,000 to 40,000, though some have a more pronounced increase than others. For example, the Alaska fleet increases from 2185 licenses under option 10,000 to 6680 for the most magnanimous option 40,000. The gain of 4495 licenses is distributed as a gain of 200 catcher processors, 3800 small catcher vessels less than 60 ft, and lesser gains in other categories. For non-Alaska licenses, 1564 are gained including 363 catcher processors.

The prominent conclusion is that any choice other than limiting license distribution solely to current vessel owners will rapidly and significantly degrade the effectiveness of the license program to address the overcapacity problem. In addition, the complexity of the program will increase significantly both in implementation and administration if significantly more records have to be matched and more licenses and transfers have to be tracked.

The relative rankings of the options are shown in the table and chart below.

Option #	Fleet Size	Potential Capacity	Mobility	Complexity	Enforceability
10,000	2	2	Neutral	2	Neutral
20,000a	7	7	Neutral	12	Neutral
20,000b	8	8	Neutral	15	Neutral
30,000a	6	6	Neutral	6	Neutral
30,000b	9	9	Neutral	15	Neutral
40,000a	6	6	Neutral	12	Neutral
40,000b	12	12	Neutral	6	Neutral
40,000c	18	18	Neutral	15	Neutral



3.2.2.3 License Designations

In January 1994, the Council identified three types of use restrictions, other than those dictated by the nature of the licenses, which could be placed on the licenses as designations. These included: (1) designation of licenses for use on catcher vessels (CV) and catcher/processors (CP), (2) designation of licenses for use on vessels of a given length class, and (3) designation of licenses for use on inshore or offshore delivery vessels. Upon reviewing the record and interpreting the Council's intent, any combination of these appears to be within the scope of the Council's alternatives. Therefore, this analysis examines the eight different combinations of use restrictions which result from the Councils alternatives:

No Restrictions 1,000
Catcher Vessel and Catcher/Processor Designations 2,000
Vessel Length Class Designations 3,000
Inshore and Offshore Designations 4,000
CV - CP and Vessel Length Class Designations 5,000
CV - CP and Inshore-Offshore Designations 6,000
Inshore-Offshore and Vessel Length Class Designations 7,000
CV - CP, Inshore-Offshore, and Vessel Length Class Designations 8,000

Under the current management regime, there are no restrictions on the lengths of vessels, processing capabilities, nor on delivery mode, except those instituted under Inshore-Offshore for Pacific cod in the Gulf and pollock in both FMPs. The Council's action on inshore-offshore included a sunset date of December 31, 1995. Further, the Council indicated that action under the CRP would replace the inshore-offshore allocation. Therefore for purposes of analysis, it is assumed that under the license program no restriction on delivery of pollock or Pacific cod to inshore or to offshore facilities will exist.

Assessment of Options

The eight options under license designations will not affect the initial fleet size, per se, but will have far reaching ramifications on the uses of the licenses, i.e., the mobility of the fleet, and the potential to increase capacity. A variety of designations and use restrictions will have some impact on complexity of implementation and administration of the program, and enforcement could be more time consuming and complicated if a plethora of use restrictions are imposed. The discussion that follows leads to the conclusion that license designations will have major impacts on the potential for increased capacity and fleet mobility, more minor impacts on complexity and enforcement, and for the most part is neutral in determining the initial fleet size.

	Initial Fleet Size	Potential Increased Capacity	Mobility	Complexity	Enforcement
Licenses Designations (1,000-8,000)	Neutral	Major	Major	Minor	Minor

No Restrictions (Option 1,000). Under this alternative, there would be no restrictions on the use of licenses other than those dictated by the nature of the licenses, (fishery, area, etc). Any license could be used to fish on any vessel regardless of length, processing capabilities, or the location of the delivery. It is at least theoretically possible, though highly unlikely, that every licensed vessel could be replaced by a vessel of much greater length and processing capacity. As noted earlier, under the current over-capitalized fishery, there appears to be few incentives to pour additional capital into the fishery. Unless the license program constrains the fleet to a size smaller than would be expected under the status quo, a license program without restrictions would not be likely to bring about a rush of new investment into the fishing fleet. If the license program constrains the fleet, then the lack of restrictions will allow vessels to more easily engage in "capital stuffing," by lengthening vessels, adding processing capacity, or even by employing spotter planes and search vessels.

Catcher Vessels - Catcher/Processor Designations (Option 2,000). Under this alternative, licenses would be issued with designations of either catcher vessel (CV) or catcher processor (CP). A single designation per vessel would be based on the vessel's activity during the qualifying years on hierarchical criteria. If the vessel operated as a CP during the qualifying period, then it would be designated a CP. This will hold even if it also acted as a delivery vessel at some point during the period. We have assumed for purposes of analysis, that if a vessel acted as a CP in any area or in any fishery during the qualifying period, then the CP designation will hold for all areas and fisheries. In other words, a vessel will receive a single designation which will hold for all fisheries and areas. A CP license will allow the licensee to operate the vessel either as a CP or as a CV delivering fish to other processors. If the vessel did not act as CP, then it would be designated as a CV. CV licenses would allow the holder to act only as a delivery vessel.

This alternative will put a cap on the number of CPs in the fleet. Catcher vessels would not be allowed to add processing equipment to their vessel and use it without first acquiring a license with a CP designation. If the license program constrains the size of the fleet, then it would be likely that this restriction would be an effective means to curtail one form of "capital stuffing."

Implementation effects of this restriction will most likely not cause much additional work. The definition of processing used by the NMFS is fairly well defined and, therefore, there should not be that many questions of whether a vessel acted as a CP or not. Enforcement and monitoring would be no more difficult than under the status quo, since CP must notify NMFS of their intentions. Implementation issues could be complicated if the Council chose to make designations based on the different areas and fisheries included under nature of the licenses. Enforcement would also be much more difficult if multiple designations on a given license were included. This caveat also holds for any of the other suggested restrictions.

Vessel Length Class Designations (Option 3,000). The Council specified three potential length designations for licenses; from 0' to 59', from 60' to 124', and from 125' and greater. A license with a size class designation would allow any vessel within that length class to operate. It should be emphasized that the Council specified that the vessel length designation was only to apply to catcher vessels, with catcher/processors designated as such. To give the Council flexibility to use the vessel length designation only, without creating a separate catcher/processor class, both catcher vessels and catcher/processors will be assigned length designations. Vessel length class designations will allow license recipients to increase the length of their vessel within that class or to transfer licenses to larger vessels within the class. Although a length class designation is more restrictive than nothing, it would not prevent length increases within classes.

If the license system constrains the fleet to a number of vessels that is less than would have otherwise participated under the status quo, then it can be expected that there will be incentives to increase the catching power of each licensed vessel; the "Catch 22" of license programs. One way to increase catching power is to lengthen the vessel, which allows greater deck space, greater hold space, and presumably would allow the use of larger or additional engines. All these will add to the catching, delivery, and processing capability of the fleet. Additional capital added to an already over-capitalized fleet will cause any gains in net benefits resulting from the imposition of a license limitation program to be dissipated. The vessel classes, as specified here, will do little to prevent many vessels from expansion and, therefore, are considered ineffective restrictions on the overall catching power of the fleet. In terms of implementation, enforcement, and monitoring, systems will have to be put into place which will deal with this restriction.

Inshore-Offshore Designations (Option 4,000). The Council asked that vessels be designated inshore or offshore according to the vessel's activity in 1993. Strictly speaking, the inshore-offshore allocation included only pollock and Pacific cod and, therefore, only vessels which made landings of pollock and/or Pacific cod would be designated. Additionally, any vessel which did not participate in the fishery in 1993 would not receive a designation. With these issues in mind, it was determined that the Council's intent could be met by designating all catcher/processors as "offshore,"[6] and designating catcher vessels either as inshore or offshore based on their activity in the most recent year of participation in any species. If a vessel made a delivery of any groundfish species to an offshore processor, then the vessel was designated as "offshore." It is assumed, for purposes of analysis, that any vessel, including any catcher/processor with an "offshore" designation will be allowed to deliver to processors operating on shore or inside State waters.

In effect, this method of assignment will create an upper limit on the number of vessels which may operate as offshore delivery vessels, while leaving fewer restrictions on the number of vessels which may deliver inshore. It is also assumed that the Council could, if it wished, change the assignment methodology. It is also conceivable that this restriction may provide an ultimate limit on the number of vessels which may operate as offshore mothership processors, since the number of offshore delivery vessels would be strictly limited. However, since catcher/processors would be designated as offshore, they could team with motherships and most likely provide enough raw product for both processing facilities.

An alternative method for assigning inshore-offshore designation would involve a much more complex algorithm which would make the assignment based on deliveries on a species by species basis. Under this methodology, it is conceivable that vessels may have both inshore and offshore designations for any particular species. This methodology would be very difficult to analyze and present and would if approved create a tremendous administrative burden. For these reasons, the simpler assignment method was used in this document.

Regardless of the assignment methodology, the designation does not guarantee that any amount of fish will be delivered to one sector or another. Therefore, the inshore-offshore use restriction cannot be viewed as an effective alternative to the inshore-offshore allocation, which is scheduled to sunset at the end of 1995. Also, catcher vessels which receive an offshore designation would not be prohibited from converting to catcher processors.

Implementation of this restriction, as analyzed, should not prove very difficult, assuming the definitions of the designation are clearly stated, and they are applied equally to all license recipients. If the assignment is defined such that some vessels do not receive designations, then a lengthy appeals and litigation process is possible. Enforcement of the inshore-offshore designations will be somewhat complex particularly if the vessel may have more than one designation.

CV - CP and Vessel Length Designations (Option 5,000). This alternative combines the vessel length designation and the catcher vessel-catcher/processor designations. This alternative was specifically defined at the Council's January meeting. Vessels designated as catcher vessels would also have length class restrictions. Vessels designated as catcher/processors would not be restricted by the length classes.[7] This alternative would prevent catcher vessels from converting into catcher processors or transferring licenses to them, and would also provide some of restriction in length increases catcher vessel less than 125' could undertake by reconstruction or transfer. Large vessels would be unrestricted in terms of length, as would catcher processors. Implementation, monitoring, and enforcement costs of this alternative will be greater than either of the two alone, but will not likely be significant overall.

CV - CP and Inshore - Offshore Designations (Option 6,000). This combination of alternatives will eliminate the possibility that catcher vessels designated as offshore convert to catcher processors or transfer their licenses to catcher processors. All other issues raised under the discussion of the Inshore-offshore designation and CV/CP designation will still apply.

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[6]Since it is assumed that the inshore-offshore allocation as currently exists will be superseded by any license program, the current definition which allows for "inshore catcher/processors" will no longer exist.

[7]Designating vessel length restrictions for catcher/processors could be considered within the scope of the analysis, since vessel length class designations were examined without a CV/CP split.

Inshore -Offshore and Vessel Length Class Designations (Option 7,000). This alternative will provide more restrictions on capacity increases than either of the two alone. It will not however prevent catcher vessels from converting or transferring license to catcher/processors. Administratively, this alternative will have the same problems as either of the two alone.

CV - CP, Inshore-Offshore, and Vessel Length Designations (Option 8,000). This alternative combines all three of the different designations. It is possible that it will provide some added restrictions against vessels delivering to offshore motherships, than the CV/CP/vessel length alternative. The difficulties in the determination of inshore and offshore categories and the costs involved in the process may not make it worth the trouble. This is especially true if the number of vessels which would have been granted offshore designations is much greater than are currently operating.

Conclusions Regarding License Designations.

Use restrictions do not establish initial fleet size, but they do act to confine the fleet from moving into and out of the different sectors and operating modes. For example, any vessel classified as a catcher vessel could act only as a delivery vessel, whereas catcher processors could act as that or as a catcher boat. This will limit the number of catcher processors, but not the number of catchers. Length restrictions will control somewhat the upward movement of the fleet to larger and larger vessels. This movement occurs in any fishery where larger capacity and more horsepower might gain a larger share of the harvest. The three length classifications may or may not be effective in controlling this. For example, as shown in the moratorium analysis, the catching power of a 124-foot trawler is an order of magnitude greater than a 61-foot longliner. Yet this kind of upgrade would be allowed even under the most restrictive of the use designations, unless the 20% upgrade limitation is adopted along with the length classification scheme.

There is additional discussion of the issue of vessel size and capacity upgrade in Section 3.2.2.7. The key point emphasized there is that overlaying limits on upgrade, such as the 20% moratorium rule, combined with vessel length license designations will restrict the pool of licenses available for purchase by owners of vessels of any given length, particularly larger vessels. If the Council chooses a very explicit license system with many different sub-area-fishery licenses, considerable constraints will be placed on owners of vessels when attempting to purchase a license that will allow them to operate with their vessel. For example, vessels less than 125 ft could purchase licenses originally issued to vessels no less than 83% of their length. Conversely, vessels at the top of their range, at 59 ft or 124 ft, could only purchase licenses of vessels of an equal or lessor length. The owner of the longest vessel receiving licenses in the initial allocation will be unable to purchase any additional licenses.

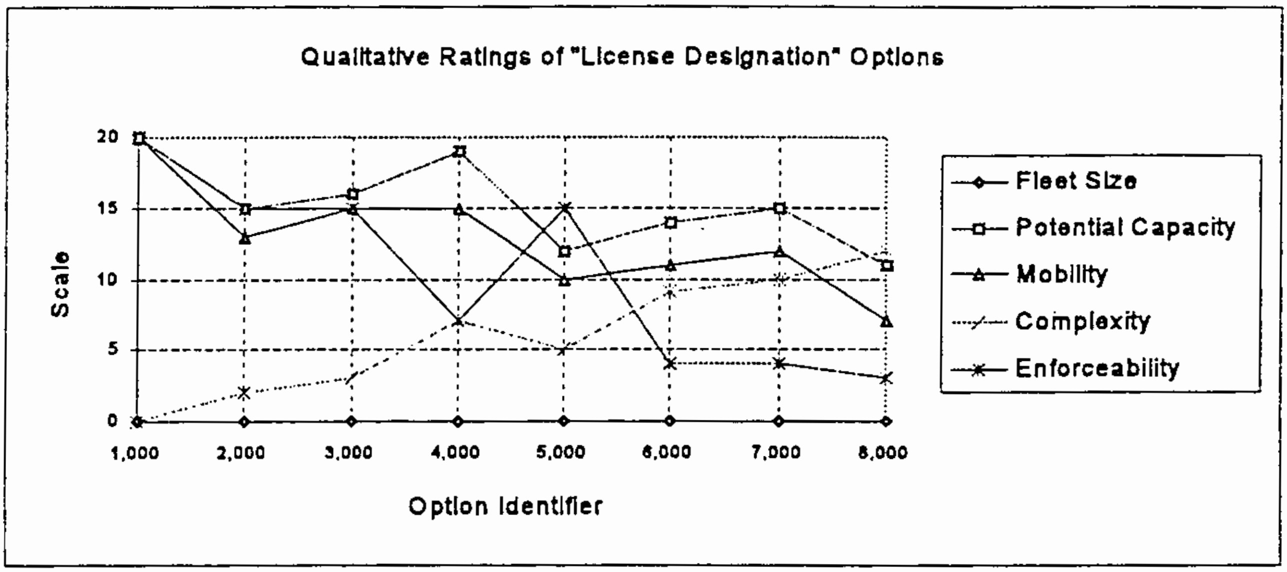
Complexity of implementation and administration, and enforcement will increase if a variety of license designations are used, however this is believed to be minor. NMFS has developed tracking systems for inshore and offshore fisheries for 1992 through 1995 and considerable experience has been gained. Vessel length categories are used already for the observer program, and NMFS did not have an implementational problem with length and upgrade provisions of the proposed moratorium, so there is no reason to believe that such provisions imbedded in a license program could not be handled properly.

In the Groundfish Tables Appendix, Configurations 111X11-118X11 show how the 1993 fleet would be partitioned under the eight options of the License Designation Component. There are 1,679 vessels, including 1215 Alaska vessels and 464 non-Alaska vessels that fished in 1993. The Alaska component can be further broken out into 1167 catcher vessels, most being under 60 ft, and 48 catcher processors. The non-Alaska fleet had 371 catchers and 93 catcher processors. Most of the non-Alaska catcher vessels are below 125 ft in length but the distribution is split more evenly between the over 60 ft and under 60 ft categories, in contrast to the more numerous smaller vessels in the Alaska fleet.

Regarding inshore-offshore, the Alaska fleet in 1993 had 1140 vessels in the inshore fishery and 75 offshore, while the non-Alaska fleet had 267 inshore and 197 offshore. As shown in Table 117X11, both the Alaska and non-Alaska inshore fleets have more smaller vessels fishing in the inshore fleet than offshore. For example, the Alaska inshore fleet had 1139 vessels under 125 ft inshore, but only 23 vessels of that size designation in the offshore fleet. Of the non-residence fleet, 257 or 96% of the catcher vessels working the inshore fisheries are under 125 ft. The non-resident fleet has twice as many catcher processors as the Alaska fleet. Only one inshore-offshore designations was assigned to each vessel: if a vessel participated in any offshore fishery in the most recent year of participation then it was assigned an offshore designation.

The table and figure below summarizes how the eight options under the License Designation component influence the five qualitative attributes.

Option #	Fleet Size	Potential Capacity	Mobility	Complexity	Enforceability
1,000	Neutral	20	20	0	20
2,000	Neutral	15	13	2	15
3,000	Neutral	16	15	3	15
4,000	Neutral	19	15	7	7
5,000	Neutral	12	10	5	15
6,000	Neutral	14	11	9	4
7,000	Neutral	15	12	10	4
8,000	Neutral	11	7	12	3



3.2.2.4 Qualifying Period

In January 1994, the Council specified three alternative periods in which a vessel or person could qualify for a license. These three options were:

(A) Jan. 1, 1978 - Dec. 31, 1993,
(B) Jan. 1, 1990 - Dec. 31, 1993,
(C) "the three year period before June 24, 1992 and/or the three year period before the date of final Council action.

The "and/or" clause in Option C may be interpreted to give four more alternatives as follow:

(C1) Jun. 28, 1989 - Jun. 27, 1992, (the three year period prior to June 24, 1992).[8]
(C2) the three year period prior to the date of final Council action,
(C3) a qualifying landing in both periods from Jun. 28, 1989 - Jun. 27, 1992, and the three years prior to the date of final action,[9] and
(C4) Jun. 28, 1989 - date of final action.[10]

In June 1994, an additional alternative was added by the Council. This alternative, proposed by the State of Alaska, requires a vessel to have made landings in each of the three calendar years from 1/1/90 through 6/27/92, as well as during the 365-day period prior to the Council's final action on the license alternative in order to qualify for an umbrella or area license. Additionally, any vessel which made qualifying landings of Pacific cod using fixed gear during the period from 6/23/91 - 6/27/92, as well as a Pacific cod landing during the 365 day period prior to the Council's final action on the license alternative would qualify for an umbrella or area license.

In all, there are seven alternative qualifying periods, four of which are indeterminate at this time. These are shown below and in Figure 3.11 with the numbering scheme used in this analysis.

Qualifying Periods

Jan. 1, 1978 - Dec. 31, 1993	100
Jun. 28, 1989 - Jun. 27, 1992	200
Jun. 28, 1989 - date of final action	300
Jan. 1, 1990 - Dec. 31, 1993	400
The three years prior to the date of final action	500
Jun. 28, 1989 - Jun. 27, 1992 & the three years prior to the date of final action	600
Each of the three calendar years from 1/1/90 - 6/27/92 & the 365 days prior to final action, except for fixed gear P. cod use 6/23/91 - 6/27/92 rather than 1/1/90 - 6/27/92	700

The four alternative qualifying periods which end on the date of final Council action are not possible to analyze in an absolute sense, since there is usually over a year's delay in the availability of reliable fish-ticket data. For example, the 1993 fish-ticket data were not made available for this analysis until June 1994. Therefore, any analysis of these alternatives will be somewhat speculative in nature. There will be no reasonable way of estimating how many qualifiers there are until the Council has made its final decision. Nonetheless, for each of the qualification periods assumptions are made and a description of the impacts is provided. These alternatives respond to Magnuson Act requirements that "current participation"

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[8]Dates were rounded to include entire weeks, since much of the catch is reported on a weekly basis.

[9]This is the interpretation of "and" in the "and/or" clause.

[10]This is the interpretation of "or" in the and/or" clause. Note also that if the date of final Council action is later than June 24, 1995, this single qualifying period will become two discontinuous periods.

be considered in developing limited access programs. For discussion purposes, we've assumed that final action is in January 1995 and the three years preceding are 1992, 1993 and 1994.

Figure 3.11

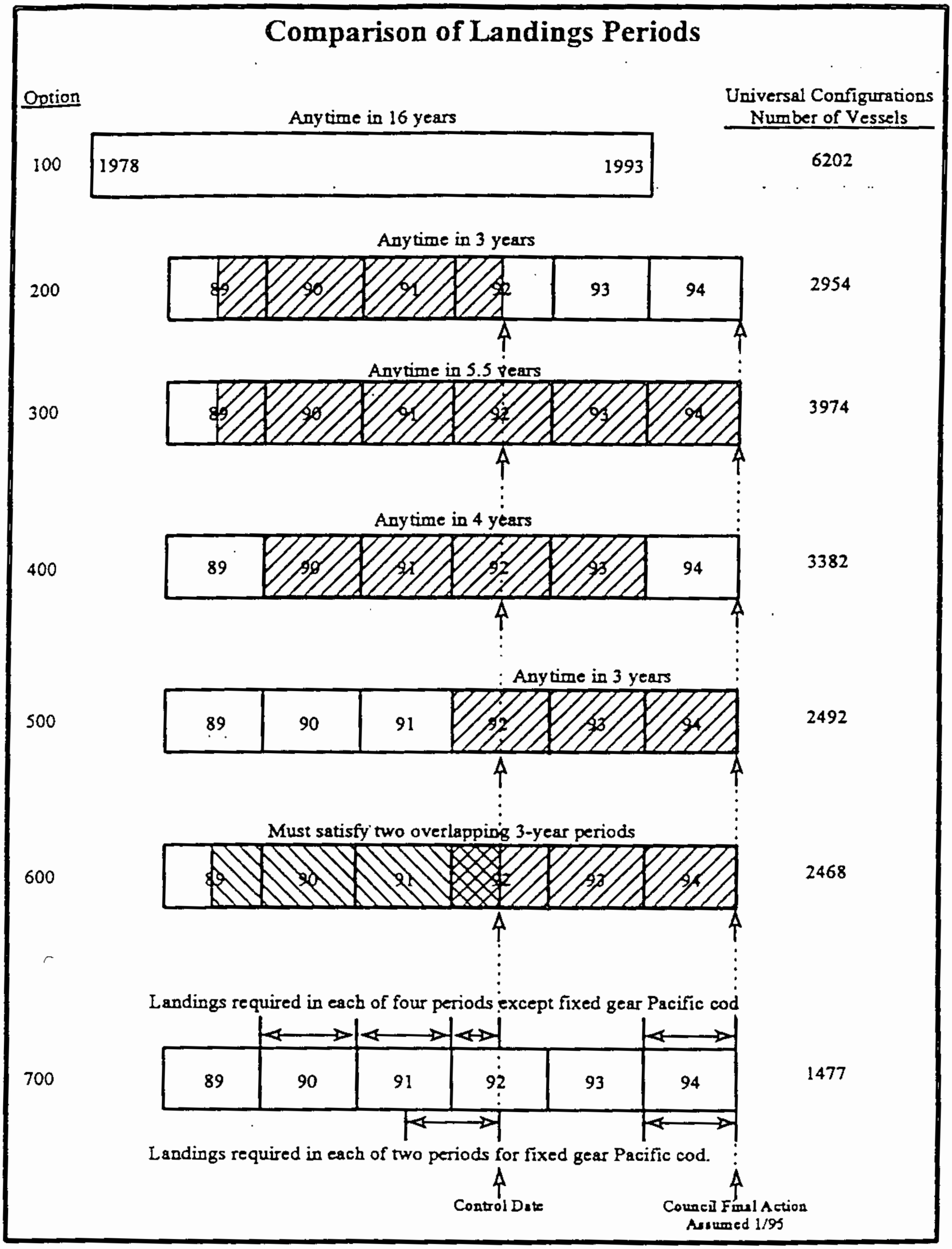


Table 3.23

Period	Vessel 1 (a combination trawler/longliner)				Vessel 2 (a trawler processor)			
	Central Gulf		Western Gulf		Central Gulf		Western Gulf	
	Pollock	P.Cod	Pollock	P. cod	Pollock	P.Cod	Pollock	P. cod
1/1/90-12/31/90	TRW			TRW				FG
1/1/91-6/22/91	TRW	TRW		TRW				FG
6/23/91-12/31/91	TRW	FG		FG				FG
1/1/92-6/27/92		-	TRW	FG	FG	~~FG~~	FG	FG
365 days prior to Council action	TRW	FG			FG	FG	FG	FG
TRW = trawl gear FG = fixed gear								

Vessel 1 will qualify for an area endorsement for Central Gulf only. It does not qualify for an area endorsement in the Western Gulf because it did not fish in that area during 365 days prior to Council action. Because its CG qualification was met with the P. cod fixed gear criteria, it will be eligible to qualify for only a P. cod endorsement. Vessel 2 will qualify for area endorsements for both Central Gulf and the Western Gulf. It will be eligible for a P. cod endorsement in both areas, and may qualify for a pollock endorsement in the Western Gulf, because it met the general criteria for that area. It will not be eligible for a pollock endorsement in the CG.

The example above demonstrates the complicated nature of this qualifying period, as well as some of its impacts. Because of the requirement for three years of consecutive participation in a given sub-area, any vessel which has moved from area to area is less likely to qualify. The ability to move from area to area, and from fishery to fishery, is claimed by many in the industry as one the primary reasons they are able to stay in business. If the fishing in one area or for one species is bad in a given year, then they can change areas, gears, or targets. This qualification system would in effect penalize those that took advantage of their mobility.

On the other hand because of this period restrictiveness relatively few vessels may qualify. Therefore, it has the greatest potential to produce an effective license program. This is because license programs need to limit the fleet's capacity to a level which is below the capacity of the existing fleet in order to be effective. Because of its restrictiveness, this option will likely be the easiest to enforce, when compared to other qualifying period options using the same configuration.

Conclusions Regarding Qualifying Periods.

The Council has seven alternative qualifying periods to choose from. Each one reflects a slightly different approach to recognizing participation in the fisheries. Option 100 reaches back over 16 years almost to the start of the Magnuson Act, and certainly predating very much development of the domestic groundfish fleet. Option 500 in contrast recognizes landings only in the three years before final Council action, assumed to include 1992-1994 for illustrative purposes in this analysis. Option 700 goes back further, but actually places greatest emphasis on most recent participation because a fisherman must have landed in 1994[13] (equivalent

[13]The tables in the Groundfish Tables Appendix do not reflect the requirement of participation the year prior to Council final action.

here to 365 days before final Council action in January 1995). Thus option 700 is more restrictive than Option 500 in terms of recognizing very recent participation.

Concerning the Council's control date of June 24, 1992 which was set when making a final decision on the proposed moratorium, options 200, 600, and 700 would not issue licenses to speculative vessels that first landed after the control date. All the other options would allow speculators to receive licenses if they met requirements of other components on the license system. They would not be left out because of the Council's choice of qualifying period alone.

As far as effectiveness of a license program in addressing overcapitalization, the options that allow more vessels will be least effective. More vessels will lead to more enforcement problems and added complexity in implementing and administering the program.

Configurations 115111-115711 and 715111-715711 in the Groundfish Tables Appendix contain detailed breakouts of the Alaska and non-Alaska fleets under the seven different qualifying period options for the Universal and Explicit reference configurations. Table 3.24 summarizes numbers of vessels for the Universal configuration for all seven options and compares them to 1993 participation from the current configuration. The first row of numbers in the table describes the fleet as in 1993 (configuration 115X11). For each option 100-700, the tables shows the total number of vessels which would qualify. The difference between the option and the current configuration is displayed in the next row in terms of percentage, and in the below that in terms of numbers. For example, there were 1,679 vessels of all types in 1993. Option 100 would yield 6,202 vessels, 4,523 more and 269% more vessels than fished in 1993. Option 700 would reduce the number of vessels by 178 to 1,501 total compared to the 1,679 vessels that fished in 1993. The fleet under option 700 would be 11% smaller than the 1993 fleet.

The results presented show that not all fleet sectors gain or lose in the same relative proportion. Returning to Option 700 as illustrative, there is a net loss of 178 vessels compared to the 1993 fleet size. The net change for Alaska residents was a loss of 124, and for non-Alaska, a loss of 54 vessels. The net change for both fleets was similar, each lost about 10-13% of their vessels. Within Alaska, however, there was a loss of 131 small catcher vessels, a loss of one catcher processor, and a gain of eight catchers over 60 ft. States other than Alaska lost 53 small catchers, 14 catcher processors, and gained 13 catchers over 60 ft. These results are preliminary however because the final year of the qualifying period is yet to be determined and applied. It is very likely that the numbers of qualifying vessels under this option will decrease for all sectors.

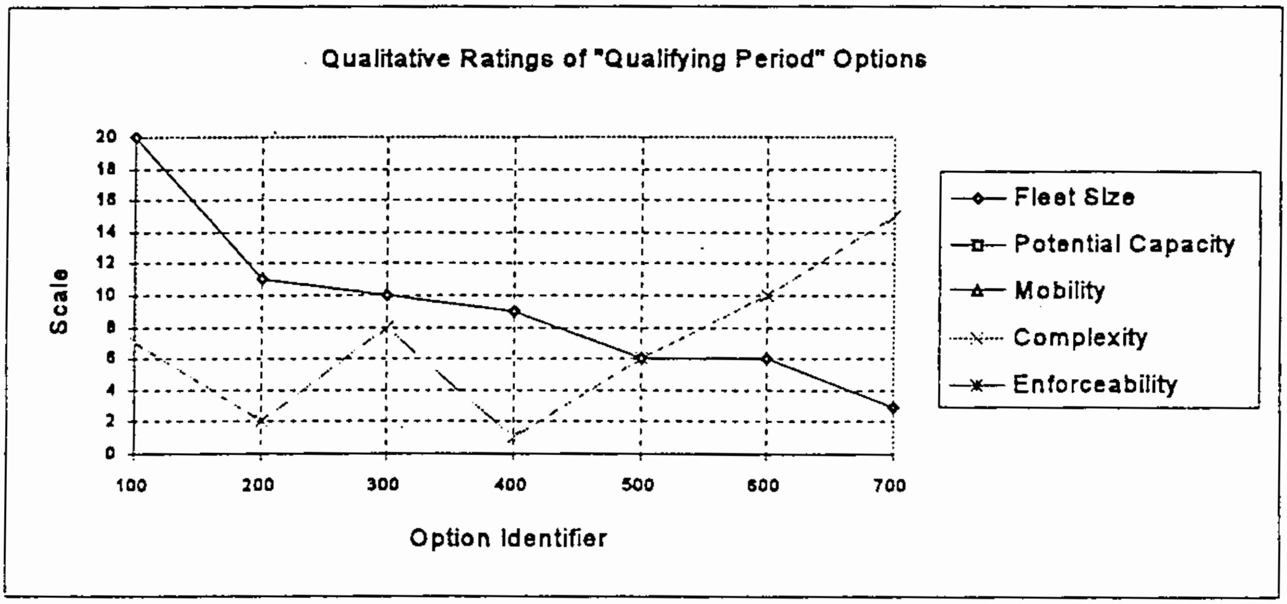
Table 3.24

A Comparison of the Number of Licenses Issued Under the Time Periods Selected by the Council for Analysis, to the 1993 Groundfish Fishery.

	Current Owner's State of Residence																	
	Alaska						Non-Alaska						Total					
	CV						CV						CV					
	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total
115x11																		
Number of Licenses in 1993 (a)	1052	110	1	1163	52	1215	191	140	24	355	109	464	1243	250	25	1518	161	1679
100																		
Licenses (b)	4,376	254	10	4,640	98	4,738	983	301	68	1,352	112	1,464	5,359	555	78	5,992	210	6,202
Percentage Change From 1993 (b/a)-1	316%	131%	900%	299%	88%	290%	415%	115%	183%	281%	3%	216%	331%	122%	212%	295%	30%	269%
Change in Number of Licenses From 1993 (b-a)	3,324	144	9	3,477	46	3,523	792	161	44	997	3	1,000	4,116	305	53	4,474	49	4,523
200																		
Licenses (c)	1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954
Percentage Change From 1993 (c/a)-1	84%	45%	500%	81%	54%	80%	110%	54%	88%	86%	-2%	66%	88%	50%	104%	82%	16%	76%
Change in Number of Licenses From 1993 (c-a)	888	49	5	942	28	970	210	76	21	307	-2	305	1,098	125	26	1,249	26	1,275
300																		
Licenses (d)	2,257	177	8	2,442	81	2,523	551	236	55	842	109	951	2,808	413	63	3,284	190	3,474
Percentage Change From 1993 (d/a)-1	115%	61%	700%	110%	56%	108%	188%	69%	129%	137%	0%	105%	126%	65%	152%	116%	18%	107%
Change in Number of Licenses From 1993 (d-a)	1,205	67	7	1,279	29	1,308	360	96	31	487	0	487	1,565	163	38	1,766	29	1,795
400																		
Licenses (e)	2,193	175	8	2,376	80	2,456	535	232	52	819	107	926	2,728	407	60	3,195	187	3,382
Percentage Change From 1993 (e/a)-1	108%	59%	700%	104%	54%	102%	180%	66%	117%	131%	-2%	100%	119%	63%	140%	110%	16%	101%
Change in Number of Licenses From 1993 (e-a)	1,141	65	7	1,213	28	1,241	344	92	28	464	-2	462	1,485	157	35	1,677	26	1,703
500																		
Licenses (f)	1,559	147	6	1,712	61	1,773	373	199	45	617	102	719	1,932	346	51	2,329	163	2,492
Percentage Change From 1993 (f/a)-1	48%	34%	500%	47%	17%	46%	95%	42%	88%	74%	-6%	55%	55%	38%	104%	53%	1%	48%
Change in Number of Licenses From 1993 (f-a)	507	37	5	549	9	558	182	59	21	262	-7	255	689	96	26	811	2	813
600																		
Licenses (g)	1,559	147	6	1,712	60	1,772	359	195	42	596	100	696	1,918	342	48	2,308	160	2,468
Percentage Change From 1993 (g/a)-1	48%	34%	500%	47%	15%	46%	88%	39%	75%	68%	-8%	50%	54%	37%	92%	52%	-1%	47%
Change in Number of Licenses From 1993 (g-a)	507	37	5	549	8	557	168	55	18	241	-9	232	675	92	23	790	-1	789
700																		
Licenses (h)	921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501
Percentage Change From 1993 (h/a)-1	-12%	5%	300%	-11%	-2%	-10%	-28%	5%	25%	-11%	-13%	-12%	-15%	5%	36%	-11%	-9%	-11%
Change in Number of Licenses From 1993 (h-a)	-131	5	3	-123	-1	-124	-53	7	6	-40	-14	-54	-184	12	9	-163	-15	-178

Overall, the qualifying period options most influence the initial size of the fleet, and as more vessels are allowed in, and more records have to be searched, complexity of program implementation and administration also will increase. Though the qualifying period component influences complexity, that effect is minor compared to the major influences of the Council's eventual choice of options for Nature of License and License Recipients. The boxes below summarize qualitatively the expected impacts of the options under qualifying period on the program attributes of initial fleet size and complexity.

Option #	Fleet Size	Potential Capacity	Mobility	Complexity	Enforceability
100	20	Neutral	Neutral	7	Neutral
200	11	Neutral	Neutral	2	Neutral
300	10	Neutral	Neutral	8	Neutral
400	9	Neutral	Neutral	1	Neutral
500	6	Neutral	Neutral	6	Neutral
600	6	Neutral	Neutral	10	Neutral
700	3	Neutral	Neutral	15	Neutral



3.2.2.5 Landings Requirements For General License Qualification

The Council has defined five alternative minimum landings requirements for qualification for general or umbrella licenses. These are shown below with the option identifiers:

One Landing 10
Two landings 20
5,000 pounds 30
10,000 pounds 40
20,000 pounds 50

This component has a major impact on the initial size of the fleet. The initial fleet size impacts the potential for increased capacity, fleet mobility, and enforcement, however, the elements in this component do not directly influence these attributes, and therefore are considered neutral. The administrative complexity is impacted by these elements, though this impact is considered minor. In the discussion of this component any references .. restrictiveness apply directly to the initial fleet size.

	Initial Fleet Size	Potential Increased Capacity	Mobility	Complexity	Enforcement
Landings Requirements General License Qualification (10-50)	Major	Neutral	Neutral	Minor	Neutral

These options may be applied to any of the "Nature of License" configurations, however implicit in all of the alternatives, is the assumption that these standards will be applied to general licenses, and optionally applied to the lower level endorsements. The working assumption used in the analysis applies the General Licenses Qualification Standard (GLQS) to all general and area licenses or endorsements. A secondary standard, the Endorsement Qualification Standard (EQS) was applied to fishery endorsements, where applicable. This should not preclude the Council from using an alternate application of the GLQS or EQS. Table 3.25 below describes how the qualification standards could be applied to the various options under the nature of the licenses.

Table 3.25

Nature of License Alternatives	Applications of General License Qualification Standards (GLQS) & Endorsement Qualification Standards (EQS)
Single licenses for all species and areas. (Option 100,000)	Only GLQS are relevant.
Licenses for FMP areas. (Option 200,000)	GLQS may be applied directly to FMP endorsements. A less restrictive program would apply GLQS to the North Pacific Umbrella license and the EQS to FMP endorsements.
Licenses for FMP sub areas. (Option 300,000)	GLQS may be applied directly to FMP sub-area endorsements. A less restrictive program would apply GLQS to the North Pacific Umbrella license, or to FMP general licenses, and the EQS to FMP sub-area endorsements.
Licenses for Fisheries. (Option 400,000)	GLQS may be applied directly to fishery endorsements. A less restrictive program would apply GLQS to the North Pacific Umbrella license, and the EQS to Fishery endorsements.
General licenses for FMP areas and endorsements for fisheries. (Option 500,000)	GLQS may be applied directly to fishery endorsements. A less restrictive program would apply GLQS to the North Pacific Umbrella license, and to FMP general licenses, and the EQS to fishery endorsements.
General licenses for FMP sub-areas and endorsements for fisheries (Option 600,000)	GLQS may be applied directly to fishery endorsements. A less restrictive program would apply GLQS to the North Pacific Umbrella license, and to FMP sub-area general licenses, and the EQS to fishery endorsements.
General licenses for sub-areas and <u>specific</u> fishery licenses (Option 700,000).	Same as above.
General licenses for EG, CG, WG, BSAI and <u>specific</u> fishery licenses (Option 800,000).	Same as above.

No Minimum (Option 10). This standard requires only that a landing be made during the qualifying period. The discussion below outlines possible criteria for defining a landing. Additionally, there are specific assumptions and caveats used in this analysis. These are described in Appendix IV.

1. <u>Inshore Catcher Vessel Landings</u>. An inshore landing will be proven if there is a fish-ticket reporting the delivery of groundfish with a valid ADF&G number and permit identifying the delivery vessel, and the processor identified as shore-based, or as operating in state waters.

2 <u>Domestic Catcher Vessel Offshore Landings</u>.

   a. From 1978-1983. A landing will be proven with a fish-ticket on which groundfish species are reported, and the processor is known to have been operating in the EEZ off Alaska.

   b. From 1984-1989. The delivery vessel must have possessed a federal groundfish permit. A landing will be proven by submission of a valid fish-ticket with reported groundfish catch and proof that delivery was to a processor operating in the EEZ under a federal permit.

   c. After 1989. The delivery vessel will have to have had a federal groundfish permit. It will have had to report to the NMFS Observer Program that offshore operations were taking place, and the vessel must have been reported by the mothership on Federal Logbooks.

3. <u>Joint Venture Catcher Vessel Offshore Landings</u>.

   a. From 1978-1983. Vessel must have been identified on NMFS existing records showing the names of joint-venture vessels operating in the EEZ off Alaska under a Federally Permitted joint-venture.

b. From 1984-1990. The delivery vessel will have to have had a federal groundfish permit. It will have had to report to the NMFS Observer Program that it was participating in joint-venture operations, and the vessel must have been reported by the foreign mothership on Federal Logbooks.

4. Catcher/processors

a. From 1978-1983. The vessel must have submitted valid fish-tickets with groundfish reported. The delivery vessel must have been identified on the fish-ticket by a valid ADF&G number and the processor must be identified on the fish ticket as being the same vessel.

b. From 1984-1985. The vessel must have possessed a federal groundfish permit. Additionally, the vessel must have filed an "Intent to Operate" form with ADF&G. The vessel must have submitted valid fish-tickets with groundfish reported. The delivery vessel must have been identified on the fish-ticket by a valid ADF&G number and the processor must be identified on the fish ticket as being the same vessel.

c. From 1986-1989. The vessel must have possessed a federal groundfish permit and the vessel must have filed an "Intent to Operate" form with ADF&G. In addition to these requirements, one of the following must have been submitted.

i. The delivery vessel must have been identified on the fish-ticket by a valid ADF&G number and the processor must be identified on the fish-ticket as being the same vessel.

ii. A "weekly processor report" documenting that processing of groundfish was occurring, must have been submitted to NMFS.

d. From 1990 forward. The vessel must have possessed a federal groundfish permit and the vessel must have filed an "Intent to Operate" form with ADF&G. In addition to these requirements, a "weekly processor report" documenting that processing of groundfish was occurring must have been submitted to NMFS.

Two Landings (Option 20) - This standard requires that two qualified landings were submitted during the qualifying period. If the qualifying period is divided into parts requiring participation in each part, then this option will mean that participation is defined as two landings in each part. In the cases where fish-tickets denote a landing, two different fish-tickets with different fish-ticket numbers must have been submitted. In cases where the landing is identified by weekly reports, submissions in a single week of activity in two FMP areas, or submission of reports in two different weeks will suffice. In cases where the landing is denoted by activity on a Federal Logbook, two entries showing deliveries must have been made.

Requiring two landings to be made during the qualifying period (or part thereof) will eliminate many "incidental" qualifiers who may have made a single landing of groundfish species only as bycatch in some non-groundfish fishery. For example, salmon trollers may land rockfish on a groundfish fish ticket. If this landing is of a species and area managed by the Council, then the landing could qualify the vessel for a license. Requiring two landings will eliminate many of these fishers, while letting in participants who were more actively involved in the groundfish fisheries.

A Minimum of 5,000 Pounds (Option 30). This standard requires that a minimum of 5,000 pounds were landed in qualified landings during the qualifying period. This alternative will have the effect of eliminating almost all incidental participants. In most cases, landings of groundfish in non-groundfish fisheries will not total more than 5,000 lbs. This requirement may also have the effect of eliminating those participants who made speculative landings of some minimum amount.

This alternative will likely prove quite restrictive when compared to the earlier alternatives. Since enforceability is directly tied to the number of licensed vessels, this alternative will be ranked higher in enforceability. This alternative is however much more complex in terms of administration and implementation. This is because proving a landing of groundfish is relatively straight forward compared to proving a given amount was landed over a period of time. Any appeals process increases in orders of magnitude if amounts of landings are required versus simply a landing.

A Minimum of 10,000 Pounds (Option 40). This standard requires that a minimum of 10,000 pounds were landed in qualified landings during the qualifying period. This option is clearly more restrictive and, therefore, more enforceable than a 5,000 pound requirement. In terms of complexity, this option is not significantly more complex than the previous option.

A Minimum 20,000 Pounds (Option 50). This standard requires that a minimum of 20,000 pounds were landed in qualified landings during the qualifying period. This option is the most restrictive of the alternatives, however it is not significantly more complex than either of the previous two.

Conclusions from the Assessment of General License Qualification Alternatives.

Table 3.26 draws on the distributional tables in the Groundfish Tables Appendix to show the impacts of the different GQLS. Requiring at least two landings (option 20) pares 262 vessels from the current fleet, 519 from the universal fleet, and 157 from the explicit fleet. Almost all of these reductions come from the small Alaskan-owned vessels. As pointed out in the qualitative discussion, many of the vessels in the fleet are accidental participants, landing the odd rockfish or Pacific cod in their salmon, halibut and sablefish fisheries. It is unlikely that, given bycatch allowances, these vessels would be impacted in any real way. They presumably would still be allowed to land incidental catches of groundfish with or without a license. They would however be prevented from entering into directed fishing for groundfish. This reduction in fleet size therefore represents a significant reduction in the potential capacity of the fleet. A smaller relative impact is seen in the endorsement reductions under the explicit configuration, because many of the 'accidental' qualifiers will be eliminated by the qualifying period which requires landings in multiple periods.

Table 3.26

Landings Requirements Options	Numbers of Vessel in Initial Fleet		
	Current	Universal	Explicit
10	1679	2954	1501
20	1417	2435	1344
30	816	1492	939
40	727	1280	833
50	631	1110	745

Requiring 5,000 pounds (option 30) reduces the fleet under every configuration by an even greater amount. Again the reduction is centered on the small vessel fleet with an equal impact (relatively speaking) on owners from all states. In the universal configuration, the reduction brings the initial fleet size down to a level below the size of the fleet which participated in 1993. It is conceivable that this option starts to eliminate vessels which were actually targeting on some species of groundfish. Requiring 10,000 or 20,000 pounds has a relatively smaller impact, although again the reductions are seen in the small vessel fleet.

The following table draws on Figures 2.1a-2.1e in Section 2.2 to show the numbers of vessels for each of the vessel profiles that would not meet the 20,000 pound limit (based on 1992).

Table 3.27

Vessel Class	Number of Vessels with Catches Under 20,000 Pounds in 1992
Longline Processor 1	24
Pot Harvester 1	24
Pot Harvester 2	67
Trawler Harvester 3	24
Trawler Harvester 4	none
Trawler Processor 1	none
Trawler Processor 2	none
Trawler Processor 3	none
Pot Processor 1	24
Trawler Harvester 1	none
Trawler Harvester 2	24
Longline Harvester 1	72
Longline Harvester 2	104
Longline Harvester 3	838

In terms of complexity, GLQS specified in terms of landings are much easier to implement. This is because proof of a landing (or two landings) is easier to document than proving a given amount was landed. Additionally, because a 5,000 pound requirement will eliminate fewer vessels than a 10,000 or 20,000 lbs requirement, potentially resulting in fewer appeals, the more stringent requirements are scored as slightly more complex.

Option #	Fleet Size	Potential Capacity	Mobility	Complexity	Enforceability
10	20	Neutral	Neutral	1	Neutral
20	15	Neutral	Neutral	3	Neutral
30	13	Neutral	Neutral	10	Neutral
40	7	Neutral	Neutral	11	Neutral
50	2	Neutral	Neutral	12	Neutral

3.2.2.7 Alternative Ownership, Transfer, and Use Provisions of Groundfish Licenses

In addition to options affecting the assignment of licenses, the Council has included options affecting the transferability, ownership, and use of licenses, independent of the initial assignments. The options are shown below. In developing its preferred alternative, the Council will need to choose one element from each component set, with the exception of "Other Provisions," from which the Council may choose any number.

Components and Alternative Elements Affecting the Ownership, Use and Transfer of Licenses

Who May Purchase Licenses

1. Licenses could be transferred only to "persons" defined under Title 46 U.S.C.
2. Licenses could be transferred to "persons" with 76% or more U.S. ownership, with "grandfather" rights for license recipients with 75% or less U.S. ownership (Title 46 U.S.C.).

Vessel/License Linkages

1. Vessel must be transferred with license.
2. Licenses may be transferred without a vessel, i.e., licenses may be applied to vessels other than the one to which the license initially was issued.

Options Regarding the Separability of Species and/or Area Designations

1. Species and/or Area designations are not separable, and shall remain as a single license with those initial designations.
2. Species and/or Area designations shall be treated as separable licenses and may be transferred as such.
3. Species and/or Area designations shall be regarded as separable endorsements which require the owner to also own a general license before use or purchase.

Vessel Replacement and Upgrades

1. No restrictions on vessel replacement or upgrades, except that the vessel must meet the "Use Restrictions" (License Designations) defined by the initial allocation.
2. Vessel may not be replaced or upgraded.
3. Vessel may be replaced or upgraded within the bounds of the 20% Rule defined in the moratorium proposed rule.

License Ownership Caps

1. No limit on the number of licenses or endorsements which may be owned by a "person."
2. No more than 5 area licenses per person with grandfather provisions.
3. No more than 10 area licenses per person with grandfather provisions.
4. No more than 15 area licenses per person with grandfather provisions.
5. No more than 5 fishery/area endorsements per person with grandfather provisions.
6. No more than 10 fishery/area endorsements per person with grandfather provisions.
7. No more than 15 fishery/area endorsements per person with grandfather provisions.

Vessel License Use Caps

1. No limit on the number of licenses (or endorsements) which may be used on a vessel.
2. No more than 1 area license (endorsement) may be used on a vessel in a given year.
3. No more than 2 area licenses (endorsements) may be used on a vessel in a given year.
4. No more than 3 area licenses (endorsements) may be used on a vessel in a given year.
5. No more than 4 area licenses (endorsements) may be used on a vessel in a given year.
6. No more than 5 area licenses (endorsements) may be used on a vessel in a given year.

Vessel Designation Limits

1. A vessel which qualifies for multiple designations (i.e., both as a CV and as a CP or as both inshore and offshore) under the use restriction component will be able to participate under any designation for which it qualifies.
2. A vessel which qualifies for multiple designations under the use restriction component must choose a single designation.

Buy-back/Retirement Program

1. No buy-back/retirement program.
2. Fractional license system. (Fractional licenses may be issued to vessel owners at the time of landing and/or permit holders.)
3. Industry Funded Buy-back Program with right of first refusal on all transfers of licenses.

Two-Tiered Skipper License Program

1. Do not implement a Two-Tiered Skipper License Program.
2. Implement a Two-Tiered Skipper License Program.

Community Development Quotas.

1. No CDQ allocations
2. 3% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
3. 7.5% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
4. 10% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
5. 15% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.

Community Development Licenses.

1. No Community Development Licenses.
2. Grant an additional 3% non-transferable licenses to CDQs communities.
3. Grant an additional 7.5% non-transferable licenses to CDQs communities.
4. Grant an additional 10% non-transferable licenses to CDQs communities.
5. Grant an additional 15% non-transferable licenses to CDQs communities.

Other Provisions (Choose any or none of the following)

1. Licenses represent a use privilege. The Council may convert the license program to an IFQ program or otherwise alter or rescind the program without compensation to license holders.
2. Severe penalties may be invoked for failure to comply with conditions of the license.
3. Licenses may be suspended or revoked for multiple violations.
4. Implement a Skipper Reporting System which requires groundfish license holders to report skipper names, address, and service records to NMFS.
5. Develop and implement mechanisms to collect management, enforcement costs and/or rents from the industry, including taxes and fees on the industry.

Who May Purchase Licenses. Two alternatives exist which would limit the purchase of licenses.

1. Licenses could be transferred only to "persons" defined under Title 46.
2. Licenses could be transferred to "persons" with 76% or more U.S. ownership, with "grandfather" rights for license recipients with 75% or less U.S. ownership.

Both alternatives have their roots in Federal Statutes. Option 1 is considered the status quo. It defines a person as any individual who is a citizen of the United States or any corporation, partnership, association, or other entity (whether or not organized under the laws of any state) which meets the requirements set forth in 46 U.S.C. which requires that U.S. ownership interests must be 50% or more for vessels harvesting fish in the EEZ. Option 2 would change the status quo by referencing 46 U.S.C. (the Shipping Act of 1916), which would require that U.S. ownership interests must be at least 75%.

Few data exist to document ownership levels in the fisheries. There have been two recent studies of ownership, one conducted by the State of Alaska, another by the U.S. G.A.O. These studies were cited in the Inshore/Offshore Allocation analysis and discussed in the Secretary of Commerce's November 23, 1992, letter to the Council accepting its revised Amendment 18. In this letter, the SOC stated...

> The analysis also evaluated the extent of foreign ownership in each sector, but I have not based my decision on the degree of foreign ownership because the data is incomplete and the conclusions are conjectural. In terms of the national interest, there is little difference between a vessel or processing plant owned in whole or in part by foreign interests and a vessel or plant that was extensively financed by loans received from foreign sources. In both cases, a significant portion of the funds received from the sale of fish products will benefit foreign interests. Although some data is available on foreign ownership in both sectors, the records are not complete and there is almost no data on the extent of foreign financing of U.S.-owned vessels or facilities. Additionally, data concerning corporate taxes paid by both sectors, reinvestment of profits in the United States, and effects on the balance of trade in fisheries products have not been analyzed.

Given the little data on ownership, an analysis of the impacts of this alternative is not possible. The Council has requested that NOAA General Counsel research the proposal to use Option 2. Since Option 1 is the status quo, it does not increase the restrictiveness of a license program, nor will additional administrative or enforcement costs be incurred. Option 2 could prove to be more restrictive. However, since there may be no reasonable way to administer or enforce the alternative, it may not be practicable.

Vessel/License Linkages. Two options exist for linking licenses to vessels. They directly affect how licenses may be transferred after the initial allocation.

1. Vessel must be transferred with license
2. Licenses may be transferred without a vessel, i.e., licenses may be applied to vessels other than the one to which the license initially was issued.

Option 1. This option, in effect, creates non-transferable licenses. Only vessels would be transferable, and only those with licenses could participate in the fisheries. This option also implicitly assumes that there is a one-to-one link between the number of licenses issued and the number of vessels. If licenses were issued to permit holders or to landings owners then there could be more than one license for a given vessel. As noted in Section 3.2.2.2, licenses issued to permit holders or to landings owners would not be linked to vessels in the initial allocation. This could be "fixed" by requiring all permit holders or landings owners to assign the license to a vessel at the time of the allocation.

Assuming now that each license is assigned to a given vessel, this option would mean that no new vessels would enter the fishery following the initial allocation of licenses. If a vessel is destroyed or sinks then the license would go with it. The end result of this option is an eventual aging of the fleet, a more restrictive license program, and probable reduction in the amount of new capital coming into the industry. It would also have serious repercussions with regard to vessel safety and efficiency. Also, this option is somewhat redundant if a vessel length designation is included. If the vessel and license are linked, then the affect of the vessel length designation is reduced to a restriction on vessel reconstruction or upgrade. If the Council wishes to make licenses completely non-transferable, then a license recipient who sells a qualifying vessel will no longer be able to use the license. This was proposed as an option in the crab license limitation program.

Option 2 would allow licenses to trade independently of vessels. This option would allow more flexibility for vessel owners and license holders to tune their operations. The vessel length and CV/CP designations in Section 3.2.2.3 would be the primary restrictions to increases in harvesting and at-sea processing capacity. It also leaves open the possibility for a much less restrictive program, particularly if transfers are easily and quickly completed and approved.

As an example of the possibilities available under the second option, imagine a shore-based catcher vessel owner with two vessels and only one license. If licenses may be transferred freely across vessels then the owner could effectively double the use of his license by transferring the license to one vessel as soon as the second had completed its trip. While one vessel is in port being re-supplied and possibly maintained, the second vessel is using the license.

Neither option appears fully suited to meet the needs of the license program. It has been suggested that licenses should be assigned to vessels for a fixed period of time, e.g., a month, quarter, year, etc. If a transfer of the license to another vessel were desired, then that transfer could only be effected at the end of the assignment period. This kind of restriction would prevent the enforcement problems of freely transferable licenses, while allowing vessel owners to tune their operations. If a more restrictive program is desired, particularly in terms of vessel upgrades or changes in vessel length, then these could/should be added as options in the vessel designation section. The following section contains options which could directly affect the transfer of licenses.

Options Regarding the Separability of Species and/or Area Designations. Three options are available and assume that licenses and vessels are not linked. If they are linked then these alternatives are moot. These options are also closely linked to the Nature of Licenses options of Section 3.2.2.1, particularly with regard to the various configurations shown by the "umbrella" figures. If a single umbrella license for all species and areas is created without any lower level endorsements (i.e., all configurations with element # 100,000), then these options are irrelevant.

1. Species and/or Area designations are not separable, and shall remain as a single license with those initial designations.
2. Species and/or Area designations shall be treated as separable licenses and may be transferred as such.
3. Species and/or Area designations shall be regarded as separable endorsements which require the owner to also own a general license before use or purchase.

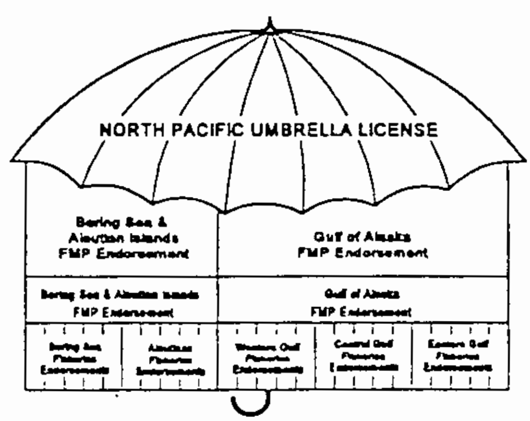
Option 1 is the most restrictive. It is akin to the IFQ block proposal in that licenses, once issued to an owner, must be traded as a block. As an example, a vessel owner receives licenses for pollock and Pacific cod in the Bering Sea, and a pollock license in the Aleutian Islands. To round out his license portfolio, the owner would like to have a Pacific cod license for the Aleutian Islands. Several alternatives exist for the vessel owner:

1. Find a person whose sole endorsement was for Pacific cod in the Aleutian Islands and purchase that license.
2. Find a person who has the portfolio he desires, i.e., pollock and Pacific cod in both the Bering Sea and Aleutian Islands. Purchase that portfolio, and hope he can find a buyer for his original portfolio.
3. Find a person whose portfolio contains Pacific cod in the Aleutian Islands, along with other species or areas. Purchase that portfolio and continue operations with redundant licenses.

If licenses are to be transferable then this alternative is extremel. restrictive because few transactions would be likely and there is no possibility for expansion of the fleet. In fact, because of the possibility that vessel owners may stack licenses in order to get the portfolio they desire, it could result in fewer vessels in the long run than the number of licenses allocated.

Option 2. This option makes licenses completely separable from any more general or umbrella license. This option corresponds to Figures 3.3b, 3.4b, 3.5b, 3.6b, and 3.7b in section 3.2.2.1, where each endorsement was self-contained under its own umbrella. Figure 3.7b is reproduced to the right. Under this option, the potential to greatly expand the fleet exists. In the initial allocation, each recipient would receive a separate license for a given fishery or area. If the recipient desired, he could assign or transfer each of his licenses to different vessels. This option does allow fishers to tune the licenses they hold to their needs, but in so doing, it allows the numbers of vessels to expand by orders of magnitude.

FIGURE 3.7A



Option 3. This option would mean that at least two types of licenses would be created, a general or umbrella license and more specific separable endorsements. This option is more restrictive than Option 2 in that the ultimate number of vessels in the fishery can never exceed the number of umbrella licenses allocated. This option allows vessels to tune their license holding to match their operations. The Council may create up to four layers of endorsements as discussed in the Nature of License in Section 3.2.2.1. If the Council creates four layers of licenses and endorsements as reproduced in Figure 3.7a, then the middle layers are treated as both general licenses and endorsements.

As an example of how this system would work, return to the fisher above who was allocated endorsements for pollock and Pacific cod in the Bering Sea and pollock in the

Aleutian Islands. In the initial allocation, he would receive the following: (1) an umbrella license for groundfish in the North Pacific, (2) an FMP umbrella license for groundfish in the BSAI, (3) sub-area umbrella licenses for both the Bering Sea and the Aleutian Islands, and (4) two pollock endorsements (one for the BS and one for the AI), and one Pacific cod endorsement for the BS. If he wished to obtain an endorsement for P. cod in the Aleutian Islands, then it would simply be a matter of finding a person willing to sell such an endorsement. If he wished to enter the Central Gulf Pacific cod fishery, it would be more difficult. He would have to purchase a GOA umbrella license, a Central Gulf umbrella license, and finally a P. cod endorsement specific to the CG. Clearly, there is room for flexibility in this configuration, but the requirements for multiple umbrella still make the system fairly restrictive by limiting total vessels to the number originally qualifying.

FIGURE 3.7B

If the Council wished to lessen the restrictiveness, while still keeping the ultimate number of vessels limited to the number originally qualifying, then it would maintain the North Pacific umbrella and drop one of the middle layers of endorsements. For example, the Council could implement a system as shown in Figures 3.7c or 3.7d. Under a system configured like Figure 3.7c, which drops the sub-area layer of endorsements but still maintains sub-area specific fishery licenses, the fisher in the example above would be allowed to purchase the AI P. cod as before, but if she wanted to get into the CG Pacific cod fishery, then she would have to purchase a GOA umbrella license, but would not have the additional cost of purchasing a Central Gulf umbrella . A system designed as in Figure 3.7d would likely be a bit less restrictive than under 3.7c. This is because a GOA license would likely be more costly than a Central Gulf license, as it would confer a wider scope of fishing possibilities.

FIGURE 3.7C

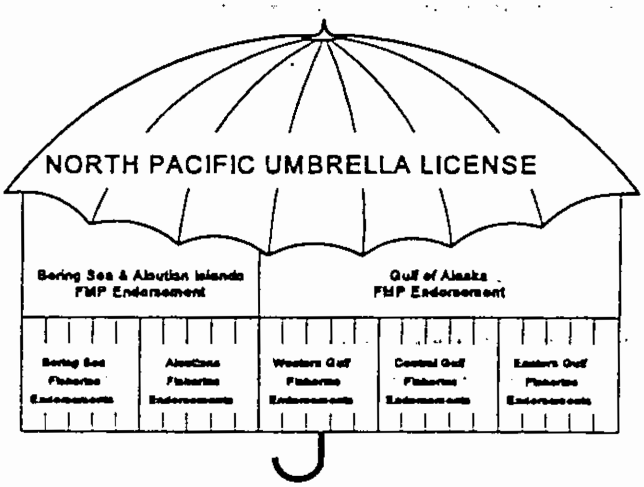
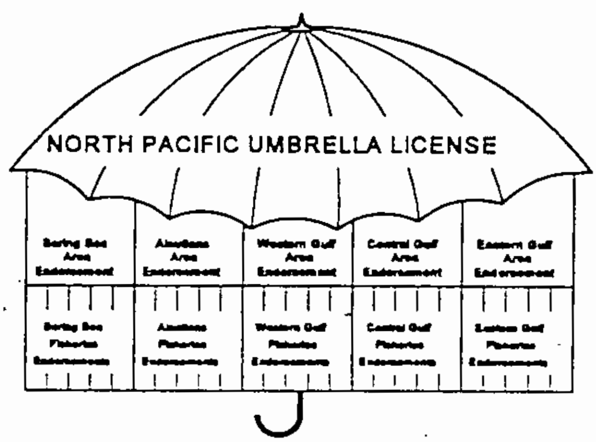


FIGURE 3.7D



Another approach to simplify the system would be to eliminate umbrellas from the top down. Rather than having a North Pacific umbrella, using a FMP umbrella or a Sub-area umbrella as the highest level would make it easier for fishers to match their licenses to their needs. Unfortunately, this would ultimately allow many more vessels to operate.

In summary, it appears that separable endorsements will add to the flexibility of the program. If the North Pacific Umbrella is maintained as a part of the system then the number of vessels in the fleet would be constrained to the number of vessels qualifying at the time of allocation. The number of layers to place between the North Pacific Umbrella and the lowest level of endorsements is a tradeoff between flexibility and restrictiveness.

Vessel Replacement and Upgrades. Three options regarding vessel upgrades and replacements have been proposed. These restrictions are assumed to be coupled with the option for Vessel Length Class Designations in the Components for Initial Allocation.

1. No restrictions on vessel replacement or upgrades except that the vessel must meet the "Use Restrictions" (License Designations) defined by the initial allocation.
2. Vessel may not be replaced or upgraded.
3. Vessel may be replaced or upgraded within the bounds of the 20% Rule as defined under the moratorium proposed rule.

These options are very difficult to interpret unless they are strictly defined. In analyzing these options, we have made the following assumptions:

> Assumption 1: The words 'upgrade and transfer and replace' are interchangeable in the context of these options.
>
> Assumption 2: There are no limits on using licenses on a vessel if the license was initially allocated to a vessel of a longer LOA. (Except that the vessel classes, if created, will apply).

Option 1. This option does not impose additional restrictions on vessel replacements or upgrades other than those in the license designations described in Section 3.2.2.3. This would be the least restrictive of the options in this section. Transfers of licenses to other vessels and upgrades of vessel lengths would have to remain within the length designation if they are imposed. Assuming vessel length designations are imposed, three separate markets would develop for licenses, one for each length category.

Option 2. This option is the most restrictive and implies that vessels and licenses are linked, which effectively eliminates all transfers of licenses. It also negates the need to have any of the license designations described in Section 3.2.2.3, with the possible exception of the inshore/offshore designation.

Option 3. This option refines the vessel length designation in the Use Restriction Component assigned in the initial allocation of licenses, by overlaying the "20% Rule" as approved by the Council in their Moratorium action. This rule would have allowed vessels to be replaced or upgraded as long as the replacement vessel or the upgrade did not increase the length of the vessels to a length greater than 120% of the original length of the qualifying vessel or 125 feet, whichever is less. Vessels 125 feet or greater would not be able to increase in length or to be replaced by a vessel with a greater LOA. The 20% rule takes on a slightly different implications when applied to vessel licenses, and when integrated with the vessel length classes under the "Use Restriction" component.

The effects of this overlay are most easily seen by using an example. Assume that the owner of a 48' vessel who was initially awarded a Central Gulf P. cod license would like to upgrade her operations by purchasing an endorsement for pollock. If the 20% Rule is overlaid on the vessel class designation, she could purchase Central Gulf pollock endorsements which were initially allocated to vessels between 40' and 59' LOA. Purchasing an endorsement which was initially allocated to a 39' foot vessel would violate the 20% rule (39'×120%=46.8'). Purchasing a license which was initially allocated to a 60' foot vessel violates the vessel class designations.

If, rather than pursuing pollock, she decided to upgrade her operations by buying a longer vessel for her P. cod fishery, she could purchase a vessel no longer than 58' (48'×120%=57.6', which would round up to 58'), and still use the endorsement she was initially allocated.

From the example, it is clear that the effect of this overlay will be to restrict the pool of licenses available for purchase by owners of vessels of any given length. An owner of a vessel which is less than 60 feet LOA may only purchase licenses which are in the same length category (0-60 ft). Further, this vessel owner may not purchase a license initially allocated to a vessel which was less than 83.3 % of the purchaser's vessel length (this is back calculated from the 20% upgrade restriction as follows 1÷120%=83.3%). Owners of vessels less than 125' LOA may only purchase licenses which were initially allocated to vessels in the 60-124' vessel class. Further, they are restricted from using a license which was initially allocated to a vessel less than 83% of the LOA of their vessel. Owners of vessels 125 feet LOA and greater may not purchase licenses which were originally allocated to any vessel with a shorter LOA, including those within the length category.

Effectively, this option places greater limits on the ability of vessels in the upper ranges of each vessel class to purchase licenses. Owners of vessels of 59' and 124' LOA may only purchase licenses of vessels of an equal or lessor length. The owner of the longest vessel receiving licenses in the initial allocation will be unable to purchase any additional licenses. The owner of the second longest vessel would only be able to purchase licenses from the longest vessel. Each progressively shorter vessel will have a slightly larger pool from which to purchase licenses.

This option is clearly more restrictive than the vessel class designations alone. It is also more restrictive for some vessels than for other vessels. The option is also quite complex administratively. This is because the length of the original qualifying vessel will have to be attached to the license and will have to be tracked over time.

This option could be applied to vessels and transfers even if the three vessel class designations were not implemented. The assumption would be that any owner of a vessel could purchase licenses originally issued to a vessel of the purchaser's vessel length or longer. Vessels less than 125' could purchase licenses originally issued to vessels no less than 83% of their length. This option would be nearly as restrictive as with the overlay. Also, this option could be used in conjunction with the CV/CP use restriction or a combination of CV/CP and vessel length classes. However, it should be noted that by assumption catcher processors are excluded from the vessel length classes. When CV/CP and vessel length classes are combined, CPs are effectively in a length class by themselves.

License Ownership Caps. There are seven options which could limit the number of area or fishery endorsements owned by a person, presumably including persons who own more than one vessel. These options are only relevant if a license limitation program with at least one layer of endorsements under an umbrella is developed. In all cases, it is assumed that persons who receive endorsements in excess of a cap would be 'grandfathered', i.e., the endorsements could be used as issued, however no further endorsements could be purchased. The options are as follows:

1. No limit on the number of licenses or endorsements which may be owned by a "person."
2. No more than 5 area licenses per person with grandfather provisions.
3. No more than 10 area licenses per person with grandfather provisions.
4. No more than 15 area licenses per person with grandfather provisions.
5. No more than 5 fishery/area endorsements per person with grandfather provisions.
6. No more than 10 fishery/area endorsements per person with grandfather provisions.
7. No more than 15 fishery/area endorsements per person with grandfather provisions.

The impacts of these ownership caps are directly related to the specific configuration to which they are applied. If the ownership of FMP endorsements (2 endorsements could represent a full complement) is limited, then a limit of 5 endorsements may be rather unrestrictive, even for a person who owns two to three vessels. If ownership of sub-area endorsements (5 endorsements could represent a full complement) is restricted, then a limit of 5 could be very restrictive, particularly to persons who own more than one vessel. Whether a given fishery endorsement ownership limit is restrictive or not will depend on the number of fisheries defined (if any) for each area. Under element 400,000 of the Nature of Licenses, five fishery area endorsements are defined. Under option 600,000, 25 different fishery area endorsements are defined. Finally, under option 700,000, a total of 33 different fishery area endorsements are defined. A limit of 15 fishery endorsements is more restrictive when there are 33 possible license types than in a system with 5 license types.

Vessel License Use Caps. These options would restrict the number of areas in which a vessel could fish in a given year. It is assumed that vessels which are initially allocated area endorsements in excess of any use cap would be 'grandfathered', in that they could fish any area in which they were allocated licenses, but would not be allowed to use additional endorsements. The Council could choose to alter this assumption.

1. No limit on the number of licenses (or endorsements) which may be used on a vessel.
2. No more than 1 area license (endorsement) may be used on a vessel in a given year.
3. No more than 2 area licenses (endorsements) may be used on a vessel in a given year.
4. No more than 3 area licenses (endorsements) may be used on a vessel in a given year.
5. No more than 4 area licenses (endorsements) may be used on a vessel in a given year.
6. No more than 5 area licenses (endorsements) may be used on a vessel in a given year.

The effects of these options will depend on the area definition to which they are applied. If the Council chooses a license system employing FMP endorsement but not sub-area endorsements, then the use limit will not be restrictive unless it is set at one area per vessel. Assuming these limits would apply to sub-area endorsements, a limit of five would not restrict the vessel in the least. A limit of one would be akin to a "super-exclusive" registration and could be quite restrictive.

Vessel Designation Limits. These options affect licenses which might qualify for multiple designations in the initial allocation.

1. A vessel which qualifies for multiple designations (i.e., both as a CV and as a CP or as both inshore and offshore) under the use restriction component will be able to participate under any designation for which it qualifies.
2. A vessel which qualifies for multiple designations under the use restriction component must choose a single designation.

As detailed in Section 3.2.2.3, the methodology used for the assignment of license designations would create a single designation for each vessel which would hold for all fisheries and areas. A license was designated for use as a CP if, during its most recent year of participation, the vessel operated as a CP. Similarly a vessel was designated as offshore if it made an offshore delivery during its most recent year of participation. The options above would only apply if the Council chose to use a different methodology, which could result in the assignment of multiple designations for a single vessel. Of the two options above, the first would be less restrictive.

Discussion of Other General Issues. The following issues are discussed elsewhere in the text but are included here because the Council will need to make decisions on these points.

Buy-back/Retirement Program. (Section 3.2.1.2)

1. No buy-back/retirement program.
2. Fractional license system. (Fractional licenses may be issued to vessel owners at the time of landing and/or permit holders.)
3. Industry Funded Buy-back Program with right of first refusal on all transfers of licenses.

Two-Tiered Skipper License Program. (Section 3.4)

1. Do not implement a Two-Tiered Skipper License Program.
2. Implement a Two-Tiered Skipper License Program.

Community Development Quotas. (Section 3.3.2)

1. No CDQ allocations.
2. 3% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
3. 7.5% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
4. 10% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
5. 15% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.

Community Development Licenses. (Section 3.3.3)

1. No Community Development Licenses.
2. Grant an additional 3% non-transferable licenses to CDQs communities.
3. Grant an additional 7.5% non-transferable licenses to CDQs communities.
4. Grant an additional 10% non-transferable licenses to CDQs communities.
5. Grant an additional 15% non-transferable licenses to CDQs communities.

Other Provisions (Choose any or none of the following)

1. Licenses represent a use privilege. The Council may convert the license program to an IFQ program or otherwise alter or rescind the program without compensation to license holders.
2. Severe penalties may be invoked for failure to comply with conditions of the license.
3. Licenses may be suspended or revoked for multiple violations.
4. Implement a Skipper Reporting System which requires groundfish license holders to report skipper names, address, and service records to NMFS.
5. Develop and implement mechanisms to collect management, enforcement costs and/or rents from the industry, including taxes and fees on the industry.

3.2.2.8 Economic and Social Impacts of Reference Configurations

This section will compare the current, universal, and explicit reference configurations in terms of potential economic and social impacts. We will discuss how the distribution of licenses under each of these particular configurations affect vessel owners in Alaska, Washington, and Oregon, including some discussion of regional impacts in Alaska. We will also categorize the vessels which would receive licenses under each configuration into the 14 vessel classes discussed in Section 2.2. These discussions will be followed by an examination of the 1993 groundfish fishery, overlaying the catch of vessels which would receive licenses under the universal and explicit configurations.

Distribution of Licenses Under the Various Configurations.

The distribution of licenses to vessels owners from various states under the current, universal, and explicit reference configurations is a function of the qualifying period used in the configurations. These were discussed in Section 3.2.2.4 and summarized in Table 3.24. The full tables showing these distributions are found in the Groundfish Table Appendix. The distributional impacts of these three configurations are reiterated below.

Current Configuration: The current reference configuration, which is actually a snapshot of the 1993 fishery is shown on page 7 of the Groundfish Tables Appendix. In 1993 a total of 1,679 vessels participated in the groundfish fisheries in the North Pacific. Of these 1,215 were vessels owned by Alaskans and 464 were owned by residents of other states mainly Washington and Oregon. The Alaskan owned vessels were principally small vessels less than 60' LOA. Only 153 vessels were 60' or longer and 52 of these were CPs. Vessels owned by residents of other states were more evenly distributed across the vessel classes, including 109 CPs.

Universal Configuration: The "Universal" reference alternative allocates a single umbrella license good for all species and areas to current vessel owners who made a single landing between June 28, 1989, and June 27, 1992. This configuration is very similar to the current configuration, differing only by the years included. Under this configuration, 2,185 Alaskans would receive licenses, the great majority of whom operate small CVs. Eighty Alaskan-owned CPs would receive licenses. Relatively few of the vessel owners from other states are in the smallest CV class, and of the 769 vessels owned by residents of other states, 107 would be designated as CPs. A total of 2,954 vessels qualify overall, 1,275 more than fished in 1993.

Explicit Configuration: Table 715711 on page 48 of the Groundfish Tables Appendix, shows the maximum number of endorsements which could be issued under the 'EXPLICIT' reference configuration. The actual number of endorsements issued is likely to be lower because the final year in the qualifying period is not yet set. However, because the 1993 fishery has no relevance to the actual qualifying period set forth in the alternative and more recent data are not available, we have chosen not to include the final qualification year in these tables. This is an important point, and should not be overlooked. The actual number of endorsements will most likely be fewer than are shown here, especially given the patterns of vessels moving in and out of the fisheries.

The caveats above not withstanding, a total of 1,501 vessels would receive endorsements for the species defined in the alternative. This compares to the 2,954 which would qualify under the Universal reference alternative and the 1,679 vessels which fished in 1993, however the 1,501 qualifying vessels under the explicit configuration are strictly limited to those areas in which they have an area umbrella license, and the targets for which they hold an endorsement. This was discussed in the summary table in Section 3.2.2.1.

Closer examination of the table shows that well over half of the vessels which receive endorsements are small Alaskan owned vessels, the vast majority of which would receive only Pacific cod endorsements. Also evident in the table is the consistency of the catcher processors under this alternative. The numbers of species endorsements tend to be much more evenly distributed across the species in a given area for CPs. The number of Pacific cod endorsements exceeds the number of other endorsements in every case, but this is to be expected, given the differential qualification requirements.

Alaskans who receive endorsements in the Aleutian Islands are limited to CVs with P.cod endorsements and CPs. Of the 80 species endorsements going to CVs in the AI, 58 are for Pacific cod. That leaves only 22 endorsements available for the rest of the CV fleet, all of which would be from other states. Endorsements to Alaskan CPs are fairly evenly distributed among the 13 vessels participating in the area, although 7 vessels are clearly more diversified. CPs from other states also received a fairly even distribution of species endorsements, with the exception of Pacific cod. The fact that there are no squid endorsements issued means that squid would be a bycatch only species in the AI.

In the Bering Sea, the picture is much different. A total of 1,490 endorsements would be issued to 375 vessels. Of these, 251 would go to Alaskan vessel owners and 1,239 to owners from other states. Again Pacific cod dominates Alaskan endorsements. Ninety of the remaining 143 endorsements will go to Alaskan owned CPs, leaving 53 endorsements spread among the remaining 89 CVs. Pollock endorsements, the major species in the BS, will go to only 8 Alaskan based catcher vessels. Vessels from other states receive most of the endorsements issued in the BS. With the exception of Pacific cod, these are fairly evenly distributed among both the catcher vessels and the CPs. It appears that every vessel receiving a Bering Sea general license (with the exception of one Alaskan CP) will receive a Pacific cod endorsement. A total of 10 squid endorsements will be issued, which if the TAC were to increase or more reliable methods of harvesting were found, then these few vessels would have a potential windfall, even if the squid fishery is converted to a fixed gear only fishery.

The Gulf fisheries include many more licenses for Alaskans. In the Central Gulf, while Pacific cod endorsements would outnumber all other species endorsements 543 to 187, the diversity across the other species is much more pronounced. In most cases, the number of endorsements going to Alaskans in the Central Gulf would outnumber the endorsements going to owners from other states. Very few endorsements would be issued in the largest CV class. This could cause difficulties for those vessels, particularly if they wished to match their endorsements and their operations. There are 36 vessels in the Central Gulf which would receive area endorsements, but which would not receive any species endorsement. The reason for this is found in the species included in the program. Since no endorsements would be issued for rockfish, flathead sole, and arrowtooth in the GOA, fishers who made landings of only these species could qualify for an area license but would not receive any species endorsements. The area endorsements would not be entirely without value, because they would only have to purchase a Central Gulf species endorsement to be allowed to fish.

In the Eastern Gulf, only 13 of the 428 endorsements would be for species other than Pacific cod. Persons receiving these endorsements would be guaranteed a large share of any open fisheries in the area. In the Eastern Gulf there were 36 vessels which would receive area umbrella licenses, but which would not receive any species endorsements. Many of these were formerly rockfish vessels.

In the Western Gulf, there are 19 Alaskan owned CV endorsements for species other than Pacific cod. A total of 66 endorsements, other than P.cod, will be issued to vessel owners from other states. CPs from all states are fairly well diversified by species. In the Western Gulf there were 3 vessels which would receive area umbrella licenses, but which would not receive any species endorsements.

Overall, it appears that Alaskan vessels will be in the majority of those receiving endorsements in the GOA. It also appears that most of these vessels will receive only P.cod endorsements. Few of the endorsements for other species would go to Alaskans; most of the non-P.cod endorsements which go to Alaskans are found in the Central Gulf. Fishers from other states receive a much more diverse set of endorsements. Most of these are in the 60'-124' and CP classes. CPs from other states are well represented in all areas with the exception of the Eastern Gulf. The table shows clearly the patterns of participation in the fisheries. Ignoring Pacific cod for a moment, the 3-year participation requirement weeds out many more interim participants. If an additional year of participation is added for both Pacific cod and the remaining species, (i.e., the 365 days prior to the Council's final action), then this alternative has the potential to reduce the fleet tremendously, creating an effective license program. This reduction however, could prove very disruptive for the fleet, and could be very divisive within fishing communities themselves. In effect, the winners, those that receive licenses, will be able to catch the fish normally caught by the losers, those that do not receive licenses.

Differential Impacts on Vessel Types

The universal and explicit configuration have differential impacts on vessels of different types. This is because of the participation patterns exhibited by each category of vessel. Vessels which would receive licenses under the two reference configurations, as well as the vessels which participated in 1993 under the current configuration were classified using the same definitions as were used in Section 2.2. These are repeated below.

1. <u>TH1 = Trawler Harvester 1. Trawlers> 125 feet.</u> These vessels also use pots. They are required to have 100% observer coverage since they are over 125 feet. Most will be required to have three licensed officers on board. They are primarily mid-water trawl vessels with large auxiliary engines, and in general will have the capacity to deliver both onshore and offshore. Owners are typically not Alaska residents.

2. TH2 = Trawler Harvester 2. Trawlers between 90 and 125 feet. These vessels also use pots. They are required to have 30% observer coverage and only 1 licensed officer. They are primarily mid-water trawl vessels with large auxiliary engines, and in general will not have the capacity to deliver large amounts of fish onshore. Owners are typically not Alaska residents.

3. TH3 = Trawler Harvester 3. Trawlers between 58 and 90 feet. These vessels also use longline, and pots. They do not, in general, have large auxiliary engines and therefore are less capable as mid-water trawl vessels. They are more likely to use bottom trawl gear. Many of the owners of these vessels are located in Kodiak, while another large group is located in Washington and Oregon.

4. TH4 = Trawler harvester 4. Trawlers < 58 feet. These vessels also use longlines, pots, and seines. This class represents the vessels out of King Cove and Sand Point, involved in a wide range of fisheries.

5. LH1 = Longline Harvester 1: Longliners > 58 feet. These vessels are full-time longline vessels , and are principally composed of the schooner fleet from Seattle. Other longline vessels in this class hail from Kodiak and other Alaskan ports.

6. LH2 = Longliner Harvester 2: Longliners/limit seiners between 50 and 58 feet. This group is principally defined by the "Petersburg Fleet." They are very much involved in salmon fisheries and also in the sablefish and halibut fisheries.

7. LH3 = Longline Harvester 3: Longliners < 50 feet. This category is mainly representative of the "Sitka" fleet. They also use trolls and jigs, and are involved in salmon fisheries as well as the demersal shelf rockfish fishery.

8. PH1 = Pot Harvester 1: Pot vessels > 125 feet. These vessels are principally crab vessels. Because of their large size, they will generally be required to have three licensed officers on board. They are able to carry more pots than smaller vessels in many of the crab fisheries with pot caps. In recent years, some of these vessels have fished P.cod with pots. They may also use longlines and trawls.

9. PH2 = Pot Harvester 2: Pot vessels < 125 feet. These are smaller crab vessels which also use longlines and trawls.

10. TP1 = Trawler Processor 1. These are large factory trawlers generally over 200', with the ability to process surimi, fillets, and headed and gutted products.

11. TP2 = Trawler Processor 2. These are large factory trawlers generally over 200', with the ability to process fillets, and headed/ gutted products.

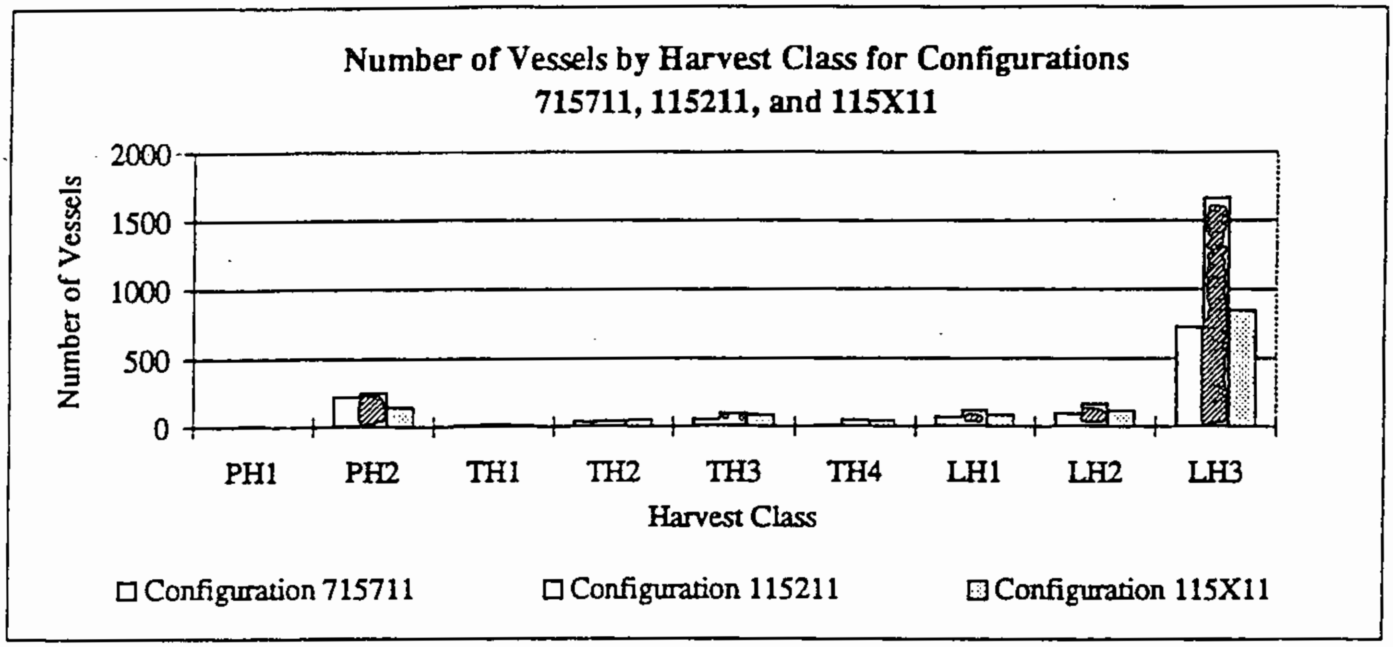
12. TP3 = Trawler Processor 3. These vessels can process headed and gutted products. They are usually less than 150' and are not generally load-line stabilized, and therefore are unable to upgrade their processing lines.

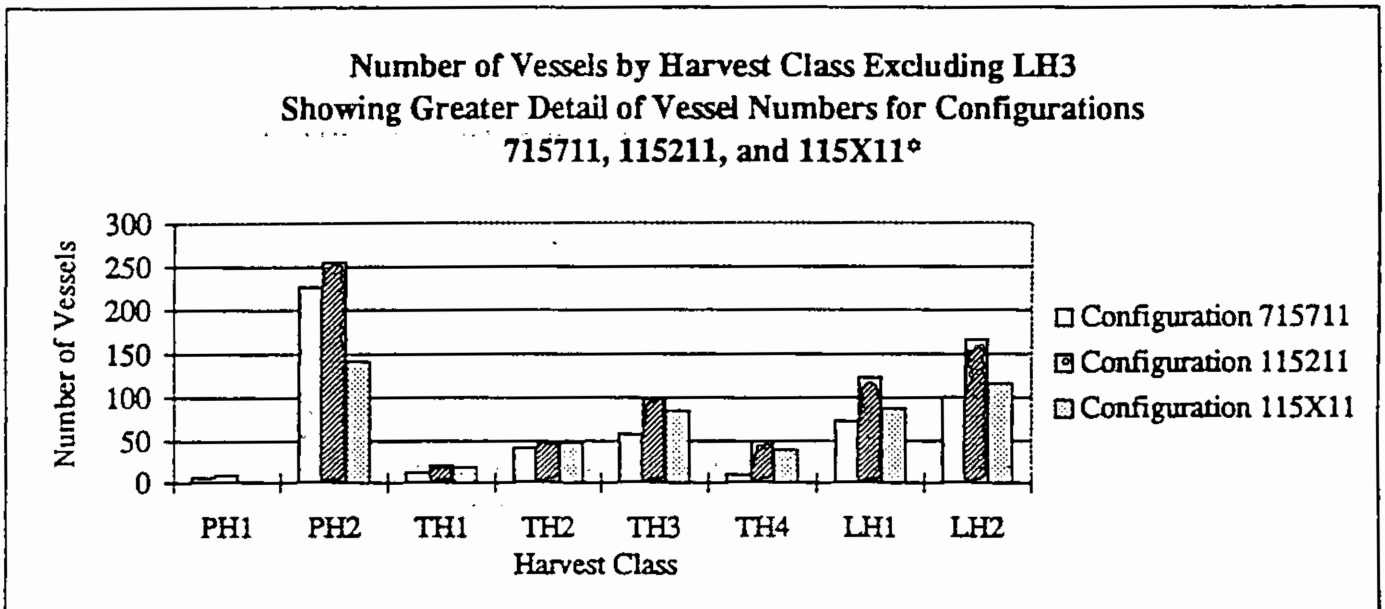
13. LP1 = Longline Processor 1. Process their longline caught fish into headed and gutted product.

14. PP1 = Pot Processor 1. Pots are principle gear, may use others. Primarily, these vessels are crabbers with brine freezers. Some will have the ability to switch to groundfish, processing H&G product.

The three charts below in Figure 3.12 depict the numbers of vessels which would qualify under each configuration. It is clear that the LH3 vessels would receive the greatest number of licenses under any of the configurations. These are followed by vessels which are classified as pot harvesters. PH2 vessels are classified as such by their participation in the crab fisheries, and the number of licenses they would receive is a reflection of their participation in the groundfish fisheries, in most cases using longlines.

Figure 3.12

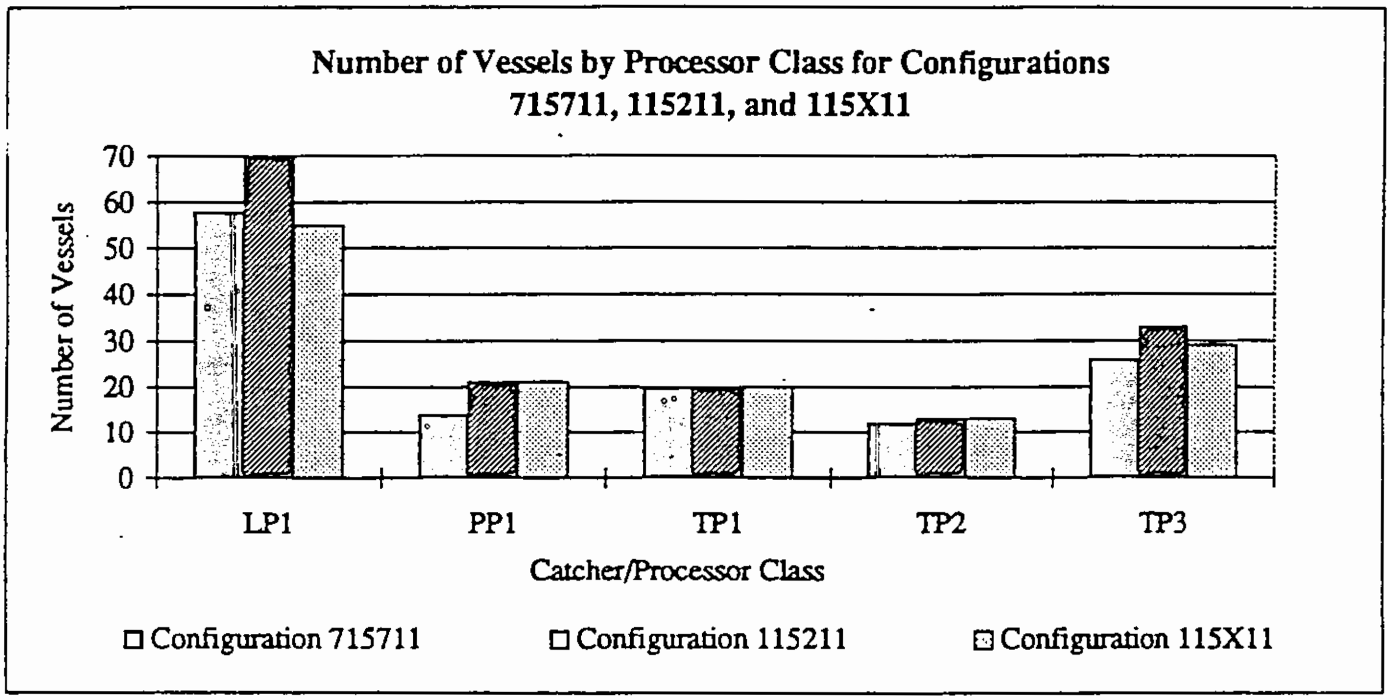




* Numbers used in this chart are the same as those used in the chart above with exception of the harvest class LH3 which was removed in order to show greater detail of the remaining classes.

(continued next page)

Figure 3.12 (continued)



The charts also show the relative impacts of the three configurations. The first two charts show licenses issued to harvest vessels; the second excludes the LH3 class in order to show more detail of the remaining harvest classes. The third chart show the catcher processor classes. The universal configuration (115211) would issue a much greater percentage of the licenses to smaller vessels, while the impacts on the larger vessels, because of their more constant participation patterns, are relatively insignificant. For example, the number of TP1 is unchanged under each configuration. The TH4 category is particularly hard hit under the explicit configuration (715711). Approximately 10 of these small trawlers, predominantly from the Alaskan Peninsula would receive licenses under this configuration, while in 1993 there were 50 of these vessels in the groundfish fisheries.

Regional Impacts

The charts discussed above are also indicators of regional impacts. As pointed out above, vessels in the TH4 class are in general owned by residents of the Alaska Peninsula. Therefore, the explicit configuration would likely have a negative impact on these communities. The LH3 vessels are owned predominantly by residents of Southeast Alaska. This class of vessels also takes a big hit under the explicit configuration. Larger trawl harvesters and trawler processors, generally owned by residents of Oregon and Washington, appear to be less impacted by the different configurations due to their more consistent participation patterns

More detail on the numbers of licenses and endorsements going to residents of four regions of Alaska and to residents of Washington and Oregon/Other States is shown in the Regional distribution tables at the end of the of each section in the Groundfish Tables Appendix. In these tables, Alaska was divided into four regions:

1) Eastern Alaska, from Yakutat southward.
2) Central Alaska, including Valdez, Cordova, the Kenai Peninsula and Borough, Anchorage and Mat-su Boroughs and communities North and East on the Alaska highway system.
3) Western Alaska includes the Alaska Peninsula, Dutch Harbor/Unalaska, the Aleutians, the Pribilofs and all other communities generally west of the road system.
4) Kodiak, including all communities on the island.

The regional distribution tables are in a slightly different format than the earlier tables, particularly the tables showing the regional distribution under the universal and current configurations. These tables all use the species endorsements defined under option 700,000, with the total licensed vessels shown for subareas and for all areas, however for the current and universal configuration the total number of qualifying vessels is the same as seen under configurations 115X11 and 115211. The first page of these tables shows the regional distribution within Alaska and the second page shows the distribution licenses across Alaska, Washington, and Oregon. The bottom line on each page shows the total numbers of vessels which would receive licenses. This line is the equivalent of a single license for all areas and species. The summary Table 3.28 below takes the bottom line from the three regional distribution tables. In general residents from Alaska would receive fewer licenses under the explicit configuration than under the universal or current configurations. Eastern Alaska would lose significant numbers, and Kodiak would remain about the same as in 1993. Central and Western Alaska residents would receive a greater number of licenses than fished in 1993.

Table 3.28

Regional Distribution of Licenses Within Alaska												
	Central Alaska			Eastern Alaska			Western Alaska			Kodiak		
Configuration	CV	CP	Total	CV	CP	Total	CV	CP	Total	CV	CP	Total
715X11	271	25	296	659	19	678	72	2	74	161	6	167
715211	637	41	678	952	27	979	185	1	186	268	9	277
715711	350	29	379	396	16	412	106	1	107	156	4	160

Regional Distribution of Licenses Across States												
	Alaska Total			Oregon Total			Washington Total			All Regions Total		
Configuration	CV	CP	Total	CV	CP	Total	CV	CP	Total	CV	CP	Total
715X11	1,163	52	1,215	86	7	93	269	102	371	1,518	161	1,679
715211	2,042	78	2,120	263	7	270	462	102	564	2,767	187	2,954
715711	1,008	50	1,058	106	6	112	241	90	331	1,355	146	1,501

Although the explicit configuration appears to issue licenses to more vessels than fished in 1993 to some regions, with the endorsement system, the opportunities to fish are greatly reduced. Most of the vessels in these regions will receive only Pacific cod endorsements. Further, though the qualifying period used in the explicit configuration requires participation in the year before final Council action, the data in the tables above do not take that into account because 1994 data is not available. This could potentially bring the number of qualifying vessels below the level shown in the current configuration, and would, in any case never, allow a vessel to qualify which had not also fished in that 365 day period. In order to effectively judge the impacts of the license configurations, one needs to look at the performance in 1993 of vessels which would receive licenses.

Harvests of "Licensed" Vessels in the 1993 Groundfish Fishery

The harvest by vessels which would receive licenses and endorsements under the universal and explicit configurations is discussed in the section below. This will give some indication of the level of harvesting capacity remaining after a license limitation program is implemented. If the harvesting capacity of the licensed fleet is not significantly less than that of the existing fleet, then a license program is less likely to bring about benefits. On the other hand if the licensed fleet is unable to harvest available resources, then the license program may have cut too deeply into the fleet's capacity.

The Universal Configuration in 1993.

Tables 3.29 and 3.30 show how much of the 1993 fishery was prosecuted by vessels which would receive licenses under the universal reference configuration. Table 3.29 shows the licensed and non-licensed participants by species and area. The EG fisheries had the greatest incidence of unlicensed participants, where 104 of 446 vessels landing P.cod and 214 of the 1,276 vessels landing rockfish would not have had licenses. From Table 3.30, we can see that the unlicensed catch of these species in the EG was 55% of the total for P.cod, but only 2% of the total for Rockfish. Recall from Section 3.2.2.1, that the Gulf rockfish fisheries are dominated by less than 20 vessels. In general, 90% of the vessels participating in the different species area combinations in 1993 would be licensed under the universal configuration, and 96% of the total groundfish harvest was taken by those vessels.

Table 3.29 Participants by Species and FMPAREA Which Would Have Been Licensed If The "Universal" Reference Configuration (#115211) Had Been In Place in 1993.

		AI		BS		CG		EG		WG		All Areas	
FLAT	Licensed	242	96%	1,097	93%	641	93%	56	98%	273	94%	2,309	93%
	Unlicensed	10	4%	85	7%	51	7%	1	2%	16	6%	163	7%
FLAT Total		252	100%	1,182	100%	692	100%	57	100%	289	100%	2,472	100%
OGRN	Licensed	136	94%	396	93%	414	93%	48	92%	133	94%	1,127	93%
	Unlicensed	9	6%	28	7%	33	7%	4	8%	8	6%	82	7%
OGRN Total		145	100%	424	100%	447	100%	52	100%	141	100%	1,209	100%
PCOD	Licensed	104	95%	286	89%	464	87%	338	76%	157	92%	1,349	85%
	Unlicensed	5	5%	37	11%	68	13%	108	24%	14	8%	232	15%
PCOD Total		109	100%	323	100%	532	100%	446	100%	171	100%	1,581	100%
PLCK	Licensed	85	98%	241	89%	187	93%	19	100%	82	91%	614	92%
	Unlicensed	2	2%	30	11%	14	7%	0	0%	8	9%	54	8%
PLCK Total		87	100%	271	100%	201	100%	19	100%	90	100%	668	100%
ROCK	Licensed	273	97%	437	92%	1,220	88%	1,062	83%	173	96%	3,165	88%
	Unlicensed	8	3%	37	8%	162	12%	214	17%	7	4%	428	12%
ROCK Total		281	100%	474	100%	1,382	100%	1,276	100%	180	100%	3,593	100%
Licensed Total		840	96%	2,457	92%	2,926	90%	1,523	82%	818	94%	8,564	90%
Unlicensed Total		34	4%	217	8%	328	10%	327	18%	53	6%	959	10%
Total Catch in 1993		874	100%	2,674	100%	3,254	100%	1,850	100%	871	100%	9,523	100%

Table 3.30 Catch in MT by Species and FMPAREA Which Have Been Licensed If The "Universal" Reference Configuration (#115211) Had Been In Place in 1993.

		AI		BS		CG		EG		WG		All Areas	
FLAT	Licensed	2,897	97%	200,076	99%	28,534	89%	596	100%	4,178	100%	236,282	98%
	Unlicensed	81	3%	1,082	1%	3,694	11%	0	0%	17	0%	4,874	2%
FLAT Total		2,978	100%	201,158	100%	32,228	100%	597	100%	4,195	100%	241,156	100%
OGRN	Licensed	61,445	100%	2,047	92%	6,423	99%	1,043	97%	830	99%	71,788	100%
	Unlicensed	51	0%	167	8%	70	1%	28	3%	5	1%	321	0%
OGRN Total		61,496	100%	2,214	100%	6,493	100%	1,071	100%	835	100%	72,109	100%
PCOD	Licensed	24,202	93%	150,194	97%	35,988	89%	1,516	45%	18,867	61%	230,767	90%
	Unlicensed	1,790	7%	4,896	3%	4,243	11%	1,816	55%	12,010	39%	24,755	10%
PCOD Total		25,992	100%	155,090	100%	40,231	100%	3,332	100%	30,877	100%	255,522	100%
PLCK	Licensed	43,513	97%	1,145,623	97%	77,511	95%	1,884	100%	16,249	87%	1,284,780	97%
	Unlicensed	1,547	3%	36,704	3%	4,252	5%	0	0%	2,361	13%	44,864	3%
PLCK Total		45,060	100%	1,182,327	100%	81,763	100%	1,884	100%	18,610	100%	1,329,644	100%
ROCK	Licensed	18,574	100%	4,946	100%	9,880	99%	4,603	98%	2,092	100%	40,095	99%
	Unlicensed	11	0%	6	0%	110	1%	90	2%	2	0%	218	1%
ROCK Total		18,585	100%	4,952	100%	9,990	100%	4,692	100%	2,094	100%	40,314	100%
Licensed Total		150,631	98%	1,502,886	97%	158,337	93%	9,641	83%	42,216	75%	1,863,711	96%
Unlicensed Total		3,479	2%	42,855	3%	12,369	7%	1,935	17%	14,395	25%	75,033	4%
Total Catch in 1993		154,111	100%	1,545,741	100%	170,706	100%	11,576	100%	56,611	100%	1,938,744	100%

The significance of these tables is two-fold. First, the disruption in the fleet caused by the universal reference configuration appears to be minimal. Since there is little disruption, there is little likelihood that fishing patterns will change or that the license program will impact the ability of the fleet to harvest the TACs. On the other hand, for a license program to be effective it has to limit the harvesting capacity of the vessels participating in the fisheries. Since only 1,700 vessels fished in 1993 and most of these were licensed, it is unlikely that the universal reference configuration with its 2,954 licensed vessels would restrict the fleet. Therefore, it is unlikely that this configuration would produce an effective license program.

Explicit Reference Configuration in 1993

Table 3.31 shows the number of vessels which fished in 1993 for each species/area combination, and matches these vessel to those which would receive species area endorsements under the explicit configuration. The table lists the five rows for each species, with the columns showing the different management areas. The first row for each species shows the number of species-area endorsements that would have been issued. The second row (endorsements used in 1993) shows the number which fished during 1993 in areas/species for which they would have received an endorsement. The third row (Endorsements unused) shows the number of vessels which would receive endorsements, but which did not fish in that area for that species in 1993. This row, added to the previous row, will sum to the number of endorsements issued shown in the first row. The fourth row (No Endorsement) shows the number of vessels which fished in 1993 which would not have received an endorsement for that particular species-area combination. Finally, the last row in the set shows the actual number of vessels which fished for that species in 1993. Adding rows 2 and 4 produces row 5.

As an example, refer to the first species, Atka Mackerel (AMCK) in the Bering Sea. We see that 120 endorsements would be issued under the explicit configuration, 43 endorsements were used (row 2), and 77 were unused (row 3). Additionally 19 vessels (row 4) which would not receive licenses under the explicit configuration made landings of BS Atka Mackerel in 1993. In all, a total of 62 vessels fished for Bering Sea Atka Mackerel.

Over half of the total number of 'unused' endorsements were Pacific cod endorsements (971). This would be expected since nearly half of the endorsements issued were P.cod endorsements (1804). In the Bering Sea approximately 67% of the 1,490 endorsements issued were used. In the CG on the other hand, only 50% of the endorsements issued were used, while in the AI, EG, and WG there were more endorsements unused than were used. In those areas, more vessels landed species completely outside the license program than used endorsements. The bottom set of rows summarizes the fishery in 1993 and the number of vessels which would have received endorsements. In all, 1,626 endorsements were unused in 1993, 44% of the 3,656 total. Together, these numbers show an important feature of the groundfish fisheries in the North Pacific: the movement of vessels in and out of fisheries over time.

The number of unused endorsements also provides an indicator of the impacts of the final year of the explicit reference configuration qualifying period. In order to meet <u>all</u> the requirements of the explicit configuration, a vessel must have qualified for the endorsements shown in the table, <u>and</u> must also fish in the year prior to the Council's final action. If the Council had taken action on January 1, 1994, then the 1993 calendar year would have been 365 days prior to Council action, and 1,626 fewer endorsements would have been issued. If the Council takes action in January 1995, then all of 1994 would be included in the qualifying period.

Table 3.32 details the catch in 1993 under the hypothetical situation. Eighty percent of the total catch was made by vessels which would have been licensed. Most of the 'unlicensed' catch is in the pollock fishery in the Bering Sea, with Pacific cod and pollock in the remaining areas contributing heavily. The catch of unlicensed rockfish in the GOA, unlicensed other groundfish in all areas, and unlicensed flatfish species accounts for nearly 52,000 mt of the unlicensed catch.

Assuming that pollock is the driving force in the groundfish fisheries, followed closely by Pacific cod, the table suggests some implications for change in the fishing patterns. Since 88% of the BS pollock was harvested by vessels which would have received licenses, one could assume that, were this program in place,

Table 3.31	Use of Species Enodrsements If The Explicit Configuration Had Been In Place In 1993							
			AI	BS	CG	EG	WG	All Areas
AMCK	Endorsements	issued	31	120	5	0	28	184
		used in '93	13	43	2	0	9	67
		unused	18	77	3	0	19	117
	No Endorsement		31	19	2	0	11	63
Total Vessels in AMCK			44	62	4	0	20	130
DFLT	Endorsements	issued	0	0	78	2	54	134
		used in '93	0	0	38	0	7	45
		unused	0	0	40	2	47	89
	No Endorsement		0	0	69	10	33	112
Total Vessels in DFLT			0	0	107	10	40	157
GTRB	Endorsements	issued	41	165	0	0	0	206
		used in '93	20	110	0	0	0	130
		unused	21	55	0	0	0	76
	No Endorsement		61	61	0	0	0	122
Total Vessels in GTRB			81	171	0	0	0	252
OFLT	Endorsements	issued	36	170	0	0	0	206
		used in '93	15	142	0	0	0	157
		unused	21	28	0	0	0	49
	No Endorsement		29	65	0	0	0	94
Total Vessels in OFLT			44	207	0	0	0	251
PCOD	Endorsements	issued	121	374	668	428	213	1804
		used in '93	45	231	303	173	81	833
		unused	76	143	365	255	132	971
	No Endorsement		58	42	212	273	79	664
Total Vessels in PCOD			103	273	515	446	160	1497
PLCK	Endorsements	issued	41	170	131	7	54	403
		used in '93	34	151	63	1	16	265
		unused	7	19	69	6	38	139
	No Endorsement		51	81	136	18	71	357
Total Vessels in PLCK			85	231	199	19	87	621
	Endorsements	issued	48	169	0	0	0	217
ROCK		used in '93	30	130	0	0	0	160
		unused	18	39	0	0	0	57
	No Endorsement		80	81	0	0	0	161
Total Vessels in ROCK			110	211	0	0	0	321
RSOL	Endorsements	issued	32	161	0	0	0	193
		used in '93	15	135	0	0	0	150
		unused	17	26	0	0	0	43
	No Endorsement		22	34	0	0	0	56
Total Vessels in RSOL			37	169	0	0	0	206
SFLT	Endorsements	issued	0	0	87	4	48	139
		used in '93	0	0	80	1	20	101
		unused	0	0	7	3	28	38
	No Endorsement		0	0	45	3	58	106
Total Vessels in SFLT			0	0	125	4	78	207
SQID	Endorsements	issued	0	10	0	0	0	10
		used in '93	0	7	0	0	0	7
		unused	0	3	0	0	0	3
	No Endorsement		32	105	0	0	0	137
Total Vessels in SQID			32	112	0	0	0	144
YSOL	Endorsements	issued	9	151	0	0	0	160
		used in '93	0	116	0	0	0	116
		unused	9	35	0	0	0	44
	No Endorsement		1	31	0	0	0	32
Total Vessels in YSOL			1	147	0	0	0	148
Total Vessels in NL FLAT			73	213	282	37	90	695
Total Vessels in NL OGRN			58	162	317	50	110	697
Total Vessels in NL ROCK			0	0	514	581	89	1184
TOTAL	Endorsements	issued	359	1490	969	441	397	3656
		used in '93	172	1065	486	175	133	2031
		unused	187	425	484	266	264	1626
	No Endorsement		365	519	464	304	252	1904
Total Species-Area Combinations in 1993			537	1583	950	479	385	3934

Table 3.32 Catch In MT by Species and FMPAREA Which Would Have Been Licensed If The Explicit Reference Configuration (#715711) Had Been In Place In 1993.

		AI		BS		CG		EG		WG		Total	
AMCK	Licensed	50,456.0	85%	161.8	63%	11.9	77%	0.0	#N/A	62.3	15%	50,692.1	84%
	Not Licensed	9,224.7	15%	96.2	37%	3.5	23%	0.0	#N/A	340.0	85%	9,664.4	16%
AMCK TOTAL		59,680.7	100%	258.1	100%	15.4	100%	0.0	#N/A	402.3	100%	60,356.4	100%
DFLT	Licensed	0.0	#N/A	0.0	#N/A	3,017.4	47%	0.0	0%	320.9	89%	3,338.3	48%
	Not Licensed	0.0	#N/A	0.0	#N/A	3,442.6	53%	144.4	100%	39.5	11%	3,626.5	52%
DFLT TOTAL		0.0	#N/A	0.0	#N/A	6,460.0	100%	144.4	100%	360.4	100%	6,964.8	100%
GTRB	Licensed	691.8	41%	2,990.1	54%	0.0	#N/A	0.0	#N/A	0.0	#N/A	3,681.9	51%
	Not Licensed	982.4	59%	2,590.4	46%	0.0	#N/A	0.0	#N/A	0.0	#N/A	3,572.8	49%
GTRB TOTAL		1,674.2	100%	5,580.5	100%	0.0	#N/A	0.0	#N/A	0.0	#N/A	7,254.7	100%
OFLT	Licensed	9.7	15%	23,588.0	89%	0.0	#N/A	0.0	#N/A	0.0	#N/A	23,597.7	89%
	Not Licensed	54.2	85%	2,933.4	11%	0.0	#N/A	0.0	#N/A	0.0	#N/A	2,987.6	11%
OFLT TOTAL		63.9	100%	26,521.4	100%	0.0	#N/A	0.0	#N/A	0.0	#N/A	26,585.3	100%
PCOD	Licensed	12,475.0	48%	132,823.0	86%	27,420.0	68%	631.4	19%	11,093.0	36%	184,442.4	72%
	Not Licensed	13,517.0	52%	22,268.0	14%	12,811.0	32%	2,700.5	81%	19,785.0	64%	71,081.5	28%
PCOD TOTAL		25,992.0	100%	155,091.0	100%	40,231.0	100%	3,331.9	100%	30,878.0	100%	255,523.9	100%
PLCK	Licensed	28,506.0	63%	1,039,089.0	88%	52,173.0	64%	0.7	0%	3,810.5	20%	1,123,579.2	85%
	Not Licensed	16,554.0	37%	143,237.0	12%	29,591.0	36%	1,883.3	100%	14,799.0	80%	206,064.3	15%
PLCK TOTAL		45,060.0	100%	1,182,326.0	100%	81,764.0	100%	1,884.0	100%	18,609.5	100%	1,329,643.5	100%
ROCK	Licensed	14,568.0	78%	3,665.0	74%	0.0	#N/A	0.0	#N/A	0.0	#N/A	18,233.0	77%
	Not Licensed	4,017.2	22%	1,286.8	26%	0.0	#N/A	0.0	#N/A	0.0	#N/A	5,304.0	23%
ROCK TOTAL		18,585.2	100%	4,951.8	100%	0.0	#N/A	0.0	#N/A	0.0	#N/A	23,537.0	100%
RSOL	Licensed	80.2	32%	49,652.0	89%	0.0	#N/A	0.0	0%	0.0	#N/A	49,732.2	88%
	Not Licensed	170.5	68%	6,414.7	11%	0.0	#N/A	6.0	100%	0.0	#N/A	6,591.2	12%
RSOL TOTAL		250.7	100%	56,066.7	100%	0.0	#N/A	6.0	100%	0.0	#N/A	56,323.4	100%
SFLT	Licensed	0.0	#N/A	0.0	#N/A	5,834.4	48%	6.9	66%	26.6	1%	5,867.8	42%
	Not Licensed	0.0	#N/A	0.0	#N/A	6,234.0	52%	3.6	34%	1,864.8	99%	8,102.4	58%
SFLT TOTAL		0.0	#N/A	0.0	#N/A	12,068.4	100%	10.5	100%	1,891.4	100%	13,970.2	100%
SQID	Licensed	0.0	0%	45.8	11%	0.0	#N/A	0.0	#N/A	0.0	#N/A	45.8	9%
	Not Licensed	54.9	100%	388.8	89%	0.0	#N/A	0.0	#N/A	0.0	#N/A	443.8	91%
SQID TOTAL		54.9	100%	434.6	100%	0.0	#N/A	0.0	#N/A	0.0	#N/A	489.5	100%
YSOL	Licensed	0.0	0%	90,187.0	85%	0.0	#N/A	0.0	#N/A	0.0	#N/A	90,187.0	85%
	Not Licensed	0.2	100%	16,310.0	15%	0.0	#N/A	0.0	#N/A	0.0	#N/A	16,310.2	15%
YSOL TOTAL		0.2	100%	106,497.0	100%	0.0	#N/A	0.0	#N/A	0.0	#N/A	106,497.2	100%
NL. FLAT	Licensed	0.0	0%	0.0	0%	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	Not Licensed	989.3	100%	6,492.6	100%	13,700.0	100%	435.9	100%	1,943.1	100%	23,560.9	100%
NL. FLAT TOTAL		989.3	100%	6,492.6	100%	13,700.0	100%	435.9	100%	1,943.1	100%	23,560.9	100%
NL. OGRN	Licensed	0.0	0%	0.0	0%	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	Not Licensed	1,761.1	100%	1,521.6	100%	6,493.1	100%	1,071.0	100%	494.6	100%	11,341.4	100%
NL. OGRN TOTAL		1,761.1	100%	1,521.6	100%	6,493.1	100%	1,071.0	100%	494.6	100%	11,341.4	100%
NL. ROCK	Licensed	0.0	#N/A	0.0	#N/A	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	Not Licensed	0.0	#N/A	0.0	#N/A	9,990.2	100%	4,692.5	100%	2,094.4	100%	16,777.1	100%
NL. ROCK TOTAL		0.0	#N/A	0.0	#N/A	9,990.2	100%	4,692.5	100%	2,094.4	100%	16,777.1	100%
Total	Licensed	106,786.7	69%	1,342,201.7	87%	88,456.7	52%	639.0	6%	15,313.3	27%	1,553,397.4	80%
	Not Licensed	47,325.7	31%	203,539.6	13%	82,265.4	48%	10,937.2	94%	41,360.4	73%	385,428.2	20%
Area Total		154,112.3	100%	1,545,741.3	100%	170,722.1	100%	11,576.2	100%	56,673.7	100%	1,938,825.5	100%

the entire pollock TAC could be harvested. One could speculate that in order for this to occur the season length would be 113% as long as in 1993. Since the offshore 'A' season in the BS in 1993 lasted 33 days, then it might be expected that under the explicit license configuration it might last an additional 3-4 days, perhaps a week. The onshore season lasted 63 days so a 13% increase in the season length would push the opening to perhaps 72 days. If the pollock season were extended by a longer period, perhaps a month, then it could be expected that the longer season would impact the prosecution of other fisheries in which the pollock vessels are involved. However, with only a 13% increase anticipated, the impacts are likely to be small.

The same scenario, if played out in the Central Gulf could result in a different outcome. There, 36% of the pollock was harvested by vessels which would not receive licenses. The pollock season might be expected to increase in length by 56% and the Pacific cod seasons by 47%. The end result could be a year round fishery for pollock and Pacific cod. The situation in the CG flatfish fisheries should be viewed with concern. In 1993 only 47% of DFLT and 48% of the SFLT harvests were made by vessels which would receive endorsements. If the pollock and Pacific cod seasons are expected to lengthen significantly, then it is possible that the TAC of these flatfish species could go unharvested. The ability of the program to produce an optimal yield could be questioned if these fisheries, along with the rockfish fisheries in the Gulf, go unharvested.

General Conclusions Regarding The Social and Economic Impacts of the Reference Configurations

In general it appears that the universal configuration is less of everything in a license program. It is less limiting than other options, and therefore less effective. It is also less disruptive and would appear to have fewer negative impacts on Alaskan residents. The same cannot be said of the explicit configuration, which appears to have some of the necessary ingredients for an effective license program, particularly in the GOA, where the fleet and harvesting capacity is cut back substantially. These cut-backs could prove to have negative social impacts, particularly in Alaska coastal communities.

Any license program will produce winners and losers. The winners will gain access to fishing opportunities given up by the losers. If the same amount of fish is harvested, it is likely that the overall benefits to the nation will remain largely unaffected. If however, the reduction in harvesting capacity falls below that necessary needed to harvest the OY, a loss to the nation may be seen. This will very likely result in new capital flowing into the fishery. Because existing capital in the form of unlicensed vessels would be idled, a new influx of harvesting capacity would be of questionable merit to the nation. This is the catch-22 of license programs. In order to be effective, a license limitation program needs to cut back the fleet and the participants in the fisheries. Once the hard cuts are made however, the remaining fleet will still be locked in a race to harvest the resource.

Potential benefits from any license program have to be weighed against other costs and standards as well. Management and enforcement of a fishery specific license program as developed in the explicit configuration, could well prove more costly than any gains to the nation from the license limitation program. These will be discussed in Chapter 4 of this document. The last section of this chapter will discuss other issues which have been linked to the license limitation program.

3.2.2.9 Linkages between License Limitation and other Actions

As with the No Action alternative, the potential impacts of a License Limitation program must be viewed not in a vacuum, but rather in the context of other potential actions which may be taken by the Council either concurrently or at some point in the future. Under the No Action alternative, we discussed some of the other potential actions which may be taken which would affect the evolution of status quo, including a vessel moratorium (may be resubmitted), inshore/offshore/CDQ extensions, total weight measurement, full utilization or harvest priority programs, and IFQ programs for groundfish and crab. In the case of the License Limitation alternatives, some of the specific proposals include direct linkages to future concurrent programs. These linkages are discussed in this section.

For example, the State of Alaska's original proposal for a groundfish license program (GLS) contained, in addition to specific license provisions, the following provisions: (1) full retention of all species for which a TAC exists, except PSCs, with a minimum requirement for food grade utilization, (2) total catch measurement for all vessels participating in the license program, (3) a phased-in transition to an IFQ program, and (4) an explicit inshore/offshore allocation based on 1993-1994 averages for each species/area. Each of these proposals represents a significant action, in and of itself, aside from the provisions of the license limitation program chosen by the Council (if chosen). As such, they have been bifurcated from the license limitation analysis and are being analyzed and considered on separate, but concurrent, tracks.

The full retention proposal is discussed in various sections of this document as it relates to the status quo or specific license limitation options being considered (Section 3.1.3, 3.2.2.1, and 6.4). In particular, we conducted a cursory examination of the implications of such a proposal with regard to the general economic implications (under No Action or under a License Limitation program), with regard to specific options for license programs, and with regard to the Council's Problem Statement for CRP. A license limitation program, in conjunction with a full retention mandate, does have more potential to address Council concerns regarding bycatch, discards, and waste in the fisheries than a license program alone. As noted previously, such a program could be implemented under the status quo, or No Action, alternative as well. A separate amendment analysis is in preparation to more fully evaluate the biologic and economic ramifications of this proposal. Total catch measurement, also being evaluated separately, could add an additional management tool to address the bycatch/waste issue, and provide fisheries managers with a tool for more accurate monitoring of total removals.

The proposal also contains an explicit transition from the GLS to an IFQ program, where the IFQ program is based on, and would replace, the GLS system. QS/IFQ would only be awarded to GLS license holders and, the eventual QS/IFQ allocation would be at least partially based on a license holders' performance under the GLS program. This performance under the IFQ program would be based partly on catch history and partly on bycatch performance, with a penalty for 'dirty fishing,' via the Harvest Priority Multiplier. One aspect of this transition period, basing IFQ allocations on catch history during the GLS program, could tend to exacerbate the current race for fish, and all the attendant problems, as license holders attempt to maximize their landings. On the other hand, the Harvest Priority Multiplier envisioned in this proposal may counteract this tendency, as fishermen alter fishing behavior to lower bycatch of PSC species. One of the intents of the proposal is to rectify bycatch/waste problems in the fisheries prior to allocating IFQs, as opposed to basing IFQ allocations on historical fishing practices.

One of the advantages of implementing the license program as a first step in a phase-in approach would be to provide some stability for qualified participants, in terms of knowing who is in and who is out in future limited entry development. They would also have a good indication of the species for which they would be eligible, via their license designations during the transition. Controversial decisions regarding IFQ recipients, and how much they would receive, may be mitigated by this approach as it defines early on what the rules of the game will be. These types of decisions have been a crucial stumbling block for the industry and Council in previous IFQ discussions. However, some hard allocational decisions will have to be made in the more immediate context of the license limitation alternatives.

The inshore/offshore issue is also a potential linkage issue as the Council proceeds with development of a CRP program, whether it be a license program, IFQs, or some phase-in approach. With the current split scheduled to expire at the end of 1995 (along with the pollock CDQ program), the Council has initiated an analysis of continuing the current allocations for 1996 and beyond. As with the other proposals discussed in this section, this amendment could be pursued regardless of action on license limitation.

One other item of note when discussing linkages is the proposal for a Mandatory Skipper Reporting System. As a link to eventual IFQs, this mechanism offers an opportunity to rectify data deficiencies which have, in the past, plagued any attempt to evaluate 'skipper crew member options' in IFQ analyses. Regardless of action taken by the Council on specific license limitation options contained in this amendment, this proposal would be easily implemented and would provide data for more meaningful evaluations in the future.

3.2.3 Analysis of Crab License Limitation Alternatives

The Council's crab license program consists of five component parts which together define the initial allocation of licenses and the general configuration of the program. The components are as follows: (1) The Nature of the License, (2) The License Recipients, (3) License Designations(4) The Qualifying Period, and (5) Landing Requirements. As with groundfish, each option under each component is examined to assess its impacts. Many of these options are the same as for groundfish, so this analysis concentrates on those options which differ.

The components are shown in bold in the box below with their respective options. One element of each of the five sets of components combines to define a single license alternative. By using the numbering scheme and adding the numbers identifying each component element together, one can uniquely identify each of the 96 possible alternatives. As an example: Define a license alternative by combining the following elements: (1) Licenses for each species/area combination [#30000], (2) Current owners [#1000], (3) Catcher vessels & Catcher/processors and vessel length [#400], (4) Jun. 28, 1989 - Jun. 27, 1992 [#20], and (5) 1/3 landings required [#2]. By adding the numbers in the brackets together, we identify this alternative as # 31422.

CRAB LICENSES

COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING INITIAL ASSIGNMENTS OF LICENSES

	NUMBERING SCHEME
Nature of Licenses	
Single license for all species and areas	10000
Licenses for species (e.g., *C. opilio, C. bairdi*, Red, Blue and Brown King Crab)	20000
‡Licenses for each species/area combination	30000
License Recipients	
‡Current owners	1000
Current owners and permit holders	2000
License Designations	
No restrictions	100
Catcher vessels & Catcher/processors	200
Vessel length	300
‡Catcher vessels & Catcher/processors and vessel length	400
Qualifying Period	
Jan. 1, 1978 - Dec. 31, 1993	10
‡6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for D.H. Red & 6/29/85 - 6/25/1988 for Prib. Blue)	20
Minimum landings	
‡No minimum	1
1 landing for Red & Blue King, 3 landings for Brown King, *C. opilio*, & *C. bairdi*	2

The ownership, use and transfer provisions are identified in the box below. The Council will need to choose one element from each set of options. These were discussed fully under the groundfish license limitation alternative in Section 3.2.2.7. Because the same implications exist for the crab fisheries, further detailed discussion of these options is not included in this Section, with the exception of the Individual Transferable Pot Quota Program which is discussed in detail in Appendix III. Any other implications which are particular to the crab fisheries will also be addressed.

Components and Alternative Elements Affecting Ownership, Use and Transfer of Crab Licenses.

Who May Purchase Licenses

1. Licenses could be transferred only to "persons" defined under Title 46 U.S.C.
2. Licenses could be transferred to "persons" with 76% or more U.S. ownership, with "grandfather" rights for license recipients with 75% or less U.S. ownership (Title 46 U.S.C.).
3. Licenses are non-transferable.

Vessel/License Linkages

1. Vessel must be transferred with license.
2. Licenses may be transferred without a vessel.

Options Regarding the Separability of Species and/or Area Designations

1. Species/Area designations are not separable, and shall remain grouped as in the initial allocation.
2. Species/Area designations shall be treated as separable licenses and may be transferred as such.
3. Species/Area designations shall be regarded as separable endorsements which require the owner to also own a more general license before use or purchase.

Vessel Replacement and Upgrades

1. No restrictions on vessel replacement or upgrades, except that the vessel must meet the "License Designations" defined by the initial allocation (including length categories).
2. Vessel may not be replaced or upgraded.
3. Vessel may be replaced or upgraded within the bounds of the 20% Rule as defined under the moratorium proposed rule.

Buy-back/Retirement Program

1. No buy-back/retirement program.
2. Fractional license system. (Fractional licenses may be issued to permit holders.)
3. Industry Funded Buy-back Program with right of first refusal on all transfers of licenses.

Community Development Quotas.

1. No CDQ allocations.
2. Set aside 3% of crab fisheries with GHLs for CDQs patterned after current program w/o sunset provision.
3. Set aside 7.5% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.
4. Set aside 10% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.
5. Set aside 15% of crab fisheries w/GHLs for CDQs patterned after current program w/o sunset provision.

Community Development Licenses.

1. No Community Development Licenses.
2. Grant an additional 3% non-transferable licenses to CDQs communities.
3. Grant an additional 7.5% non-transferable licenses to CDQs communities.
4. Grant an additional 10% non-transferable licenses to CDQs communities.
5. Grant an additional 15% non-transferable licenses to CDQs communities.

Two-Tiered Skipper License Program

1. Do not implement of Two-Tiered Skipper License Program.
2. Implement a Two-Tiered Skipper License Program.

Other Provisions (Choose any or none of the following)

1. Licenses represent a use privilege. The Council may convert the license program to an IFQ program or otherwise alter or rescind the program without compensation to license holders.
2. Severe penalties may be invoked for failure to comply with conditions of the license.
3. Licenses may be suspended or revoked for multiple violations.
4. Implement a Skipper Reporting System which requires groundfish license holders to report skippers name, address, and service records to NMFS.
5. Develop and implement mechanisms to collect management, enforcement costs and/or rents from the industry, including taxes and fees on the industry.
6. No Future Super-exclusive Area will be proposed.

Individual Transferable Pot Quota System

In addition to the components above, an Individual Transferable Pot Quota (ITPQ) System Alternative has been proposed in concept only. Under this option, the components affecting the initial assignment of crab licenses will remain unchanged. However, once it is decided which persons qualify for which vessel size and processing designations, licenses would be linked to a limited number of pots. Pots could be transferred to meet individual vessel requirements. Many of the component sets regarding the use and transferability of licenses may not apply under a ITPQ system. The Council will have to specify in more detail if additional analysis of the ITPQ system is desired. A detailed discussion of an ITPQ system is contained in Appendix V.

The rest of Section 3.2.3 is organized in the same basic format as Section 3.2.2. Each component will be discussed qualitatively in a separate sub-section. The qualitative discussion will be followed by a quantitative description of the distributional impacts of the elements under that particular component. As for groundfish, the analysis will employ reference configurations to demonstrate the distributional effects. Two reference configurations will be used. The discussion in this section is much more brief than the discussion of the same components in the groundfish alternatives. It should be assumed that, unless otherwise noted, the findings and conclusions in the qualitative discussion of the groundfish program apply to the crab program.

The "CRAB" reference configuration will be defined as configuration #31421 using the numbering scheme. Under this configuration, licenses for each species/area combination (option #30000) will be issued to current vessel owners (option # 1000). The licenses will be designated as catcher vessel (CV) or catcher/processor (CP) and all CVs licenses will further be designated by vessel length (option #400). All vessels which made qualifying landings between 6/28/89 and 6/27/92, or qualifying landings of red king crab in the Dutch Harbor area between 6/29/80 and 6/29/85, or qualifying landings of blue king crab in the Pribilof area between 6/29/85 and 6/25/88 would receive licenses (option #20). A single landing during the qualifying period, for any species, would qualify (option #1). Table 3.33 below shows the distributional results for the "CRAB" reference configuration. All other distributional tables for crab, which portray the results of other system configurations, are included in the Crab Table Appendix (bound separately).

The "CURRENT" reference configuration is included for comparison purposes. This configuration is the same as the "CRAB" reference configuration, except that landings in 1993 are used as the qualifying period. Using the numbering scheme, this configuration is identified as #314X1, where X=1993. Table 3.34 below shows the distributional results of the "CURRENT" reference configuration.

Table 3.33

License for each species/area combination issued to Current Owners which made landing between 6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for DH red and 6/29/85 - 6/25/88 for Prib. blue) No Minimum

	Alaska						Other States						Total					
	Catcher Vessels						Catcher Vessels						Catcher Vessels					
	0'-59'	60'-124'	125' +	CV Total	CP Total	AK. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	O.S. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	Total
31421 - King Crab																		
Norton Sound																		
Red				0		0	1			1		1	1	0	0	1	0	1
Blue																		
St. Lawrence/St. Mathew																		
Red																		
Blue	1	20	10	31	2	33		55	19	74	14	88	1	75	29	105	16	121
Brown																		
Pribilof																		
Red																		
Blue	1	6	0	7		7	1	33	9	43	6	49	2	39	9	50	6	56
Brown											1	1	0		0	0	1	1
Adak																		
Red		12	2	14	1	15		30	10	40	5	45	0	42	12	54	6	60
Brown		10	3	13		13		36	18	54	6	60	0	46	21	67	6	73
Dutch Harbor																		
Red	30	39	3	72	1	73	21	96	7	124	7	131	51	135	10	196	8	204
Blue																		
Brown		1	1	2		2		7	11	18	3	21	0	8	12	20	3	23
Bristol Bay																		
Red	6	110	16	132	3	135	3	166	47	206	20	226	9	266	63	338	23	361
Blue																		
Brown																		
31421 - Tanner Crab																		
Eastern Bering Sea																		
C. opilio		73	15	88	3	91	2	123	49	174	19	193	2	196	64	262	22	284
C. bairdi	1	94	16	111	3	114	2	146	49	197	19	216	3	240	65	308	22	330
Western Bering Sea																		
C. opilio		50	11	61	3	64	1	98	41	140	18	158	1	148	52	201	21	222
C. bairdi		7	2	9		9		7	12	19	5	24	0	14	14	28	5	33
Eastern Aleutians																		
C. opilio								3		3		3	0	3	0	3	0	3
C. bairdi	8	2		10		10	2	5		7	1	8	10	7	0	17	1	18
Western Aleutians																		
C. opilio		1		1		1		1		1		1	0	2	0	2	0	2
C. bairdi		4		4		4	6	6	2	12	3	15	5	9	2	16	3	19

Table 3.34

Licenses for each species/area combination issued to Current Owners which made landings between 1/1/93 - 12/31/93 (no minimum). This license will be specified for use on catcher vessels within length classes or catcher processors.

		Alaska						Other						Total					
		Catcher Vessel						Catcher Vessel						Catcher Vessel					
		0'-59'	60-124'	>125'	CV Total	CP Total	AK Total	0'-59'	60-124'	>125'	CV Total	CP Total	O.S. Total	0'-59'	60-124'	>125'	CV Total	CP Total	TOTAL
314X1-KING CRAB																			
Norton Sound																			
	Red	15	0	0	15	0	15	19	0	0	19	0	19	34	0	0	34	0	34
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Lawrence/St. Mathew																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	39	7	46	2	48	1	96	26	123	4	127	1	135	33	169	6	175
	Brown	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
Pribilof																			
	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	1	0	1
Adak																			
	Red	0	3	0	3	0	3	0	7	1	8	1	9	0	10	1	11	1	12
	Brown	0	4	0	4	0	4	0	8	10	18	0	18	0	12	10	22	0	22
Dutch Harbor																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	1	0	1	0	1	0	3	7	10	0	10	0	4	7	11	0	11
Bristol Bay																			
	Red	5	79	8	92	2	94	0	138	46	184	2	186	5	217	54	276	4	280
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
314X1-TANNER CRAB																			
Eastern Bering Sea																			
	C.opilio	0	40	6	46	2	48	0	77	36	113	14	127	0	117	42	159	16	175
	C.bairdi	0	75	6	81	2	83	0	125	36	161	9	170	0	200	42	242	11	253
Western Bering Sea																			
	C.opilio	0	54	10	64	2	66	0	117	42	159	17	176	0	171	52	223	19	242
	C.bairdi	0	50	10	60	2	62	0	113	33	146	10	156	0	163	43	206	12	218
Eastern Aleutians																			
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	0	2
Western Aleutians																			
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	3	0	0	3	0	3	1	3	0	4	0	4	4	2	0	6	0	6

3.2.3.1 Nature of Licenses

The following three basic options exist for crab fisheries licenses. They are similar to the groundfish options, though they differ due to the species and management areas involved:

Nature of License
Single license for all species and areas 10000
Licenses for species(e.g. *C. opilio*, *C. bairdi*, Red, Blue and Brown King Crab)........................ 20000
Licenses for each species/area combination 30000

The following species and areas would apply for option 30000.

King Crab	
Area	**Species**
Norton Sound	Red, Blue
St. Lawrence	Red, Blue, Brown
St. Matthew	Red, Blue, Brown
Pribilof	Red, Blue, Brown
Adak	Red, Brown
Dutch Harbor	Red, Blue, Brown
Bristol Bay	Red, Blue, Brown

Tanner Crab	
Area	**Species**
Eastern Bering Sea	*C. Opilio, C. Bairdi*
Western Bering Sea	*C. Opilio, C. Bairdi*
Western Aleutians	*C. Opilio, C. Bairdi*
Eastern Aleutians	*C. Opilio, C. Bairdi*

In the section for groundfish, we assessed the qualitative attributes of the 'Nature of Licenses' in terms of (1) initial fleet size, (2) potential increased capacity, (3) mobility, (4) complexity, and (5) enforcement. Looking at these same parameters for crab licenses, the assessment is basically the same, indicating that the nature of the license will have neutral effects with regards to initial fleet size, but has major potential effects on the other attributes. For example, allocating a general license (good for all species and areas) will result in the same total number of initially licensed vessels as allocating licenses which are species or species/area specific. There will be a greater number of 'licenses' allocated in the latter option, but they would be applicable to the same pool of initially eligible vessels.

The first real implication of this choice arises when we look at the potential for increased capacity after the initial allocation. Although a general license is the most flexible in terms of allowing vessels to cross over into various crab fisheries, it would effectively limit the total number of vessels operating in the fisheries. A species or species/area license on the other hand would allow for additional vessels to enter specific fisheries, if such licenses are freely tradeable. This could be limited if the Council chooses to adopt the 'umbrella' license concept described earlier, and make species or species/area endorsements transferable, but only to those who hold a general umbrella license.

The species/area endorsement concept makes the system a bit more complex to administer, as well as having enforcement implications, similar to those described for groundfish. It will be more difficult to enforce species designations, particularly when season openings for particular species overlap. However, this does not necessarily represent an additional enforcement concern, as crab fisheries are currently managed using species/area permits. Some of the concerns regarding a general license, such as the crossovers, could be mitigated with more traditional management tools such as exclusive registration, as well as transferable pot limits.

Using the same 20 point scale as was used in the groundfish analysis, the following evaluation summarizes the 'Nature of License' options for crab. (This is done for 'Nature of Licenses' because of the critical importance of this component in the system. We do not repeat this for other crab components as they are relatively simple and straightforward.) This particular evaluation assumes that the species or species/area 'licenses' are endorsements which require an umbrella license.

Attribute	Meaning of Higher Scores
Initial Fleet Size	Greater Fleet Size
Potential for Increased Fleet Size	Greater Potential
Mobility	Greater Mobility for Fishers
Complexity	Greater Admin. complexity/cost
Enforcement	Better enforceability/lower cost

Option #	Fleet Size	Potential Capacity	Mobility	Complexity	Enforceability
10,000	Neutral	15	20	1	18
20,000	Neutral	15	12	14	8
30,000	Neutral	15	8	18	3

Distribution of Licenses

The three alternatives for the nature of the licenses using the crab reference configuration are shown in configurations 11421, 21421, and 31421 (from the Tables at the end of this Section). Notice that only the first component changes in each of the configurations. For each, the following options for the remaining component options are constant. Option 1000—The license will be allocated to current owners. Option 400—There will be catcher vessel (CV) and catcher processor (CP) designations, with CVs receiving additional designations for vessel length classes. Option 20—The qualifying period will be from June 28, 1989, through June 27, 1992. The qualifying period for Dutch Harbor red king crab will be from 6/29/80-6/25/83, and the qualifying period for Pribilof blue king crab will be from 6/29/85-6/25/88. Option 1—There will be no minimum landing requirement, i.e., a single landing will qualify the vessel for a license. For comparison purposes, the same basic configurations for the fishery in 1993 are provided; i.e., the "current" configuration. These are identified as 114X1, 214X1, and 314X1 where X=1993.

If the Council chooses a configuration which issues a single license, good for all species and areas, to current vessel owners, the total number of vessel licenses will be 551 (configuration 11421). Other distributions included in this table show that, of this total of 551 vessels, 212 are Alaska based vessels while 339 are from other States. Of the total, 523 are catcher vessels and 28 are catcher processors. The total vessel count of 551 compares to 354 vessels which participated in 1993, as shown in configuration 114X1. Both of these numbers are based on a qualification period between 6/28/89 and 6/27/92. Impacts of alternative qualification windows are described in a separate section.

Looking once again at Table 3.33 ("CRAB" reference configuration 31421), we see that the number of species/area licenses (or endorsements) totals 1,811. This is derived by adding all of the numbers in the far right hand column. If an overall umbrella license is required, this would still limit the total number of vessels operating in the fisheries to 551, but endorsements would be transferable among these 551 vessels. If these are treated as separable licenses, then the potential number of vessels operating could literally equal 1,811.

Configuration 31422 is nearly identical to configuration 31421, the "CRAB" Reference configuration, but requires three landings of brown king, opilio, and bairdi. This reduces the number of potential licenses from 1,811 to 1,615, with all of that reduction in those particular fisheries licenses. Notice that the number of licenses for red and blue king crab remain the same under both of these alternatives.

3.2.3.2 License Recipients

The Council is considering two options for license recipients.

License Recipients

Current owners	1000
Current owners and permit holders	2000

The primary alternative under consideration, as with groundfish, is to allocate licenses to current vessel owners. Current vessel owners are defined, in this analysis, as the vessel owner in the 1993 ADF&G vessel registration files. Also under consideration are allocations to permit holders who made landings during the time periods under consideration. It was in this context that the concept of fractional licenses were introduced and discussed in depth in the groundfish license limitation section of this document. An additional option for a two-tier license option for skippers is also discussed earlier.

Assessment of Options

Allocating an additional license to all permit holders who made qualified landings, regardless of whether they had already received licenses as current owners, may greatly increase the number of licenses issued initially. This option would benefit "owner-operators" over owners who used hired skippers, because they would receive two licenses as opposed to one. The owner who hired skippers may be further disadvantaged by the potential for more vessels to enter the fishery than have historically fished. This is possible if an "owner-operator" receives two licenses and chooses to sell one of his redundant licenses to a fisher wishing to enter the fishery. The following is a summary of the degree to which the "License Recipient" component affects the five attributes described earlier.

	Initial Fleet Size	Potential Increased Capacity	Mobility	Complexity	Enforcement
License Recipients	Major	Major	Neutral	Major	Neutral

Vessel Catch Data

The State of Alaska has been granted oversight of the crab fisheries in federal waters off the coast of Alaska. Because the State manages the crab fishery they collect catch data for the entire fleet and report the catch in ADF&G fish tickets. Therefore, unlike the groundfish data which is collected by both State and federal sources, the crab fishery can be studied using a single data source (ADF&G fish tickets).

ADF&G fish tickets identify the CFEC permit holder which landed the catch. This permit holder is generally the skipper, however, any crew member that holds a permit could have made the landing. Using the CFEC permit holder's encrypted social security number we were able to track the number of permit holders active in the fishery.

Distribution of Licenses

Using the "CRAB" and "CURRENT" reference configurations, and the alternatives for issuing licenses to permit holders (configurations 32421 and 324X1), comparisons between license recipients can be drawn. The "CRAB" reference configuration indicates that between June 28, 1989 and June 27, 1992 (except Dutch Harbor red king crab will be from 6/29/80 through 6/25/83 and Pribilof blue king crab will be from 6/29/85 through 6/25/88)

91 vessel owners residing in Alaska made landings of C. *opilio* and 114 made landings of C. *bairdi* in the eastern Bering Sea. Conversely, in the same time period and area, 193 residents of other states made landings of C. *opilio* and 216 made landings of C. *bairdi*. The number of permit holders residing in Alaska and making landings of C. *opilio* in the eastern Bering Sea (configuration 32421), during this time period, was 185. This is slightly more than double the number of current owners who would receive licenses. This ratio remains fairly constant for C. *bairdi* as well. In the Dutch Harbor red king crab fishery, more permit holders would be issued licenses than current owners in each vessel classification, except the 0-59' catcher vessel class whose owners reside in a state other than Alaska. These smaller vessels were more likely to be "owner operators" and therefore would not result in duplicate licenses.

The "CURRENT" reference configuration describes the 1993 crab fishery. Comparing the number of current owners and permit holders (configuration 324X1) who would receive licenses based on 1993 activity, for red king crab in the Bristol Bay area, we see that 94 licenses would be granted to current owners and 111 licenses would be granted to permit holders residing in Alaska. Residents of other states would receive 186 licenses as current owners and 173 licenses as permit holders. This indicates that not all fish tickets contained an encrypted social security number for the permit holder. Additional information might be obtained on the permit holders by further researching the permit number issued by CFEC and linking that information back to the catch data. This will only be possible if a legible permit number was recorded at the time of landing. Once again comparing these two tables we see that a total of 253 licenses for C. *bairdi* would be issued to current owners in the eastern Bering Sea, while 339 licenses would be issued to permit holders. No landings of C. *opilio* or *C. bairdi* were made by vessels in the 0-59' class in the Bering Sea.

The number of area and species crab licenses issued to permit holders may exceed the number of current vessel owner licenses by more than 100% (i.e. if there were 100 current owners there could be over 300 licenses issued). Typically, however, the number of permit holder licenses exceeds the number current owner licenses by a range of 0-40% with the greatest differences being in the larger vessel classes. Granting licenses to permit holders for large vessels may exclude many of them from purchasing a vessel of that size and entering the fishery. Permit holders may be able to use the licenses by reaching an agreement with a vessel owner who was not granted, or does not currently own, a license for the crab fishery. The option of granting licenses to permit holders, in addition to current owners, greatly increases the potential for additional effort to enter the fisheries.

3.2.3.3 License Designations

Again similar to groundfish, the following options for license designations have been identified by the Council:

License Designations

No restrictions	100
Catcher vessels & Catcher/processors	200
Vessel length	300
Catcher vessels & Catcher/processors and vessel length	400

The differential impacts of each of these alternatives have been discussed in the groundfish portion of this Chapter, and again, the primary tradeoffs involve limitations on crossover options and capacity increases versus administrative and enforcement complexity. These potential designations come into play when the license or endorsement is transferred, or when a particular vessel wishes to upgrade itself. For example, a simple designation of catcher vessel (CV) and catcher processor (CP) would freeze the number of CVs and CPs operating in the fisheries at that number in the initial allocation; i.e., CVs could not be upgraded into CPs, either by transfer of the license or by upgrade of the original vessel. One option under consideration by the Council would be to allow for 'downgrades', such that CP designations could be transformed into CV designations, but not vice-versa.

The vessel length designations have the same effect in that they freeze the number of vessels in each category at the number in the initial allocation. Combined with the CV/CP designations, the effect is an even further tightening on potential capacity increases in the future, though vessels within each length category could trade up to the upper limit of each category, subject to other possible constraints such as the 20% upgrade rule associated with the moratorium. This option is included by the Council and is discussed further under transferability considerations.

Distribution of Licenses

Of the 551 vessels qualifying under the "CRAB" reference configuration, 523 are CVs and 28 are CPs, compared to 334 CVs and 20 CPs which operated in 1993. This is summarized in configurations 11421 and 114X1 respectively. Configuration 11421 also shows that, of the 551 vessels which would qualify, 79 fall into the under 60' category, 364 in the 60'-124' category, and 80 are over 124' in length.

3.2.3.4 Qualifying Period

The options for the qualifying period for crab fisheries differ from groundfish, though the same general, differential impacts are to be expected relative to the number of vessels qualifying. The options, listed below, range from a very liberal qualifying period to one which is much more restrictive, and adheres to the Council's June 24, 1992, cut-off date for CRP planning.

Qualifying Period
Jan. 1, 1978 - Dec. 31, 1993 10
6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for D.H. Red & 6/29/85 - 6/25/1988 for Prib. Blue) 20

The first option, going back to 1978, would grant licenses to many more vessels (owners) than currently participate in the crab fisheries, likely exacerbating the problems currently experienced under open access. The more restrictive (option 20) would more closely approach current participation levels, but may exclude vessels which have entered the fisheries after June 27, 1992; however, this option would maintain the integrity of the Council's June 24, 1992, Control Date.

Distribution of Licenses

Configuration 31411 summarizes the numbers and distributions of licenses under the first qualifying period - from January 1, 1978 - December 31, 1993. This table contains all of the elements of the "CRAB" reference configuration, with the exception of the qualifying period. The total number of vessels which would qualify under this configuration is 707, which compares to 551 under the "CRAB" reference configuration (which uses the more restrictive qualification window) and 354 which fished in 1993.

3.2.3.5 Minimum Landings Requirements

Minimum landings
No minimum 1
1 landing for Red & Blue King, 3 landings for Brown King, *C. opilio*, & *C. bairdi* 2

The first option requires only that a single landing in a given species/area be made during the qualifying period. The section option maintains the single landing requirement for red and blue king crab, but increases the required landings to 3 for brown king crab and both Tanner crab species. The impacts of these options are clearly empirical issues, though the bottom line effects are not considered to be significantly different, with the only difference being the numbers of vessels qualifying for brown king crab, opilio, and bairdi. Red and blue king crab qualifiers will be the same under either option.

Distribution of Licenses

The "CRAB" reference configuration (31421) shows that the first option, a single landing for any species, creates 1,811 species/area licenses or endorsements, while the second option creates 1,615 species/area licenses or endorsements. The reduction in numbers of licenses is realized fully in the brown king crab, opilio, and bairdi fisheries. If species/area licenses are freely tradeable, then option 1 has the potential to allow for greater numbers of vessels entering the fisheries. If the endorsement concept is adopted, the total number of vessels is capped, but an additional 196 species/area endorsements would exist. If the Council goes with a species, but not area, designation, the total number of licenses or endorsements is 1,375 (configuration 21421), noting that the total is still 551 vessels, again assuming the more restrictive qualification window.

3.2.3.6 Transferability, Use, and Ownership Provisions

The options regarding transferability, use, and ownership are summarized at the beginning of Section 3.2.3, and again are similar to groundfish in their nature and potential impacts to the program. Detailed discussions of these options are contained in Section 3.2.2. As with groundfish, the primary elements which affect transfers and use revolve around the 'Nature of Licenses' and 'License Designations'.

Nature of Licenses

A critical element of the program is whether species or species/area licenses would be separable and tradeable, or whether they would exist as endorsements which require a general umbrella license. If such designations are grouped as in the initial allocation, then this effectively freezes the number of tradeable license units to that number in the initial allocation. If they are separable and tradeable, this allows for significant increases in numbers of vessels in particular fisheries. Perhaps the optimal combination of restrictiveness and flexibility is to make such designations endorsements, which are freely tradeable, but only to those who hold a general umbrella license. This would allow fishermen to adjust their individual portfolios while maintaining a cap on the total number of vessels operating in the fisheries.

License Designations

A second area of critical importance involves the license designations imposed, whether they be CV/CP, vessel length categories, or a combination of both. Though an option exists to prohibit upgrades or transfers, this option is not addressed in depth. Discussion of length categories and CV/CP designations exist in earlier sections of the crab analysis. In summary, designations by CV/CP and length categories have the potential to stem the capacity creep inherent in license limitation programs. Without such designations, the effective capacity of the fleet, whether or not the number of vessels is restricted, may increase infinitely. These designations also tend to maintain the existing nature of the fleet. An allowance for 'downgrading', either by mode or by vessel size category would not harm the ability to cap capacity, though such downgrade options would not likely be utilized under a license program.

An important option which would further restrict the potential capacity creep is the 20% rule as adopted by the Council under its moratorium. Applying this option, either alone or in combination with the vessel categories, will provide further assurances that capacity increase are limited through transfers and upgrades. As an example, if we only apply the length categories, licenses in the >124' category may be transferred to a 900' vessel; applying the 20% rule would disallow such an event. Some complications do arise with imposition of this rule in conjunction with vessel length categories; vessels at the top end of each length category will have an increasingly limited pool of licenses which they could legally purchase because they are restricted not only by the length categories, but by the 20% increase rule as well.

An additional concern relevant to this discussion is the option to only allow licenses to be transferred with the vessel holding the license. This option would have serious implications with regard to vessel safety and replacement, as well as restricting the flexibility of business operations of fishermen.

Ownership Caps

Restrictions on the number of licenses or endorsements which may be owned or used under a crab license limitation program were not explicitly included by the Council for analysis. Implications of such caps are discussed in the groundfish analysis and might be used in the crab program if it appears to produce desirable results. The Council did explicitly include an option for the crab program to implement an Individual Transferrable Pot Quota (ITPQ) program for crab in conjunction with the license program for crab. This concept is discussed in other parts of the analysis, and in some detail in Appendix III. This program probably offers the most effective means of actually capping effort, with or without a license attached. If an ITPQ's implemented, the transferrable pots would be the mechanism which regulates effort in the fisheries, not the license.

Other Considerations

An additional consideration regarding ownership and use has to do with the level of foreign ownership in a fishing operation. The Council included an option for consideration which would only allow transfers of licenses to 'persons' with at least 76% U.S. ownership (U.S. Shipping Act of 1916). The other option is to allow transfers only to 'person' as defined under current Title 46 regulations which refer to 50% or greater U.S. ownership. A full analysis of foreign ownership patterns in the fisheries is beyond the scope of this analysis and is not likely under any time frame. Limitations on the ability to track ownership patterns is discussed more fully in Section 3.2.2. Additionally, the Council has requested and is awaiting a legal opinion regarding its ability to restrict ownership, use, and transfers on the basis of foreign ownership.

Options regarding CDQ allocation of crab and matching 'skipper licenses' are discussed separately in Sections 3.3 and 3.4.

3.3 Community Development Quota (CDQ) Options

The License Limitation alternatives for both groundfish and crab contain options for CDQ allocations, either in the form of set asides of the TACs (or GHLs for crab) or as additional, non-transferable licenses. Under the first option, CDQ set asides could range from 0% (no CDQ allocations) up to 15% for any or all groundfish and crab species, excluding sablefish and halibut which are dealt with separately. Pollock CDQs are currently set at 7.5% of the BSAI TAC each year and are distributed among six CDQ organizations encompassing the eligible communities along the Bering Sea coastline. The pollock CDQ program is scheduled to sunset at the end of 1995. The CDQ program associated with the sablefish/halibut IFQ program is scheduled to become effective in 1995, along with the overall IFQ program, and will operate in the same manner as the pollock program, with the CDQ quota set aside being distributed among the eligible CDQ groups based on recommendations from the Governor of Alaska. The major difference between this and the pollock program is that the CDQs associated with sablefish and halibut do not sunset.

3.3.1 Status Quo Implications

Under the status quo, there would be no limited entry program and no additional CDQ programs beyond those currently in place, though the Council is not precluded from considering a CDQ program independent of a limited entry program. Within this analysis, we assume the status quo contains no additional CDQ programs. The existing pollock program will sunset at the end of 1995, thereby making an additional 7.5% of the TAC, roughly 100,000 metric tons, available to the existing, open access fishing fleet. This action might reduce some of the overcapacity problems in the fleet in the short term, but under open access these gains would quickly become overtaken by existing and, potentially new, vessels. The catching and processing capability of the inshore and offshore sectors combined significantly exceeds the existing overall TACs for pollock, as well as other species. Additionally, the temporary gains experienced by the fleet would only be realized in the pollock fisheries and would not affect similar over-capitalization problems in the other groundfish and crab fisheries.

Without the pollock CDQ program, six CDQ organizations encompassing over 60 predominately native, rural coastal communities would be affected adversely. The current pollock CDQ program generates in the neighborhood of $25 to $30 million annually, much of that money funneled into development projects for these communities. The program was set up to help bring these communities into self-sufficiency through the fisheries at their doorsteps which, until recently, they have been unable to enter to any economically significant degree. Development projects which are being funded through the CDQ program include: community services, fisheries and education training programs, processing and dock construction, fishing vessel procurement, and real income to participants. The alternatives in this document consider expansion of the current program to include other groundfish and crab species, along with a license limitation program. Under the status quo, the additional gains to the CDQ program, potentially as economically valuable as the pollock program, would not be realized. In the absence of any CDQ set asides, these organizations and communities would have to rely on the sablefish and halibut resources made available through that CDQ program for future fisheries development initiatives.

3.3.2 CDQs as TAC Set Asides

If this option is included in the license limitation alternative, some amount of the TACs, up to 15%, would be designated for existing, eligible CDQ groups. None of the options currently under consideration would expand the CDQ program beyond the existing communities. The general benefits of such a set aside have already been discussed relevant to pollock, and would expand under this option. Based on a similar percentage (7.5%), the projected value of additional CDQ set asides, for all remaining groundfish and crab, could be in the range of $50 million. If pollock is continued as well, the total value of this program to the participants approaches $80 million. This is a mid-range estimate and would depend on the percentage finally approved by the Council and Secretary, as well as fish prices and other factors.

Such a set aside involves a redistribution of the fisheries benefits from the existing commercial fleet to the CDQ communities. Under either open access or a license limitation program, any reductions in the TAC available to the commercial fleet would likely exacerbate the problems facing those fisheries. An increased race for the available fish, with all of the attendant problems, would be the likely result. In this sense, the limited entry fleet after implementation of the program would be functioning as an open access fleet relative to the CDQ fisheries. The CDQ fisheries on the other hand would function with a guaranteed quota for each organization, either with their own vessels or through 'joint venture' arrangements with other vessels. The benefits of this type of fishery have been exhibited in the current pollock CDQ program where the result has been a slower paced fishery, higher value fisheries relative to the open access fishery, generally lower bycatch rates of PSC species, lower discard rates, and a more stable planning environment for the participants.

Although a formal, quantitative analysis of these benefits has not been undertaken, some overall economic generalizations can be made based on theory and observed practice. Though there are costs associated with monitoring and enforcing these types of 'individually accountable' fisheries, the expected benefits likely outweigh these costs. For example, projected cost savings and price increases in the sablefish and halibut IFQ program are expected to outweigh the costs by $30 to $67 million annually. These projections are based on the same circumstances and advantages associated with the CDQ fisheries. Therefore, from the perspective of overall net benefits derived from the fisheries, it is likely that the proposed CDQ set asides, whether 1% or 15%, would result in increased net benefits.

Again, this net benefit is realized at some expense to the existing commercial fleet by virtue of their reduced TAC. The decrease in net benefits associated with this TAC reduction is difficult to quantify, but likely would not outweigh the benefits. A critical point to be made here is that the economic benefits derived from assigning a specific percentage of the TAC to an individual operation would be realized regardless of whether the recipient was a CDQ group or some other business organization. The allocation of these specific harvest privileges to CDQ organizations would produce social benefits in addition to the purely economic benefits.

3.3.3 CDQs as Additional Licenses

Another option within the license limitation alternatives for both groundfish and crab would be to create additional, non-transferable licenses for CDQ allocation. For example, a base number of licenses would be allocated for fishing vessels (this number depends on the qualification criteria adopted) and then an additional number, from 0 to 15% of the base amount, of licenses would be 'created' and allocated for use by CDQ organizations. Under this option numerous questions arise as to the nature of the licenses which would be created for CDQ use. One solution, if the Council wishes to proceed with this option, would be to prorate the additional license in the same proportion as the base licenses by area, species, vessel size, or whatever other designations exist.

In the context of the overall problems the Council wishes to address through the limited entry proposal, this partic- ·r option does not represent the most effective means to implement a CDQ program. Creating additional licenses in the fisheries will result in additional vessels, thereby exacerbating the very problems the Council is attempting to solve. Any potential benefits of a license limitation program may be offset by the creation of additional licenses.

Another perspective to examine involves the functioning of the CDQ program itself. Under this option, CDQ groups would be allocated licenses, the benefits of which would only be realized with the purchase of vessels on which to fish those licenses. These vessels would likely be additional to the existing pool of initially licensed vessels. Assuming these groups acquire the necessary vessels, they would not be guaranteed any percentage of the harvest, but would conduct their fisheries in competition with other licensed vessels. The resulting harvest by these groups may be larger or smaller than would be expected under Option A, simply setting aside a portion of the TAC. In summary, the likely results of this option run counter to the Council's goals for the overall fishery as well as the CDQ program.

3.4 Two-Tier Skipper License Option

In addition to alternatives for allocating licenses to permit holders (often skippers), the Council is considering an alternative which would create a 'two-tiered' license system to recognize skipper participation in the fisheries. Under this option, qualified skippers would be allocated a license based on qualification criteria parallel to those for vessel owners, though some specific, additional criteria would apply. This license would not be good for entering an additional vessel into the fisheries; however, any vessel fishing would have to have at least one licensed skipper on board during fishing under the License Limitation program.

The proposal by Skippers for Equitable Access (SEA), the proposal upon which this option is based, contains specific qualification criteria for inclusion in this program. For example, a skipper must have participated as a captain in the subject fishery for at least four years between 1989 and the time of Secretarial approval of this program. Additionally, that skipper must have three documented landings in that fishery in each of those four years. Finally, that person must be a U.S. Coast Guard licensed 1600 ton or greater fishing master. Determining the Coast Guard documentation is fairly straightforward except that it would include any 1600 ton master, not just fishing captains; determining participation and numbers of landings is much more difficult, and will likely involve manual examination of logbooks to determine the actual pool of eligible recipients. In summary, determining this pool of recipients will not be an easy task due to data limitations on these persons.

Previous (preliminary) analyses by NMFS staff on this subject have indicated the difficulties associated with identifying eligible crew and skippers for inclusion in a limited entry program. One finding from these analyses is that identification of skippers in the fisheries, particularly where they were licensed, is more feasible than for other crew members. However, as noted above, it may be very time consuming and labor intensive to determine the actual eligible recipients, based on the current qualification criteria. We also do not know in advance the levels of participation between now and Secretarial approval. IRS information or company records may be an additional source of information for identifying these individuals. For purposes of analysis, however, it is not necessary at this time to identify the actual skipper license recipients in order for the Council to go forward with this option. Rather, we can look at the potential number of licenses which would be created by this proposal, and then examine the possible implications of this program on the overall License Limitation alternative, keeping in mind the implementation difficulties discussed above.

Based on information on numbers of vessels operating in the fisheries, coupled with assumptions about the numbers of captains per vessel, there may be from 800 to 1,400 skippers operating in the groundfish fisheries in any year. An additional 300-400 may participate in the crab fisheries each year, though there is some overlap in individuals which fish both groundfish and crab. If the qualification period is between 1989 and 1995 (assuming Secretarial approval in 1995) then the potential number of eligible skippers could be as high as 11,900. However, it is likely that many of these individuals will not meet the 1600 ton license requirement and still others will not meet the participation and landing requirements, if those are implemented.

Based on this preliminary information it is difficult to estimate whether the number of skipper licenses would be greater than or less than the number of vessels granted licenses to fish. If it turned out to be less than the number of vessels, this would result in severe implications for the owners of those vessels; i.e., there would not be enough captains to go around. We currently estimate that many existing skippers do not hold these licenses, and would have to obtain such a license to qualify for the program. Unless and until these licenses are required, there could be a shortage of qualified skippers. This possibility could be eliminated by eliminating this criteria.

Alternately, if the number of licensed skippers greatly exceeded the numbers of vessels then the value of this program to the eligible captains is severely diluted. The value of the license they have been granted is reduced by the fact there are excess skipper licenses to the needs of the fishing fleet. If the pool of licensed skippers is similar in size to the pool of licensed vessels which must carry one of these skippers, then this option may provide some benefit to skippers. Vessel owners, conversely, may be negatively affected to the extent they would be limited in their choice of skippers for their operations.

In summary, the Council needs to weigh the possible benefits to vessel skippers against the possible costs to vessel owners, while also considering the time and costs necessary to identify the eligible recipients. Transfer benefits, from vessel owners to skippers, may be significantly offset by costs of implementing, and later, enforcing this option. An alternative would be to require skippers to apply for such a license and furnish proof of their participation during the qualifying period. In any case, it is not likely under a vessel License Limitation program that the need for experienced skippers would go away. Those in the fishery now, particularly those with a long history of participation and landings, will likely be in as great, or greater, demand than before. Finally, the Council should look at this proposal in the context of the problems facing the fishery and whether this addresses those problems.

There may be other benefits to the two-tier proposal other than granting license rights to skippers. Safety and professionalism would likely be enhanced under a requirement for a 1600 ton masters license. One intent of the proposers (SEA) of this option is to use the two-tier skipper license option as a means of "defining the field of players" early in the CRP process, in the event the system eventually is integrated into some form of IFQs. Whether or not the Council adopts this option in the program, some thought should be given to the possibility of an eventual IFQ program and whether skippers would be included in an allocation of IFQs. If there is that possibility, the Council may want to implement some method of tracking skipper participation to be used, potentially, in future allocations.

Such a method has been proposed within the State of Alaska's GLS proposal, which would implement a Mandatory Skipper Reporting System in conjunction with a license limitation program. Under this program, holders of groundfish (and crab) licenses would be required to report the skipper's name address, and dates of service to the NMFS in order to build a database for consideration of skipper options under a subsequent IFQ program.

<u>A Look at the Available Numbers</u>

Since the original draft of this document, the analysts have attempted a more definitive estimate of the potential numbers of skipper licenses created by this proposal. The alternative under consideration which would allocate licenses to permit holders (in addition to vessel owners) makes such an examination possible because the programming runs explicitly pull historical numbers of permit holders from the data base, where possible. By eliminating permit holders who were also vessel owners, we are able to <u>approximate</u> the number of skippers for a given qualification period. For example, using numbers from the Crab Table Appendix, comparisons between current owners, landing's owners, and permit holders in the three reference alternatives can be drawn. Under the Explicit reference alternative a total of 1,085 permit holders made landings on vessels which qualified for a license. Of those permit holders, 940 were not listed in the data set as current vessel owners, and 870 were not listed as landing's owners or current vessel owners. Therefore, if licenses were only granted to vessel owners, 48% of the permit holders would not qualify for a license. The Universal reference alternative had a total of 3,258 permit holders which made landings on vessels that would qualify. Of those permit holders, 1,299 (40%) were never listed as current owners or landing's owners. The Current reference alternative indicates the number of licenses that would be issued based on 1993 participation in the fishery. A total of 1,758 permit holders made landings during 1993. Seven hundred and twelve (41%) of the permit holders were not current owners and would not receive a license if licenses were issued solely to current owners.

3.5 Potential Social Impacts

From the beginning of the CRP process in 1992, the industry and Council have expressed concern over the potential social ramifications of a comprehensive limited entry program of the scale being contemplated. This concern was particularly acute relevant to the prospect of an IFQ program which would cover all of the groundfish and crab fisheries, and would privatize these fisheries indefinitely, with specific assignment of harvest rights. In the summer of 1994, Council staff organized a group of leading experts in the fields of social science, with an emphasis on fisheries experience. This Social Science Steering Group played a key role in developing a Request for Proposals for a social impact study relevant to the major limited entry alternatives under consideration by the Council. Impact Assessment, Inc. (IAI), was awarded the contract to conduct the study which will consist of detailed fleet sector profiles (as requested by the Council) and a limited impact assessment of the major limited entry alternatives.

Combined with the Community Profiles developed under separate contract, the Council will have comprehensive social information to aid in their decision making process for CRP. The Community Profiles cover 127 Alaskan coastal communities and a dozen Pacific Northwest communities, with an emphasis on describing each community's involvement in the fisheries. These Profiles are being finalized and will be available concurrently with public review of the license limitation analyses. The more detailed industry sector profiles and limited social impact assessment are also being finalized and will be available in October 1994 as well. When these studies were initiated, the Council was primarily concerned with the potential impacts of an IFQ program, but also wanted the analyses to cover simple license limitation. With IFQs on hold at this time, the studies will likely remain relevant to a decision on license limitation. Depending on the Council's timing for a public review package for license limitation, these studies should, as noted above, be available simultaneously for public review. They will constitute part of the overall amendment package for Secretarial review of any Council recommendations on limited entry alternatives.

In order to round out the social impact work being conducted, the results of the economic/distributional analyses contained in this document will be provided to AI for additional work specific to the major license limitation alternatives under consideration. Distributional results of three to four core alternatives will be evaluated and tied together with information in the baseline study conducted already by IAI. This follow up study will be included in the license limitation analytical package under review in the fall of 1994.

4.0 Administration and Enforcement

RESERVED

5.0 NEPA Requirements: Environmental Impacts of the Alternatives

An Environmental Assessment (EA) is required by the National Environmental Policy Act of 1969 (NEPA) to determine whether the action considered will significantly impact the human environment. An Environmental Impact Study (EIS) must be prepared if the proposed action may reasonably be expected to: (1) jeopardize the productive capability of the target resource species or any related stocks that may be affected by the action; (2) allow substantial damage to the ocean and coastal habitats; (3) have a substantial adverse impact on public health or safety; (4) affect adversely an endangered or threatened species or a marine mammal population; or, (5) result in cumulative effects that could have a substantial adverse effect on the target resource species or any related stocks that may be affected by the action. An EA is sufficient as the environmental assessment document if the action is found to have no significant impact (FONSI) on the human environment.

An EA must include a brief discussion of the need for the proposal, the alternatives considered, the environmental impacts of the proposed action and the alternatives, and a list of document preparers. The purpose and alternatives were discussed in Chapter 1 and the list of preparers appears at the end of the document. This section contains the discussion of the environmental impacts of the alternatives, including impacts on threatened and endangered species and marine mammals.

5.1 Environmental Impacts of the Alternatives

This document does not include a detailed description of the physical and biological environments off Alaska, as such descriptions are contained in several other source documents including the 'Status of Living Marine Resources off Alaska,' published by the National Marine Fisheries Service (NMFS), and the Council's annual Stock Assessment and Fishery Evaluation (SAFE) documents. The information from these documents is summarized as well in the Council's EA/RIR prepared for the proposed vessel moratorium off Alaska. This section will concentrate on potential changes (impacts) to the biological and physical environment which would occur as a result of the proposed alternatives contained herein.

Potential impacts are considered from two perspectives: (1) a general comparison of status quo management against the proposed, general license limitation program, and (2) a look at potential differential impacts of various forms of license limitation programs proposed. Potential impacts to threatened or endangered species and marine mammals are discussed separately in the final sections. The environmental impacts expected from the proposed license limitation program will be very similar to that expected (and described) under the proposed vessel moratorium. As such, much of the impact assessment is described in the context of the potential numbers of vessels (capacity) operating in the subject fisheries. The proposed license limitation program does include other options which may have influences beyond merely the numbers of vessels. These are also discussed in the following sections.

5.1.1 Alternative 1: Status Quo (No Action)

Under the status quo alternative, fisheries would continue to be managed overall with the use of Total Allowable Catch (TAC) limits established annually by the Council and Secretary. Effective management will ensure that these TACs are not, or only minimally, exceeded for each of the target species or species complexes managed by the Council. The numbers of vessels in the fisheries might fluctuate around current levels, increase, or decrease, depending on the economics which provide the incentives or disincentives to enter or leave the fisheries. The number of vessels operating in the fisheries now exceeds that necessary to harvest the TACs. If the proposed moratorium is considered part of the status quo, this could mitigate the extent of potential increase in vessel numbers, and perhaps more importantly, the capacity of those vessels.

Under the proposed moratorium, additional vessels could enter the fisheries in numbers substantially beyond current levels. However, much of the potential increase would be in the small vessel fleet which normally accounts for a relatively small percentage of overall harvest levels (NPFMC 1992). The moratorium would serve to cap the entry of the larger, high capacity vessels, which may represent an important difference to a status quo alternative without the moratorium. In any event, with or without the moratorium, the capacity of the fleet would still remain beyond that necessary to harvest the overall TACs.

The potential impacts to non-target species under the status quo alternative would be similar to that described for target species. With or without the moratorium, there is potential for significant increases in the numbers of vessels operating in the fisheries, with attendant increases in the race for fish, early attainment of TACs and bycatch caps, and higher rates of discarding. Although continued status quo has the potential to exacerbate the problems identified for these fisheries, it would not be expected to result in significant impacts to the environment or fish stocks with continued overall quota management.

5.1.2 Alternative 2: License Limitation

The License Limitation alternative, in its most restrictive proposed form, would cap the fleet at somewhere near, or slightly below, its current level. Under this scenario, the effects of this alternative would depend on whether the fleet would have increased, decreased, or remained the same under the status quo alternative. If the fleet would have increased under the status quo, then a License Limitation program could be viewed as 'effective,' assuming that the program has some mechanisms for limiting increases in vessel capacity (PFMC 1991). On the other hand, if no new vessels would have entered the fisheries under status quo (due to economic conditions of the fisheries), then a License Limitation alternative offers no differences from status quo, unless it initially reduces the fleet, or contains an effective buy-back program to reduce the numbers of vessels in the fisheries.

In general, this alternative would result in no changes in the overall TAC management regime. As with status quo, quotas for target species and bycatch would still be enforced. If license recipients expect a future IFQ management system, then vessel capacity may increase and exacerbate the race for quotas as participants attempt to maximize their catch records in anticipation of an IFQ system. Such activity could result in higher bycatch and discard rates of non-target and target species.

A full retention/utilization mandate has been proposed in conjunction with the License Limitation program. By forcing operators to match catching capacity to processing capacity, such a program might slow down the overall race for fish and reduce the incidental catch of non-target species and, potentially reduce the amount of total removals from the ecosystem. Such a program could be implemented under either the license limitation or the status quo alternative. However, current levels of removals, whether discarded or not, are within the bounds of what is considered 'safe' by fisheries scientists and managers. A more fully developed analysis of the full retention proposal is being conducted separately.

5.1.2.1 Nature of License Sub-alternatives

Within the overall License Limitation alternative there exists a myriad of options which will affect the final configuration of a License Limitation program. One of these options pertains to the nature of the license to be granted. For example, the licenses for each vessel could be species specific, area specific, some combination of both, or it could be a single license applicable to all species and areas under Council jurisdiction. Additionally, the license may be further designated by vessel size class and by vessel mode, such as catcher or catcher/processor. Such designations could affect the overall number of licenses in operation, but might also affect potential capacity increases per vessel, and even potential rates of discard.

In the groundfish fisheries, for example, a species specific license would result in monitoring and enforcement complications which could lead potentially to increased discarding and/or highgrading. This is because a vessel with such a license would have to limit its retention of fish to the species allowed, based on existing directed fishing standards. In order to stay within the species designation on the license, discards of other species would be required. This particular alternative could also result in more vessels operating in the fisheries, if species designations, or endorsements, were tradeable to new vessels wishing to enter the fisheries. One way to avoid this problem would be to make the endorsements transferable only to initially licensed vessels (the umbrella licensing scheme described in Chapter 3).

At the other end of the spectrum, a general license applying to all areas and species would allow the potential for increased effort in management areas, as vessels which qualify move into areas they did not fish previously. This sub-alternative would not likely increase the potential for higher discard rates, since it is not restricted by species. A management area specific license may represent a reasonable middle ground, given these considerations.

5.1.2.2 License Recipient Sub-alternatives

Options currently exist for granting licenses to current vessel owners, as well as past vessel owners and permit holders of record (a two-tier skipper license alternative is discussed separately). As with the proposed vessel moratorium, differences that relate to environmental impacts have to do with potential numbers of vessels (capacity) in the fishery. Any option other than granting licenses only to current vessel owners would result in additional licenses in the fishery, hence additional vessels in the fisheries. Chapter 3 of this document describes in detail the numbers of licenses resulting from each of the alternatives under consideration for license recipients. Any alternative which allows for an increase in the numbers of vessels in the fisheries would likely exacerbate the race for fish, increase gear interactions with the benthic environment, and perhaps increase the likelihood and magnitude of discarding. Conversely, alternatives which actually reduce the number of vessels operating in the fisheries would have reciprocal, and likely beneficial, results. The same holds true if an effective fractional licensing or license buy-back program is implemented, regardless of the number of initial allocants.

If licenses are initially attached to a particular vessel, even if that license is transferable to a different vessel, then it becomes impractical to issue licenses for that vessel to more than one recipient. In this case, the numbers of vessels resulting from a license limitation program would be fixed at the initial allocation level, though increases in individual vessel capacity could still occur.

5.1.2.3 Qualifying Period Sub-alternatives

The options for eligibility probably have the greatest impact in defining the numbers of vessels initially eligible for limited licenses. The numbers of license under each of these options is described in Chapter 3, though it is obvious that the most restrictive window of time for eligibility would result in the fewest number of licenses. For example, requiring that a vessel fished in the last three years will result in far fewer vessels than allowing the window of eligibility to stretch back to 1978 (groundfish alternatives), but would still qualify more vessels than fished in the latest year of the fishery. Requiring participation in each of the last three years would result in the fewest number of vessels. Environmental effects of any license limitation program, when compared to the status quo, will likely depend on the numbers of vessels operating in the fisheries.

The additional option for a minimum landing requirement (MLR) may help to reduce the pool of eligible vessels, but probably not substantially since most of the vessels in the fisheries under consideration would meet or exceed the MLRs under consideration. Additionally, those vessels excluded by the MLR would likely be smaller vessels that represent a fraction of the harvest capacity in the fisheries. Virtually all of the larger vessels would easily make even the most restrictive MLR.

5.1.2.4 Use and Transferability Restrictions

Although the use and transferability restrictions under consideration would not directly affect the initial numbers of licenses (vessels) operating in the fisheries, they could impact significantly the future numbers of vessels and their capacity to a significant degree. The issue of general licenses vs. license endorsements for species or areas presents on example. If species or area 'endorsements' were allowed to be separated from the initial license, and sold to other vessels, this would then allow for additional vessels in the fisheries, unless such trades were restricted to those already holding an additional license.

Another set of options, limiting transferability of licenses across size categories, would mitigate the potential for large increase in vessel capacity which could occur by upgrading to larger vessels. This is discussed in a previous section, under 'Nature of License'. Both groundfish and crab license programs include an option for using the moratorium (20% upgrade limit up to 125') limits for vessel license upgrades. These and any length category restrictions would help to slow, but would not entirely eliminate, increases in the size of vessels in the fisheries. Thus, there could still be significant upgrades in capacity. Restrictions by mode, such as catcher vs catcher processor would help mitigate, but not eliminate, this possibility. Again, any alternative which restricts either the numbers of vessels or their capacity will have the least impact on the physical environment and fisheries stocks.

5.1.2.5 Other Considerations

Options exist for Community Development Quotas (CDQs) for both groundfish and crab license programs; i.e., some percentage of the TAC would be set aside for this program, or, some percentage of additional licenses would be allocated for these programs. These are discussed in further detail in Chapter 3, but we address them here briefly as they relate to environmental concerns. Any portion of the fishery which is prosecuted under a CDQ component will likely be at a slower pace, at selected times, and with lower bycatch rates of non-target species. This has been borne out by CDQ fishery experience to date in the pollock fisheries. For that part of the TAC assigned to CDQs, this would be true. However, it is worth noting that the tradeoff is a smaller TAC for the remainder of the fishery participants, which will likely exacerbate the existing derby nature of the fisheries with all of the attendant bycatch implications.

For crab fisheries, an Individual Transferable Pot Quota (ITPQ) is being considered, which has some potential for reducing the overall effort levels in the crab fisheries. This is discussed in detail in Appendix III.

5.2 Impacts on Threatened or Endangered Species, Marine Mammals, and Seabirds

5.2.1 Alternative 1: Status Quo (No Action)

Interactions between commercial fisheries and endangered species, marine mammals, and seabirds have become a primary driving force in how we manage our fisheries. Above and beyond direct interactions such as gear entanglement and other fishery induced mortalities, there is concern over the indirect effects of fishing on the food sources of these species. However, even under continued open access, these interactions are taken into consideration when setting fishery quotas and in the in-season management of the fisheries. Provisions of the Endangered Species Act provide an overriding influence on the management of the fisheries. Marine mammal protection measures have been recently enacted which provide additional protection for these species from the effects of commercial fishing operations. Protective zones around sea lion rookery sites, and no-trawl zones around walrus haul-out sites, are two recent examples. Such measures were implemented under current open access fishery regulations. The effects of continued open access are difficult to quantify, but would be expected to be minimized by whatever measures the Council deems appropriate. The types of gear and areas in which this gear is employed are variables which would determine the potential effects, but these variables are difficult to estimate.

The potential adverse effects to marine mammals in the groundfish fisheries include: (1) reduction of food availability (quantity and/or quality) due to harvest, (2) unintentional entanglement in fishing gear, (3) intentional harassment of animals by fishermen, and (4) disturbance by vessels and fishing operations. The first possible effect, reduction of food availability should not be a factor under continued open access (vs a moratorium) because the TAC for a given species is set and monitored regardless of fleet size. The only caveat to this observation is that, in an expanded fleet, the potential may exist for a larger amount of undersized fish (pollock, for example) to be taken and subsequently discarded. The reason for this is that with more vessels on the grounds-fishing for a fixed quota, it is possible that some vessels may be unable to target effectively on concentrations of larger fish. The undersized fish discarded by the fishermen may be fish that are relied on by marine mammals as their primary food source. However, it should be noted that there exists no quantifiable relationship between gear selectivity and crowding on the fishing grounds. The amount of undersized fish taken in a fishery may be a function of the relative biomass of this particular size class of fish, and not be related to the numbers of vessels on the grounds.

Three of the possible effects listed above could be expected to increase in likelihood under conditions of open access which allow for additional numbers of vessels to enter the fisheries. Unintentional gear entanglements, intentional harassment, and indirect disturbance by fishing operations could possibly increase as more vessels operate on the fishing grounds.

Interactions between commercial fishing operations and seabirds is an area of more recent concern. Due to the limited information available regarding interactions with commercial fishing operations, a more detailed discussion of seabirds is contained here. Seabirds are an integral part of the marine ecosystem of the North Pacific Ocean. They are particularly important from the standpoint of being top-level predators and because of their role in recycling nutrients throughout the entire Pacific basin.

Interactions between commercial fisheries and seabirds take many forms. Fishing gear catches seabirds incidentally during operations; fisheries take the same organisms preyed on by seabirds; fisheries eliminate organisms that compete with seabirds for prey; and fisheries produce abundant and easily obtained new food for seabirds in the form of discarded organisms or their parts from commercial operations. The impact of these interactions on seabird populations of the North Pacific is poorly known, but studies from high seas driftnet fisheries show that such impacts can be severe. Thus any impact of groundfish, halibut, and crab fisheries on the economic, aesthetic, and cultural value of seabirds should be considered in this environmental assessment.

Impacts on seabirds could occur through competition with the commercial fishery for the same groundfish species and also through entanglements with trawl gear and being caught by baited hooks of hook-and-line gear. Amounts of groundfish TACs, therefore, will influence the degree of interactions on seabirds. To generalize, any impact on seabirds by fisheries for groundfish, halibut, and crabs cannot be assessed presently in any definitive terms, nor can impact differences be ascribed to license limitation options covered by this EA. However, there is a general perception by the scientists and the fishing industry that any such impact should be minimal and perhaps negligible because direct mortality on seabirds caused by these fisheries is negligible. The question of competition with the seabirds for their food by the fisheries is difficult to assess at this time. Any such impact from the proposed moratorium, however, should be minimal because the fisheries are regulated by catch quotas that have been determined to be "acceptable biological catches" from an overall stock status and ecosystem point of view. Trawl fishing activity inflicts mortality on seabirds that are caught in trawl nets. Fewer seabirds, therefore, might be killed if the alternative chosen resulted in fewer boats.

Many seabirds consume juvenile pollock, herring, capelin, and sandlance, and other commercially important species. Seabirds and commercial fishermen compete directly with each other, although they take different age classes of fish. Most of the commercial fisheries, however, harvest adult-sized groundfish. Larger harvests of groundfish species such as pollock actually may result in lesser predation on smaller pollock and prey species such as sandlance and capelin. Larger amounts of juveniles of these species may remain in the ecosystem as prey for seabirds.

Populations of other species of seabirds are of concern. These include the Spectacle and Steller eider, red-legged kittiwake, black-legged kittiwake, thick-billed murre, common murre, whiskered auklet, and marbled murrelet. The status of populations of spectacle and Steller eiders populations is uncertain and believed to be depressed. The occurrence of the spectacle eider is rare. Wintering locations are unknown. The Steller eider occurs occasionally in Alaska. Red-legged kittiwakes have declined substantially on the Pribilof Islands, but populations are believed to be stable and abundant elsewhere. The black-legged kittiwake, thick-billed murre, and common murre have declined recently over large parts of the Bering Sea and Aleutian Islands. Reasons for the declines are not understood. Except for the spectacle and Steller eiders, the seabird populations elsewhere appear to be abundant.

High seas driftnet fisheries have been documented to impact sea bird populations with as many as 327,000 birds killed annually in this fishery. However, it is not anticipated that any of the proposed alternatives, including continued open access, is likely to significantly impact sea bird populations.

5.2.2 Alternative 2: License Limitation

As with Alternative 1, the effects of a license limitation system on endangered species, marine mammals, and seabirds are difficult to assess. Any license limitation option which increases the potential number of small vessels, including an exemption for small vessels, could increase the interactions between fishing operations and these species. Depending on gear types and areas of gear deployment, these effects would likely range from none to minimal, given overriding authority to manage the fisheries under provisions of the Endangered Species Act and the Marine Mammal Protection Act.

5.3 Impacts on Ecosystem and Physical Environment

5.3.1 Alternative 1: Status Quo

Continued open access, while not directly affecting the overall fisheries resources, has the potential to allow some additional impacts to the physical environment itself. As more vessels are operating in the waters of the oceans, employing more gear on the fishing grounds, the potential for physical impacts to the environment is increased. For example, increased effects on the benthic environment could result as more bottom trawl gear is employed. More vessels fishing faster than before in the longline fisheries will result in more gear entanglements and more lost gear littering the ocean floor. Continued ghost fishing by lost gear could have more direct impacts on the fisheries resources themselves. As more vessels are present on the water, the potential for an increase in marine debris and pollution becomes apparent. Increased numbers of vessels of all sizes could result in an accelerated fishery and increase safety problems for the participants in these fisheries.

5.3.2 Alternative 2: License Limitation

Any of the license limitation options under consideration would tend to lessen the effects of the commercial fisheries on the physical environment. The differences between the license limitation options, including the options for qualifying criteria, primarily affect the numbers of vessels which might be participating in the fisheries. Impacts of these options within an overall license program would depend on the types of gear employed by these particular vessels and the areas in which these vessels operate. It is likely that many of these vessels would be operating in near-shore areas; therefore, any increases in marine debris or pollution resulting from these additional vessels is more likely to have measurable physical impacts, as compared to the more restrictive options which reduce the number of eligible vessels.

5.4 Finding of No Significant Impact

For the reasons stated above, neither retaining the status quo or implementation of any of the proposed license limitation alternatives would significantly affect the quality of the human environment, and preparation of an Environmental Impact Statement (EIS) on the final action is not required by Section 102(2)(c) of NEPA or its implementing regulations. Any of the proposed license limitation alternatives contained in this amendment would likely lessen the effects of the commercial fisheries off Alaska on the quality of the human environment, as compared to the status quo alternative, as they would cap the overall fleet at some point, which is a situation not offered under the status quo (no action) alternative.

David Evans
Assistant Administrator for Fisheries

9/19/97
Date

6.0 Summary and Conclusions

This Chapter summarizes the major findings of the analysis, describes how the proposed actions address the Council's Problem Statement, and addresses the proposed actions' consistency with other applicable law.

6.1 Environmental Assessment

As described in the Environmental Assessment in Chapter 5, none of the alternatives contained in this document is expected to significantly impact the human environment, physical environment, the fisheries, marine mammals, seabirds, or endangered species. Preparation of a more detailed Environmental Impact Statement is not warranted for the proposed actions due to the Finding of No Significant Impact (FONSI).

6.2 Economic Impacts (E.O. 12866)

Under the requirements of Executive Order 12866, this document evaluates the potential economic impacts of the proposed actions. E.O. 12866 recognizes that some of the costs and benefits associated with proposed actions are unquantifiable. This is the case with the alternatives under consideration herein; however, as described in Chapter 3, none of the proposed alternatives will differ significantly from the status quo in terms of net benefits to the Nation. None of the proposed actions would have an annual effect on the economy of more than $100 million, nor would they trigger any other provisions of the Order which would invoke a finding of 'economic significance.'

The Council indicates in their Problem Statement that many of the problems prevalent in the fishery are occurring because of the existence of overcapitalizion. Under the No-action alternative or Status Quo, the 14 specific problems which result from continued entry and capitalization will likely be exacerbated. However, a fully or overcapitalized fleet will provide few opportunities for growth and new investment. Very few vessels have entered the groundfish and crab fisheries since February 9, 1992. It may be that the threat of the moratorium kept new vessels out of the industry, or, perhaps investors have decided their money is better spent elsewhere. If potential fishery participants are expecting an eventual IFQ allocation, this may provide an incentive to enter the fisheries despite the economic irrationality of such a decision.

Regardless of the size of the fleet, because most of the catching power is tied up in fewer than 500 vessels, the problems of excess capacity that contribute to the problems listed in the problem statement still will exist. Even if a moratorium or a license limitation program capped the fleet at its existing level, each existing vessel owner would attempt to maximize returns to the investments they have already made by trying to increase their share of the harvest. To increase harvest shares, they will need to invest in capital or labor on their existing vessels. Because the overall TAC is unlikely to increase in the short-run, this results in higher costs for the entire fleet without a consequent increase in total revenue.

The Problem Statement also lays blame for many of the crab and groundfish problems on the race for fish. Unless the race for fish caused by the common-property nature of the fishery is eliminated, vessel owners will continue to make decisions which seem economically rational for themselves, but detrimental and irrational for the fisheries, and nation, as a whole. Neither the status quo or the license limitation alternative appear to be able to eliminate the common property aspects of the fishery.

Relative to the status quo, the license limitation alternative has the potential to prevent further deterioration of economic benefits accruing from the groundfish resources, depending on the options chosen within that alternative. Those gains will only come about if the number of licenses is set such that it constrains entry into the fishery. In order to be effective, a license limitation program must constrain the number of vessels in the fleet to a number less than that which would be participating under open access. Capital stuffing will very likely occur in any 'effective' license limitation program. If the license program does not constrain the fleet, the likelihood of capital stuffing approaches zero, but then there is no benefit to the industry, or the Nation, even in the short term. Capital stuffing is the "Catch 22" of license limitation programs, and is the fundamental shortcoming of license limitation programs.

Section 3.2.1.2 describes some conditions under which capital stuffing can be prevented and benefits sustained over the longer term. These conditions include effective capacity limitations, license buy-back programs, fractional licensing systems, or some combinations thereof. It is not expected however, that a viable buy-back program could be implemented, when there is a perception that this license limitation program will identify the field of participants while more comprehensive management solutions are being developed, perhaps eventual IFQ allocations. Since license limitation can be viewed in the context of being an interim step, it could provide some stabilization for the industry as a whole as these solutions are being developed.

The analysis in Section 3.2.2 focuses largely on the distributional impacts of various license limitation sub-alternatives. The choices in designing a license limitation program will figure heavily in the overall success of such a program, and in the program's ability to achieve specific management objectives. The potential for limited, short term benefits must be weighed against the expected administrative and enforcement burdens placed on the implementing agencies. The license program will take on greater importance in capping growth if the proposed moratorium is not implemented.

In general it appears that, of the principle configurations examined, the universal configuration would not be an effective license limitation program. It does appear to be less disruptive and would appear to have fewer negative impacts on Alaskan residents, than the explicit configuration. The explicit configuration appears to have some of the necessary ingredients for an effective license program, particularly in the GOA, where the fleet and harvesting capacity is cut back substantially. These cut-backs could prove to have negative social impacts, particularly in Alaska coastal communities.

Any license program will produce winners and losers. The winners will gain access to fishing opportunities given up by the losers. If the same amount of fish is harvested under a license limitation program, then producer and consumer surplus will most likely remain unchanged. Therefore the overall net economic benefits to the nation will remain largely unaffected. If however, the reduction in harvesting capacity falls below that necessary needed to harvest the OY, a loss to the nation may be seen. Any significant cut in harvesting capacity will very likely result in new capital flowing into the fishery. Because existing capital in the form of unlicensed vessels would be idled, a new influx of harvesting capacity would be of questionable merit to the nation. This is another aspect of the catch-22 of license programs. In order to be effective, a license limitation program needs to cut back the fleet and the participants in the fisheries. Once the hard cuts are made however, the remaining fleet will still be locked in a race to harvest the resource.

6.3 How the Alternatives Address the Council's Problem Statement

The alternatives under consideration include continued status quo (no action) or implementation of some form of License Limitation program. There currently exists an extremely wide range of possibilities for the specific elements and provisions of a License Limitation program. Selection of a Preferred Alternative will aid in a more definitive evaluation of how the program addresses the 14 problems outlined in the Council's CRP Problem Statement. A preliminary evaluation is provided below. The numbering of the problems is not intended to reflect any prioritization.

Problem 1: Harvesting capacity in excess of that required to harvest the available resource.

Under status quo, without a vessel moratorium, this problem will not likely go away and will be exacerbated as additional vessels are allowed to enter the fisheries. A License Limitation program could address this problem, at least in the short term, if a restrictive window of participation is required for qualification. Some of the options under consideration achieve reductions in vessels, particularly in combination with minimum landings requirements. Any of the options which do not reduce the current numbers of vessels will not address Problem #1. A Full Retention mandate, being considered separately, may also positively address this problem by effectively reducing harvesting capacity (in order to match processing capacity).

However, even if short term gains are derived by a reduction of effective harvest capacity, they will likely be quickly diffused by capacity increases, as has been exhibited by virtually all License Limitation programs in existence. An effective License Buy-back Program would be one method which would tend to maintain the benefits beyond merely the short term. Again, an effective buy-back program has not been developed, and would be unlikely under a License Limitation program which is viewed as an interim step towards eventual IFQs, and which defines the 'players' to be included in such allocations.

Problem #2: Allocation and preemption conflicts between and within industry sectors, such as with inshore and offshore components.

Status quo fisheries management is predominately driven by allocation and preemption conflicts between industry sectors striving for raw fish product, PSC bycatch apportionments, or rights to processing. None of the alternatives contained herein will, in and of themselves, address these allocational issues. Inshore/offshore processing allocations, for example, are being addressed separately, and similar issues would continue to arise under either the status quo or license limitation alternatives. There are certainly allocational decisions which could be made within the context of this amendment; however, some of the primary driving forces in fisheries allocational disputes, such as bycatch apportionments, would remain unresolved. The option to designate licenses by inshore or offshore would restrict transfers between those sectors, but do little to alleviate overcapitalization problems within sectors or allocational problems between sectors, if a separate inshore/offshore allocation is not implemented.

Problem #3: Preemption conflicts between gear types.

During the development of the License Limitation alternatives, license designations by gear type were explicitly excluded from further consideration. Such designations may have reduced future preemption conflicts to some degree, depending on transferability and use provisions. However, even gear designations would not have necessarily solved many of the preemption issues facing the industry and the Council. Unless specific allocations of TAC and PSC bycatch are made up front, as has been done with BSAI Pacific cod, such preemption conflicts would likely continue to face fisheries managers. Current alternatives under consideration do not directly address this problem.

Problem #4: Gear conflicts within fisheries where there is overcrowding of fishing gear due to excessive participation and surplus fishing effort on limited grounds.

This problem is primarily a function of excess capacity and as such is subject to the same findings as in Problem #1 - that is, if a program is adopted which reduces, or at least effectively caps, fishing capacity, then it may address Problem #4. A License Limitation program, for example, will define the field of participants, but contains no inherent incentives to reduce or alter the race for fish and the attendant gear crowding problems. The proposals for a crab License Limitation program include a potential Individual Transferable Pot Program (ITP), which could directly address this problem by effectively capping capacity and allowing a market based allocational mechanism. However, it may be worth noting that it is the ITP, not the License, which is the mechanism for addressing this problem.

Problem #5: Dead loss such as with ghost fishing by lost or discarded gear.

None of the alternatives directly addresses this problem in the groundfish and crab fisheries under consideration. The fixed gear halibut and sablefish fisheries are scheduled to operate under an IFQ program beginning in 1995 which is expected to directly address this problem. Much of the lost gear problem is a function of the race for fish and overcapacity. A License Limitation program which effectively reduces fishing capacity, and slows down the race for fish, may mitigate this problem.

Problem #6: Bycatch loss of groundfish, crab, herring, salmon, and other non-target species, including bycatch which is not landed for regulatory reasons.

As with other problems associated with the race for fish, bycatch loss of groundfish, crab, and other non-target species may be reduced by a management regime which alleviates the race for fish. None of the alternatives herein directly address this problem, though a License Limitation program which reduces capacity could conceivably constrain the derby nature of the fishery. Bycatch loss of non-target groundfish and crab species may be alleviated by a full retention mandate, an alternative which is available under either status quo or License Limitation. However, the full retention proposal does not include a mechanism for addressing bycatch and waste of PSC species such as halibut, salmon, and crab, which are not landed for regulatory reasons.

A 'Harvest Priority Multiplier,' as contained in the GLS proposal offered by the State of Alaska does offer an incentive to reduce bycatch of PSC species by tying a vessel's performance under the License program to future IFQ accrual. Because this particular proposal would affect future IFQ allocations, it will be more fully analyzed when detailed IFQ analyses are undertaken. Similar to a VIP program, the 'multiplier' concept could be implemented under status quo as well as a License Limitation program. Similarly, the original 'Harvest Priority' proposal from the Alaska Marine Conservation Council (AMCC) is designed to address the issues contained under Problem #6 (and Problem #7), and could be implemented separately from any proposed action contained herein.

Problem #7: Economic loss and waste associated with discard mortality of target species harvested but not retained for economic reasons.

As with #6 above, the alternatives contained in this document directly address this problem only if combined with some other action such as a Full Retention, Harvest Priority, or other program which relies on individual accountability.

Problem #8: Concerns regarding vessel and crew safety which are often compromised in the race for fish.

Although a License Limitation program does have some ability to reduce effective fishing capacity, at least in the short term, it will not eliminate the basic derby nature of the fisheries and, therefore, is not expected to address this problem to any significant degree.

Problem #9: Economic instability within various sectors of the fishing industry, and in fishing communities caused by short and unpredictable fishing seasons, or preemption which denies access to fisheries resources.

Economic instability caused by short seasons and preemptions will not be significantly addressed by any of the alternatives contained herein. However, some economic stability in industry sectors, and even communities, may be achieved under a License Limitation alternative by virtue of defining the field of participants in the fisheries, and reducing the fleet to a level which lengthens the fishing seasons. Defining the players alone may provide stability to industry participants who now know where they stand in terms of present and future fishing privileges. Future discussions and development of more comprehensive programs, including IFQs, may be facilitated by adoption of an interim License Limitation program.

Problem #10: Inability to provide for a long-term, stable fisheries-based economy in small economically disadvantaged adjacent coastal communities.

As part of the original inshore/offshore amendment and the sablefish/halibut IFQ amendment, the Council has, through the allocation of CDQs, addressed this problem to a significant degree in the BSAI. The current License Limitation proposal also contain options for additional set asides of CDQs for the same groups of communities involved in the existing CDQ program. The pollock CDQ program established in 1992 is scheduled to sunset after 1995, unless rolled over by Council action. Any additional set asides established as part of this amendment would likely increase the benefits to these communities relative to Problem #10. This action could be taken by the Council independent of approving a License Limitation program. Some of the license limitation configurations examined may actually diminish the prospects for some communities, not necessarily involved the CDQ programs.

Problem #11: Reduction in ability to provide a quality product to consumers at a competitive price, and thus maintain the competitiveness of seafood products from the EEZ off Alaska on the world market.

Many of the problems associated with marketing aspects of the fisheries are a result of the race for fish and the attendant inability of fishermen and processors to tailor their operations to optimal markets. Neither continued status quo nor license limitation is expected to significantly change this situation.

Problem #12: Possible impacts on marine mammals, seabirds, and marine habitat.

As described in the EA section of this document, none of the alternatives under consideration is expected to significantly affect marine mammals, seabirds, endangered species, or the marine or human environment. Fishing practices under any of the License Limitation alternatives is likely to be similar in nature to current open access fisheries. However, any alternative which reduces fishing capacity and the race for fish may have the effect, though not likely significant, of reducing potential impacts. Moreover, the Full Retention mandate proposed separately could complement any such positive effects by slowing down the race for fish and reducing catch of non-target or undesirable fish. The overall effect of such a program on total removals from the nutrient flow of the ecosystem is, however, undetermined.

Problem #13: Inability to achieve long-term sustainable economic benefits to the nation.

As noted earlier, any of the potential economic benefits of a License Limitation program, even a fairly restrictive program, are likely to be short-lived. Long-term, sustainable economic benefits may be attributed to a License Limitation program only from the perspective that such a program is a necessary first step in a sequential decision-making process for the overall CRP initiative. The License Limitation program itself is not expected to provide these types of benefits.

Problem #14: A complex enforcement regime for fishermen and management alike which inhibits achievement of the Council's comprehensive goals.

Under the status quo (no action) alternative, the current enforcement regime will continue to be in place as modified by other action taken by the Council and NMFS. The License Limitation alternatives, even in the simplest form, have little or no capacity to reduce the complexity of this enforcement regime. Enforcement mechanisms under License Limitation will be similar to those under status quo. Some of the License Limitation alternatives do have the capacity to increase the complexity of the enforcement regime, particularly those that assign species specific licenses (see discussion in chapter 4). If combined with other, concurrent actions such as the Harvest Priority Multiplier, the complexity would likely be further increased. For example, the multiplier concept would function in many ways like an expanded VIP program, coupled with monitoring and enforcement of specific license endorsements.

In addition to the 14 specific problems identified, the Council's Problem Statement refers to an "overriding concern to maintain the health of the marine ecosystem to ensure the long-term abundance of the groundfish and crab resources." To this end, there does not appear to be significant differences between the major alternatives under consideration: Status Quo and License Limitation. Under either alternative, fisheries would continue to be managed similarly, from the environmental perspective. Though there are proposals, such as Harvest Priority and Full Retention, which are aimed at minimizing the ecosystem impacts of commercial fisheries, these programs could be implemented under either a License Limitation program or under continued Status Quo. Many of the issues for which the CRP process was initiated involve economic allocations of the resource.

6.4 Other Applicable Law

Magnuson Act (Executive Order 12866) and NEPA requirements for actions contemplated by the Council (and SOC) are addressed in Chapter 3 and 5 respectively, where we evaluate the expected economic and environmental consequences of the alternatives under consideration. Proposed action is also required to be consistent with seven National Standards, and Section 303(b)(6) of the Magnuson Act, which outlines criteria for limited access programs by the Council. Additionally, a fisheries impact statement is required which addresses the potential impacts on participants in both affected, and adjacent, fisheries.

6.4.1 National Standards

A definitive evaluation of the proposed action's consistency with the National Standards is difficult to complete at this time due to the large array of alternatives under consideration. At this time, we will attempt a generic evaluation, which includes the range of potential license limitations program configurations. A supplement to this section will likely need to be completed at a point when the Council determines a Preferred Alternative; i.e., the specific form of License Limitation it may be forwarding to the SOC. A preliminary evaluation for each National Standard is included below:

National Standard 1: Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry.

Optimum yield (OY) is defined as the amount of fish which will provide the greatest overall benefit to the Nation including maximum sustainable yield (MSY) as modified by any relevant economic, social, or ecological factors. Under either the status quo (No Action) or License Limitation alternative, the overall way in which the fisheries are managed will not change significantly. Annual TACs will still be specified as they are currently, and achievement of species TACs and PSC caps will be monitored by NMFS. Within the alternatives under consideration, there are, however, sub-alternatives which could effect the attainment of OY. For example, one option under consideration is to, in effect, prohibit directed fisheries for rockfish in the GOA, by not issuing licenses for that species. Arrowtooth flounder is also omitted from the list of species for which licenses would be issued (under this particular alternative), but arrowtooth is not a species of relevance in OY considerations at this time.

In the case of rockfish in the GOA, the annual estimated value of this fishery is in the neighborhood of $14-$20 million, an amount which represents potentially foregone value to the Nation if fisheries for rockfish are prohibited. It is possible that some of these rockfish, and therefore some of the value, will still be captured as bycatch while prosecuting other fisheries. However, it is possible that a substantial amount of these species would remain uncaught, depending on how restrictive the allowable retention rates are set. The Council and SOC have recently implemented an explicit stock rebuilding schedule for POP rockfish in the GOA, which recognizes surplus amounts of fish available for commercial harvest. Recent trends in the status of stocks for these species indicate an increased abundance over levels seen in the last few years. Factoring in this increased abundance would increase the potential 'loss' of OY if licenses are not issued for this species.

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

In developing this analysis, numerous current data sources were utilized in order to obtain the best information available. Under implementation of any of the alternatives under consideration, the Council and NMFS would continue to manage the fisheries using the best information available.

National Standard 3: To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

Nothing contained in these proposed actions will alter the way in which fish stocks are managed relative to National Standard 3. Current management practice is consistent with this standard.

National Standard 4: Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to assign fishing privileges among various U.S. fishermen, such allocation shall be: (1) fair and equitable to all fishermen, (2) reasonably calculated to promote conservation, and (3) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

The greatest test of equity in allocating fishing privileges is in determining which group of people are included and excluded. None of the alternatives included in this document base qualification on state residency; rather, the primary test of inclusion rests with participation history in the subject fisheries. Decisions still need to be made by the Council regarding who would receive licenses based on participation history from among the following major groups: current vessel owners, past vessel owners, and permit holders (skipper and crew members, for example). Regarding qualification histories, there are alternatives under consideration which do differentiate between specific fisheries. For example, one option is to have a differential qualification period for vessels which participated in fixed gear, Pacific cod fisheries, while maintaining a more restrictive qualification criteria for all other fisheries. Though this differentiation is based on a species/gear criteria, it would indirectly alter the overall distribution of fishing privileges by state of residency, when compared to other alternatives under consideration. However, such a differential qualification would still be equally applied to all vessels, regardless of residency.

In regards to Community Development Quotas (CDQs) under consideration, these are not considered to differentiate between residents of different states because not all residents of any state are eligible to receive such allocations. Although they are restricted to western Alaska, a relatively small percentage of Alaskans will receive the benefits of such allocations. Furthermore, CDQ experiences to date indicate that the benefits of such a program accrue to vessels not directly included in the CDQ allocations, through cooperative fishery business arrangements. Many of the vessels participating in these arrangements are from states other than Alaska.

The alternatives under consideration also contain provisions for limiting the amount of fishing privileges which may be allocated, or subsequently acquired, by fishing entities.

National Standard 5: Conservation and management measures shall, where practicable, promote efficient utilization of fishery resources, except that no such measure shall have economic allocation as its sole purpose.

Utilization of the fisheries resources will not be directly affected by any of the alternatives under consideration. License Limitation will only define the eligible players of the game, but will not necessarily affect the utilization patterns in the fisheries. If a full retention program is implemented in conjunction with either the License Limitation program or the status quo, this could result in more efficient utilization of the resource. Again, such a proposal is being developed and analyzed separately from this proposed amendment.

Though the results of a License Limitation program will undoubtedly include economic allocations, the primary purpose of the proposal is to limit further entry in the fisheries and to provide a more stable operating environment for fishermen. Further, this program is seen as a potential bridge to further, market based management systems. As such, the program will define the field of players, making future development of broader CRP initiatives potentially easier.

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

Though a License Limitation program would assign specific fishing privileges in North Pacific fisheries, transferability and use provisions being considered allow for a significant degree of flexibility for fishermen to respond to changes encountered in the fisheries in the future.

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

Compared to the status quo, implementation of a License Limitation program will result in an increase in administrative and enforcement costs to the implementing agencies. These costs increase proportionately to the degree of complexity of the program. For example, a program which assigns species-specific fisheries licenses will require monitoring and enforcement on a level comparable to an IFQ program. This may be particularly true if coupled to some type of full retention/utilization mandate. To the extent that this program is seen as a bridge to IFQs, for some interim time period, it may result in unnecessarily high and duplicative costs, especially if the costs and infrastructures associated with an eventual IFQ program are different in nature. If, however, similar administrative and enforcement infrastructures are practicable, then duplication of costs may be minimal.

In a more immediate sense, costs associated with implementation of a complex License Limitation program may be seen as unnecessarily high and duplicative to the vessel moratorium passed by the Council. This is particularly true if the License Limitation program is viewed as only an interim measure in a step-wise CRP process, one of the stated intents of the moratorium. At the time of this writing, the resolution of the moratorium is still pending, stemming from the August 5 disapproval by the SOC. It is possible that the moratorium will be revised and resubmitted by the Council.

6.4.2 Section 303 (b)(6)

Under Section 303 (b)(6) of the Magnuson Act, the Council and SOC are required to take into account the following factors when developing a limited access system: (A) present participation in the fisheries, (B) historical fishing practices in, and dependence on, the fisheries, (C) the economics of the fisheries, (D) the capability of fishing vessels used in the fisheries to engage in other fisheries, (E) the cultural and social framework of the fisheries, and (F) any other relevant considerations.

Included in the broad range of alternatives under consideration (within the overall license limitation concept) are various options for qualification criteria covering a broad range of present and past participation. These options are evaluated for a wide range of fishery participants who depend on the fisheries, including current vessel owners, past vessel owners, permit holders, and skippers involved in the fisheries.

Much of the document is devoted to examination of the basic economic principles and theory concerning limited entry, and in particular, license limitation. An even greater emphasis is placed on the distributional aspects of the various alternatives as they relate to past, current, and future fishing privileges.

Treatment of social and cultural concerns is described in Section 3.5. The Council and analysts have devoted considerable time and expense to capturing the social context of the subject fisheries through community profiles, industry sector profiles, and current and scheduled impact assessments on fishery participants. A more definitive assessment of the program's consistency with 303 (b)(6) will depend on selection of a Preferred Alternative by the Council.

6.4.3 Fisheries Impact Statement - Section 303 (a)(9)

Section 303 (a)(9) of the Magnuson Act requires that any plan or plan amendment submitted by the Council include a description of the potential impact of such plan (amendment) on the participants in the fisheries and on the participants in fisheries managed by adjacent Councils. The intent of the proposed license limitation program is to stabilize the size and capitalization of the fleet operating in Council-managed fisheries while allowing the industry and Council to further develop potential IFQ systems which more directly address the underlying problems facing the fisheries . As such, the license limitation alterative does not resolve the underlying problems of existing overcapitalization and excess effort in the fisheries, unless an effective buy-back program is developed, but may prevent these problems from worsening while more comprehensive solutions are being developed. The effectiveness of a license limitation program and the status quo have been analyzed as to their respective abilities to achieve this objective.

6.4.3.1 Impacts to Participants in Affected Fisheries

The license limitation alternative would deny access to new vessels, but would not restrict the entry of vessel owners or operators. Depending on the qualification window chosen, it is likely that any current participants in the fisheries, or at least any participants through the Council's June 24, 1992, control date would qualify for a vessel license. Options for license designations would also restrict the ability of vessel owners to significantly increase the capacity of their vessels. As a result, fishermen are not denied the opportunity to enter the fishery, or to upgrade their vessels, so long as they draw from the existing capitalized fleet of qualifying vessels. Similar provisions would allow for the replacement of lost or damaged vessels. Those vessels which have fished in the past, but not in recent years, could be denied access under some of the license limitation options. Similarly, vessels which have entered the fishery in the most recent year, or which may enter between now and implementation of a license program, could also be denied access.

Total allowable catches of crab and groundfish are not affected by the proposed license alternatives. The flow of products and total revenues through the marketing network is not expected to change, nor is the regional distribution of vessel ownership. Associated industries and communities that depend upon fishery product flows also are expected to be unaffected, with the exception of ship building and affiliated industries.

It is possible that certain vessels of a desired configuration may command a premium in the resale market, given the restrictions on entry of additional vessels. Also, because the license limitation alternative restricts further capitalization of the fleet, participants in some fisheries may be able to reinforce their position in certain situations if there is reduced pressure from additional competitors. Despite these possibilities, there is unlikely to be a shortage of vessels necessary to harvest the available stocks, in view of the overcapitalization and excess capacity already present in the fleet. The trade-off that the industry receives for restricting further increases in capitalization is a stabilized environment during which time the Council and industry can consider long term management solutions without encouraging additional speculative growth in capacity.

Under the status quo, the inherent incentives created by open access and publicly-owned resources will maintain pressure to add capacity and capitalization to the fleet. If only economic variables are considered, it is possible that fleet size will decline from present record-high levels. However, recognizing that the Council may be considering additional limited access alternatives for these fisheries (IFQs), speculative activity to establish or build catch records is expected to result in increased capacity, if not vessel numbers, under continued open access.

The consequences of still further capitalization of the fleet will contribute to existing conditions of instability and financial risk for the industry, and will likely aggravate allocation problems throughout the fishery. In the face of constant prices and catch quotas over the next few years, additional vessels and effort portend declining average net returns, decreasing efficiency, and further reductions in season length. Associated problems attributed to overcapacity and excess effort including discard and bycatch waste, high-grading, poor product quality, and unsafe operations are perpetuated under the status quo alternative.

6.4.3.2 Impacts to Participants in Adjacent Fisheries

Under a license limitation alternative, it is expected that some vessels and their owners who are restricted from participating in Council-managed fisheries will turn elsewhere. The effect could be to increase pressure on a declining number of unrestricted fisheries, aggravating management problems in these areas. The entry rate of first-time participating vessels in the Alaska EEZ fisheries over the past 15 years has averaged nearly 900 vessels per year. Under the proposed license limitation alternative, some of these new entrants may simply redirect their vessel acquisition to the pool of available boats that qualify, particularly in the case of a new participant whose primary motivation is to fish the Alaska EEZ. Alternatively, new entrants also include fishermen whose motivation is to utilize an existing vessel, and open access fisheries are the solution. Under license limitation, they will likely redirect their efforts to other open access fisheries.

Under the last scenario described above, the consequence of limited entry in one fishery is to transfer the overcapitalization problem to another. Potential new entrants denied entry into the Alaska EEZ fisheries have an increasingly small or number of open access alternatives available along the West coast. Within Alaska, many of the commercially important state-managed fisheries such as salmon, sablefish, herring, and GOA crab are already operating under a limited entry program, affording protection from an influx of vessels unable to participate in the EEZ. The federally managed sablefish and halibut fixed gear fisheries are scheduled to come under IFQ management in 1995. There are certain niche fisheries that could come under pressure, however, including minor groundfish species in Alaska state waters, or fisheries within the EEZ not presently covered by a Council or state FMP.

Outside Alaska, the availability of open access fisheries is being reduced significantly due to the recent imposition of limited entry in other areas, for example, the likely adoption of a vessel limited entry program in the Pacific Council groundfish FMP off the coast of Washington, Oregon and California. As a result, it appears unlikely that the limited entry alternatives proposed for the Alaska EEZ will lead to an unexpected surge in participation in these fisheries. To the contrary, these alternatives may prevent a surge in unanticipated new entrants displaced from these adjacent fisheries.

The combined impact of the limited entry management programs either in effect or being considered off the West coast may slow the unneeded flow of new capital and catching capacity into these fisheries. Capital investment shifted out of the commercial fishing industry can be redirected to countless other productive ventures in the economy. Less fortunate are those vessel owners who find themselves or their boats denied access to the fisheries. Owners of non-qualifying vessels may have the ability to purchase rights to operate in certain limited entry fisheries, or sell their boats to other fishermen who possess these rights. However, recognizing that the industry is overcapitalized with excess fishing capacity, it is inevitable that owners of some excluded vessels will incur losses on their investment.

6.4.4 Impacts on Small Entities (Regulatory Flexibility Act)

The principal impact on small fishing enterprises due to this proposal will be a limitation on the entry of new vessels. This may restrict the ability of new, small entities to enter the fishery, although access is not denied since there is expected to be some pool of eligible qualifying boats available to new entrants. Premiums may develop for certain types of vessels, owing to shortages of these classes, which would increase the cost to prospective vessel owners. Alternatively, small fishing firms owning non-qualifying vessels may experience a decrease in the value of their investment to the extent that the vessel's opportunities have been limited. Based on projections from the moratorium analysis, it is estimated that from 450-900 small vessels may enter the fisheries in any given year.

The small vessel category has been documented to account for a proportionately small share of the total catch tonnage and revenues generated in the Council-managed fisheries. Nonetheless, the incomes earned by small vessel owners may represent an important part of annual income to the affected fishermen. Five thousand dollars of income from a halibut fishery may be vitally important to these small fishing operations. Access to the fishery is not a trivial concern to many of these small scale fishermen, to the extent that they have few alternative means outside of fishing for earning income. The impact of license limitation is to restrict the opportunities of some small vessel owners, yet offer a stabilized economic environment for the majority of the affected small businesses. The benefits accrue from preventing a further erosion of per vessel net returns and operating efficiency.

Compliance costs for small business entities are expected to be minor, since the existing procedures for application and issuance of fishing permits will be used to verify participation. In summary, the proposed license limitation program is not expected to have a significant impact on small business entities. The flexibility of open access will be reduced, possibly limiting economic opportunities for some non-qualifying fishermen, but this should be offset by increased stability and financial security for the existing participants in the Council-managed fisheries.

6.4.5 Coastal Zone Management Act

The alternatives in this proposed amendment are consistent, to the maximum extent practicable, with the provisions of the CZMA of 1972 and would not conflict with State of Alaska laws or regulations.

6.5 Administrative and Enforcement Costs

The license limitation alternative poses several issues that will impact administrative costs, including: (1) the determination of eligibility; (2) the appellate procedure; and (3) enforcement. Determining eligibility will require the verification of a vessel's status based on the participation criteria adopted. The vessel participation file generated as a part of this analysis may provide a basis for such a standard, but further refinement of the vessel file, and automation of the application process will initially require the work of at least one technical analyst.

The cost of operating an appeals board depends on the size of its membership, and the length and location of its meetings. The extent of appeals will also be affected by the qualifying criteria chosen by the Council; for example, a minimum landings requirement would add to the potential numbers of appeals when compared to a simple participation criteria. The cost and administrative requirements of the appellate procedure will be influenced, in large, by the eligibility criteria employed. Given the size of the fleet involved, and the lack of prior experience with such regulations, the appellate process might easily require the part time services of a two or three person staff during the initial allocation period.

The procedure for enforcement of the license limitation system is presumably no different than the present permit system. The issuance of a permit constitutes the right to operate in the affected fisheries, and vessels operating in these fisheries without permits would be violators. Careful screening of applicants in the initial issuance of permits is thus crucial to an effective enforcement program. However, to the extent that a license limitation system might lead to greater violations, some change in permit procedures or increased enforcement personnel may be required. Enforcement costs may also be affected significantly be the nature of the license issued under this alternative. A species-specific license, for example, may require much higher enforcement efforts than a general license which is good for all species. Enforcement costs associated with the proposed alternatives will likely represent the most significant costs to the implementing agencies.

Administrative costs in general will be influenced by the qualification criteria adopted. Highly restrictive eligibility criteria, while supporting the goals of limited entry, may entail proportionately greater administrative costs. In this regard, the expected benefits to be gained through specific license limitation provisions need to be weighed against the potential differences in administrative and enforcement costs.

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LIST OF APPENDICES

APPENDIX I

LICENSE SYSTEM FOR GROUNDFISH
As Approved by N.P.F.M.C.
June 1994

NATURE OF LICENSES

Note: Shaded options were added at the April 1994 Council meeting, mainly from the State of Alaska's "Integrated Fisheries Rationalization Program" proposal.

A groundfish license system would not apply to longline sablefish, halibut, or demersal shelf rockfish.

Alternatives include:

Option A: A single groundfish license applying to all species/areas.
Option B: Licenses for each species.
Option C: General license with endorsements for each species/area.

Suboption A: separable endorsements.
Suboption B: non-separable endorsements

Option D: Groundfish license(s) would be issued for each management area. Areas are defined as:

1) Bering Sea
2) Aleutian Islands
3) Western Gulf
4) Central Gulf
5) Eastern Gulf

Suboption: Combine Bering Sea and Aleutian Islands into a single area

Each area license will also be designated by vessel size and industry sector (catcher vessels/catcher processors), with accompanying species endorsements as follows:

1) Separate groundfish license designations for catcher and catcher processor operations. License designations are to be based on activity in the period January 1, 1990 through June 24, 1992.[1] If more than one operation type was used during this period, the vessel owner must choose one operation designation.

2) Separable endorsements by area for the following list of target species (consistent with the proposed IFQ program). Species endorsements awarded based upon qualifying participation (for each species) as described below under CRITERIA FOR ELIGIBILITY.[2]

BSAI	GOA
pollock	pollock
Pacific cod	Pacific cod
Atka mackerel	deep water flats
yellowfin sole	shallow water flats
other flatfish	Atka mackerel
rockfish	
squid (fixed gear only)	
rocksole	
turbot	

3) Licenses for catcher vessels will be issued by the following size categories: <60', 60' to 125', and 125' and greater. Suboptions for base date for length determination are:

Suboption A: Vessel length will be categorized based upon the vessel length as of June 24, 1992, pursuant to the conditions of the moratorium.

Suboption B: Vessel length at the date of final Council action.

4) Licenses will be designated inshore or offshore based on 1993 activity.

In addition to the options above, the Council is considering the following suboptions:

Suboption A: Separate licenses for catcher and catcher/processor operations.
Suboption B: Licenses for three catcher vessel size categories <60', 60' to 125', and >125'.
Suboption C: Licenses would be designated inshore or offshore based on 1993 activity.

Additionally, the Council is considering the following option, which is related to the IFQ alternatives described separately:

Licenses for BSAI Pacific cod fixed gear fishery only; would apply to 45% (or historical split) of the TAC set aside for fixed gear.

WHO WILL RECEIVE LICENSES

Alternatives include:

Option A: Current vessel owner is defined as date of final Council action and must be a U.S. citizen pursuant to Title 46.

Option B: GLS license will be awarded to 'qualifying vessel owners' who must be a U.S. citizen ('citizenship' for corporations, partnerships, and associations to be defined by Title 46, Sec. 802 (the Shipping Act of 1916), i.e., 75% U.S. ownership/control) and is the owner of record at the date of final Council action.[3]

Option C: Those with between 50% and 75% U.S. ownership would be 'grandfathered' for purposes of initial allocation.

Suboption A: Vessel owners at the time of landings.
Suboption B: Permit holders.

These two suboptions are only relevant if license is not attached to vessel.

Additionally, the Council is considering the two-tier skipper license program. (Under this option, at least one skipper license holder must be on board the vessel when fishing.)

CRITERIA FOR ELIGIBILITY

Alternatives include issuing a license to any vessel (or person) who made landings between:

Option A: January 1, 1978 and December 31, 1993.
Option B: January 1, 1990 and December 31, 1993.
Option C: Vessel must have fished in the three-year period before June 24, 1992 and/or the three-year period before the date of final Council action. If a vessel is lost during this period, owner at time of loss is still eligible.

In addition to the options above, the Council is considering the following:

Suboption: Must have made at least 2 landings (per area/species combination) or made total groundfish landings of 5,000, 10,000, or 20,000 pounds (3 options) in any one year. (In addition to #1 or #2 above).

Option D: Licenses will be issued to any qualifying vessel owner for each vessel that fished in each year of the three-year period before June 24, 1992 (January 1, 1990 - June 24, 1992) and the year before the date of final Council action. For fixed gear Pacific cod only, the vessel must have fished in the year prior to June 24, 1992.[4] If a vessel is lost during this period, the owner at the time of loss is still eligible. Options for analysis of additional landings requirements include:

Suboption A: A minimum of one to four landings per area/target species combination during the qualifying periods above.

Suboption B: A minimum of one to four landings per area/target species combination in the year prior to final Council action.

TRANSFERABILITY AND OWNERSHIP

Alternatives include:

Option A: Licenses could be transferred (sold or leased) only to "Persons" (as defined by Title 46), i.e., U.S. citizens or U.S.-owned corporations.
Option B: Vessels must be transferred with license.
Option C: License may be transferred without vessel (can apply to "new" vessel).

Suboption A: Non-transferable across size categories identified above (Nature of Licenses).
Suboption B: Licenses may be combined in a manner similar to that described in the Pacific whiting fishery.

Option D: Licenses are non-transferable across vessel size, mode of operation, inshore/offshore, and area. Species endorsements are separable and transferable within an area. Licenses may only be transferred (sold) to U.S. citizens as defined:[5]

Suboption A: by 50% U.S. ownership.
Suboption B: by 75% U.S. ownership.[6]

Each qualified vessel owner may not hold or otherwise control more than 5, 10, or 15 area licenses in total. The initial allocation of groundfish licenses, based on historical participation, may exceed this number, however, the vessel owner would be prohibited from acquiring any control or interest whatsoever[7] in additional licenses until their aggregate holdings are below the limit.

No more than ___ GLS area licenses may be used on any vessel. Options for analysis range from 1 to 5 area licenses per vessel.[8]

Suboption A: License may only be transferred with the vessel. If a vessel is lost or upgraded, it may be replaced with a vessel of equivalent size and fishing capacity pursuant to the conditions of the moratorium.

Suboption B: License may be transferred without the vessel. License may only be transferred to a new/replacement vessel of equivalent size and fishing capacity pursuant to the conditions of the moratorium.

Methods for effective license caps will also be examined

BUYBACK/RETIREMENT PROGRAM (OPTIONAL)

An industry funded buyback program, using funds collected through a fee assessment of exvessel of groundfish, run by NMFS/RAM, will be initiated to govern all transfers of licenses. This program will have first right of refusal on licenses to be sold. All licenses purchased by the program may be permanently retired to adjust participation levels.

COMMUNITY DEVELOPMENT QUOTAS

Option A: No CDQ allocations.

Option B: CDQ set-asides of up to 15% (range of 0% to 15%) of any or all groundfish TACs, but only for BSAI communities meeting current CDQ eligibility requirements, patterned after current pollock CDQ program, with no sunset provisions.

Option C: Would grant CDQs in the form of additional, non-transferable licenses (3%, 7.5%, 10% and 15% of initial licenses).

GENERAL PROVISIONS

In addition, the analysis will include examination of the following general provisions:

1) Licenses represent a use privilege; however, the Council could alter or rescind the program without compensation. In particular, the groundfish license program may be converted to an IFQ program without compensation.

2) Penalties must be severe for failure to comply with any of the conditions finally adopted under a Full Utilization/Bycatch Control Program and/or for violations of area restrictions (to be analyzed separately). Licenses may be suspended or revoked for multiple violations.

3) Develop and implement a Mandatory Skipper Reporting System. Holders of groundfish licenses would be required to report the skippers' name, address, and dates of service to NMFS. The intent of this option is to build a database for consideration of skipper options under a subsequent IFQ program.

4) Analyze the impacts of various rent collection levels and mechanisms. The analysis should include consideration of State and Federal taxes and fees imposed on industry. Management, enforcement, and other costs borne by State and Federal government in support of industry should also be considered.

5) An analysis of enforcement and program implementation costs.

6) Analyze current foreign ownership patterns and potential foreign control of licenses to the extent possible.

7) A full utilization/bycatch control provision is included in the State of Alaska's GLS proposal which was adopted by the Council in April 1994. This is being analyzed on a separate track from the License Limitation analysis, along with other potential bycatch control alternatives. The GLS proposal calls for full retention and full utilization of all target species for which a TAC exists, except PSCs, with a minimum food grade requirement (Options are 50%, 70%, and 90% for human consumption processing). It is intended that full utilization provisions would be implemented simultaneously with the license programs, though they are now on different schedules for analysis and consideration by the Council. Total catch measurement/monitoring and total PSC enumeration also are envisioned under the license program.[9]

Note: A general provision regarding inshore/offshore allocations will be considered on a separate schedule with the potential extension of the current inshore/offshore CDQ program.

Shaded areas represent additions from the April 1994 meeting.

NATURE OF LICENSES

Alternatives include:

Option A: A single crab license applying to all species/areas.
Option B: A separate license for each species.
Option C: Separate licenses (permits) for each species and each existing crab management area.
Option D: A general license with endorsements.

The following two suboptions (to be applied to the above) are being considered:

Suboption A: Separate licenses for catcher and catcher/processor operations.
Suboption B: Licenses for three catcher vessel size categories <60', 60' to 125', and >125'. (These can be matched with pot limits.)
Suboption C: Licenses are defined by fishing activity occurring prior to June 24, 1992.

WHO WILL RECEIVE LICENSES

Current vessel owners as of Council final action. ("Persons" are defined as in Title 46.)

Option A: Current vessel owner is defined as date of final Council action and must be a U.S. citizen pursuant to Title 46.

Option B: GLS license will be awarded to 'qualifying vessel owners' who must be a U.S. citizen ('citizenship' for corporations, partnerships, and associations to be defined by Title 46, 802 (the Shipping Act of 1916), i.e. 75% U.S. ownership/control) and is the owner of record at the date of final Council action.[10]

Option C: Those with between 50% and 75% U.S. ownership would be 'grandfathered' for purposes of initial allocation.[11]

Suboption: Permit holders: Each permit holder not receiving a permit, could receive a fractional share of a license. Only full shares may be fished, and these must be utilized on a "moratorium qualified vessel."

Additionally, the Council is considering the two-tier skipper license program. (Under this option, at least one skipper license holder must be onboard the vessel when fishing.)

CRITERIA FOR ELIGIBILITY

A vessel must have made landings between:

Option A: January 1, 1978 and December 31, 1993.

Option B: June 28, 1980 and June 27, 1983 to qualify for the Dutch Harbor red king crab fishery;

June 28, 1985 and June 27, 1988 to qualify for the Pribilof king crab fishery; and

June 28, 1989 and June 27, 1992 to qualify for all other king and Tanner crab fisheries. (These dates correspond to the existing fall/winter crab seasons in the BSAI. The latter dates include the 1989/90, 1990/91 and 1991/92 registration years.)

Additional landing requirements include:

1) One landing during the qualifying period in each fishery is required to qualify for a red or blue king crab license for each fishery; and

2) Three landings during the qualifying period in each fishery are required to qualify for a brown king crab, C. opilio (snow crab), or C. bairdi (Tanner crab) license for each fishery.

TRANSFERABILITY AND OWNERSHIP

Alternatives include:

Option A: Licenses could be sold only to U.S. citizens as defined:

Suboption A: by 50% U.S. ownership.
Suboption B: by 75% U.S. ownership.[12]

Option B: Vessels must be transferred with license.

Suboption: Replacement/upgrades will be restricted as per the language in the moratorium regulations.

Option C: License may be transferred without vessel (can apply to "new" vessel).

Suboptions:
(a) Non-transferable across size categories identified above.
(b) Transferable across size categories.
(c) Species/area licenses will be non-transferable.
(d) Transfers of vessel license may occur only within the classification of the vessel (Catcher vessel v. Catcher processors). Catcher vessel licenses may be traded to catcher vessels, catcher processor licenses to catcher-processors, catcher processor licenses to catcher vessels (as a catcher vessel only), but not catcher vessel licenses to catcher processors for catching and processing.
(e) Replacements/upgrades will be restricted as per the language in the moratorium regulations.

POT CAPS

Alternatives include:

Option A: No caps on the total number of pots.

Option B: Caps are established on the total number of pots.

An Individual Transferable Pot (ITP) quota is initiated, such that the number of pots equates to the existing pot limit relative to the number of vessels with licenses for each fishery. An ITP would allow stacking of pots to occur, where a person owning multiple vessels could combine pots and vessels as they wished. Effort reduction could occur in each fishery, if necessary, by reducing some percentage of the number of individual pots over time until an optimal fishery pot cap is obtained.

BUYBACK PROGRAM (OPTIONAL)

An industry funded buyback program, using funds collected through a fee assessment of ex-vessel of crab, run by NMFS/RAM, will be initiated to govern all transfers of licenses. This program will have first right of refusal on licenses to be sold. All licenses purchased by the program may be permanently retired to adjust participation levels.

COMMUNITY DEVELOPMENT QUOTAS

Option A: No allocations to CDQs.

Option B: Initially allocate 3%, 7.5%, 10% or 15% of the GHL by species and CDQs: may apply to any or all crab species, but only for BSAI communities meeting current CDQ eligibility requirements, patterned after current pollock CDQ program, with no sunset provisions.

Option C: Would grant CDQs in the form of additional, non-transferable licenses (3%, 7.5%, 10% and 15% of initial licenses).

GENERAL PROVISIONS

No superexclusive registration areas will be developed beyond that in place of the Norton Sound.

FOOTNOTES FOR ELEMENTS AND OPTIONS

1. This reflects clarification, from the april meeting, that this refers to calendar years and does not include the latter half of 1989.

2. This is changed from what was contained in the April newsletter to more correctly reflect the actual wording of the proposal as adopted by the Council.

3. The alternative which would require 75% U.S. ownership was inadvertently omitted from the April newsletter. An additional alternative, also omitted, was to grandfather those persons with between 50% and 75%, for purposes of initial allocation of licenses.

4. Review of the record shows that the differential qualification period (from the GLS proposal) for fixed gear Pacific cod was <u>not</u> intended as a suboption, but as an integral part of the overall qualification criteria for the GLS proposal.

5. This change was made to reflect the fact that species endorsements were meant to be separable, within area designations.

6. The options regarding U.S. ownership requirements are clarified.

7. The word 'whatsoever' is included (per the actual language adopted by the Council) due to its definitive nature.

8. The use limits on GLS area licenses were inadvertently omitted from the earlier draft.

9. The provisions from the GLS proposal regarding full utilization have been added back to the list of elements and options in order to convey the intent of the State of Alaska's GLS proposal. This alternative is being analyzed on a separate, parallel track and will not be explicitly included in the License Limitation document.

10. Same changes for crab as were made for groundfish regarding the U.S. ownership requirements.

11. Same as number 10 above.

12. Same as number 10 above.

APPENDIX II

Data Summaries for 1990-92

to the

LICENSE LIMITATION ALTERNATIVES

for the

GROUNDFISH & CRAB FISHERIES

in the

GULF OF ALASKA AND BERING SEA/ALEUTIAN ISLANDS

April'18, 1994

Number of Vessels Participating in Proposed License Limitation Fisheries in Recent Years

Estimates of the numbers of harvesting and catcher/processor vessels that participated in the BSAI and GOA groundfish fisheries are presented in Table 1. Table 2 contains comparable estimates for the BSAI king and Tanner crab fisheries. A comparison of these estimates with the estimates of the numbers of vessels that would qualify for licenses with different qualification rules can be used to determine the extent to which each set of qualification rules would allow the number of vessels to increase for each of many categories of vessels.

The Tables provide estimates of the numbers of vessels by year, vessel class, mode of operation for harvesting vessels, residence of the vessel owner, species, area, and gear. The data are for three years, 1990-92. Four vessel classes are used. The first three are for harvesting vessels of the following lengths: less than 60', from 60' to 124', and greater than 124'. The fourth class is for catcher/processor vessels. The ownership residency categories are Alaska and other. The two modes of operation are defined by whether the fishing is in support of onshore or at-sea processing. The groundfish species are pollock, Pacific cod, flatfish, rockfish, and all other groundfish. The crab species are red king crab, blue king crab, brown king crab, bairdi, and opilio. For groundfish, the areas are BSAI, WG, CG, and EG. ADF&G management areas are used for crab. The two groundfish gear groups are trawl and all other. Vessels that used both trawl and other gear were put in the all other gear group and not in the trawl group.

The numbers of vessels for various levels of aggregation are also reported. Vessels, for which length or owner residence data were not available, are included only in the totals for which such information is not necessary. That is one reason why the totals are not necessarily the sums of the parts. The other reason is that some individual vessels are counted in more than one category. For example, during a year a vessel can be both a harvesting and a catcher/processor vessel or it can deliver fish for both onshore and at-sea processing.

Number of Vessels Participating in Proposed License Limitation Fisheries in Recent Years by Level of Catch

The level of participation of a vessel in a fishery can be measured in terms of its annual catch. Estimates of the cumulative numbers of harvesting and catcher/processor vessels for each of 11 ascending levels of catch in the BSAI and GOA groundfish fisheries are presented in Table 3. Table 4 contains comparable estimates for the BSAI king and Tanner crab fisheries. These estimates provide an indication of the effects on the number of qualifying vessels in aggregate and by category with alternative minimum catch requirements.

The estimates of the cumulative number of vessels by level of catch for 1992 are presented by vessel class, residence of the vessel owner, mode of operation, species, area, and gear. The 11 catch levels in terms of pounds of total catch are as follows: less than 10,000, 10,000-20,000, 20,000-30,000, 30,000-40,000, 40,000-50,000, 50,000-60,000, 60,000-70,000, 70,000-80,000, 80,000-90,000, 90,000-100,000, and greater than >100,000. The four vessel classes are harvesting vessels of the following lengths: less than 60', from 60' to 124', and greater than 124', and all catcher/processor vessels. The ownership residency categories are Alaska and other.

The two modes of operation are defined by whether the fishing is in support of onshore or at-sea processing. The species groups are groundfish, king crab, and Tanner crab. The areas are the BSAI and GOA. The two groundfish gear groups are trawl and all other. Vessels that used trawl and other gear were put in the all other gear group and not the trawl group. The cumulative numbers of vessels for various levels of aggregation are also reported.

There are two reasons why the totals are not necessarily the sums of the parts. First, vessels for which length or owner residence data were not available, are included only in the totals for which such information is not necessary. Second, because these estimates are based on a data set which did not include catch by mode of operation or vessel class for individual vessels that had catch in more than one mode or class, such vessels are not included in the estimates that require that information, but they are included in the totals that do not require it.

The data in Table 3 indicate that, as expected, a minimum catch requirement would have a disproportionately large and adverse effect on vessels less than 60'. It would have a similar effect for vessels owned by Alaska residents. For example, in the 1992 BSAI groundfish fishery, there were 84 harvesting vessel less than 60' and 45 of these vessels had BSAI groundfish catch of less than 10,000 lbs. About 58% of the Alaska vessels in this size class had less than 10,000 lbs as opposed to 52% for vessels owned by residents of other states. Of the 25 harvesting vessels longer than 124', only 3 had catch of less than 10,000 lbs; and of the 139 catcher/processor vessels, only 1 had catch of less than 10,000 lbs.

In the 1992 GOA groundfish fishery, 992 of the 1,404 harvesting vessels less than 60' had catch of less than 10,000 lbs. For the 16 harvesting vessels over 124', only 3 had catch of less than 10,000 lbs. Although the percent of small vessels with catch below 10,000 lbs was slightly lower for vessels owned by Alaska residents (70% compared to 75%), 84% of the vessels less than 60' are owned by Alaska residents.

Also as expected, a minimum catch requirement would have a disproportionately large effect on the number of vessels that used non-trawl gear. In the 1992 BSAI groundfish fishery, there were 409 vessels in total and 76 of these had catch of less than 10,000 lbs. 179 of the 409 vessels used non-trawl gear and 64 of those had catch of less than 10,000 lbs. Therefore, while less than 20% of all the vessels had catch less than 10,000 lbs, about 36% of the vessels that used non-trawl gear had catch below that level. In the GOA, 61% of all vessels had catch below 10,000 lbs and 72% of the vessels that used non-trawl gear had catch below that level.

To summarize, a minimum catch requirement in the groundfish fishery would have the largest adverse effects on the following groups of vessels: (1) harvesting vessels less than 60' in length, (2) vessels that use non-trawl gear, and (3) vessels owned by residents of Alaska. There is substantial overlap among these groupings of vessels. Most of the vessels less than 60' use non-trawl gear and most of those vessels are owned by residents of Alaska.

The data in Table 4 indicate that, as expected, a minimum catch requirement in the BSAI crab fisheries would have disproportionately large effects on vessels less than 124" and vessels owned by Alaska residents. For the crab fisheries, there are very few vessels less than 60'.

Differences within Each Vessel Class

Within each of the four vessel classes there are substantial differences in vessel lengths and in levels of catch. Estimates of the mean, minimum, and maximum of the vessel lengths by vessel class for the groundfish fishery are included in Table 5 and comparable data for the BSAI crab fisheries are presented in Table 6.

Table 7 provides estimates of the percent of groundfish catch accounted for by the low, mid, and top third of the vessels in each vessel class by area and gear in 1992 when the vessels are ranked by their catch levels. Comparable data for the BSAI crab fisheries are in Table 8. Two sets of groundfish percentages are presented. The first set of percentages sum to 100 for a gear type and the second set sum to 100 for all gear groups combined.

The difference between the percent of catch for any two of the three performance groups in a vessel class and gear group can be used to estimate what could happen to catch if the vessels in one performance group were replaced by vessels in the other performance group. This provides estimates of the increases in harvesting capacity that could occur in each vessel class and gear group with no increase in the number of vessels. For example, if the vessels in the mid performance group were replaced by vessels in the top performance group in the BSAI 60' - 124' trawl vessel class, BSAI groundfish trawl harvesting capacity could increase by 8.7% (13.8% - 5.1%) and total groundfish harvesting capacity across all gear groups could increase by 7.4% (11.8%

- 4.4%).

If in each of the four trawl vessel classes, the low third of the vessels were replaced by vessels with the performance of those in the mid third and if those in the mid third were replaced by vessels with performance similar to those in the top third, the harvesting capacity of the BSAI groundfish fleet would increase by 45%. The comparable estimate for the GOA is 48%. The increases would be larger if similar replacements occurred also with the other gear groups.

These estimates of the increases in harvesting capacity that could occur with a fixed number of vessels in each of four vessel classes are only provided to give a rough idea of the potential increases in harvesting capacity. Without restrictions by vessel class and gear, the potential increase in harvesting capacity would be substantially greater. Over time technical progress would allow even greater increases. And improvements in the performance of the vessels in the top third of each vessel class would result in additional increases in harvesting capacity.

Table 1 -- Number of vessels catching groundfish in the BSAI and Gulf
by gear, residence, vessel type, area, species and year, 1990-92.

All gear and all owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
Total gf.												
1990	1187	202	12	.	15	.	1188	231	18	1437	113	1550
1991	1375	250	9	2	15	.	1377	281	14	1672	125	1797
1992	1430	275	19	4	16	1	1434	305	28	1767	149	1918
Flatfish												
1990	45	93	8	.	15	.	46	122	13	181	96	277
1991	35	79	7	1	14	.	36	108	12	156	112	268
1992	52	98	10	4	16	.	56	128	17	201	128	330
Other gf.												
1990	34	47	5	.	14	.	34	74	10	118	99	217
1991	25	38	4	.	7	.	25	53	6	84	114	198
1992	32	50	5	4	16	.	36	78	12	126	139	266
Pacific cod												
1990	805	162	12	.	15	.	806	191	18	1015	110	1125
1991	946	218	9	1	15	.	947	249	14	1210	120	1330
1992	1068	230	19	3	16	1	1071	260	28	1359	147	1508
Pollock												
1990	51	72	7	.	15	.	51	101	12	164	91	255
1991	47	83	7	2	13	.	49	111	12	172	105	277
1992	94	97	10	4	16	.	98	127	17	242	119	363
Rockfish												
1990	697	123	5	.	12	.	698	142	10	850	92	942
1991	840	141	2	.	14	.	840	167	4	1011	107	1118
1992	879	170	5	1	8	.	880	188	8	1076	128	1205
BSAI												
Total gf.												
1990	74	91	11	.	15	.	74	119	17	210	106	316
1991	117	127	8	1	15	.	118	156	13	287	121	408
1992	80	129	17	4	16	1	84	159	25	268	139	409
Flatfish												
1990	26	64	7	.	15	.	26	92	12	130	92	222
1991	15	52	7	1	13	.	16	78	12	106	109	215
1992	20	64	10	4	16	.	24	93	17	134	125	260
Other gf.												
1990	2	38	4	.	14	.	2	64	9	75	97	172
1991	6	29	4	.	7	.	6	41	6	53	112	165
1992	5	43	5	4	16	.	9	71	12	92	133	226
Pacific cod												
1990	51	82	11	.	15	.	51	110	17	178	106	284
1991	105	122	8	1	15	.	106	150	13	269	115	384
1992	65	113	17	3	16	1	68	143	25	236	138	375
Pollock												
1990	14	45	6	.	15	.	14	73	11	98	89	187
1991	9	50	7	1	13	.	10	73	12	95	103	198
1992	8	59	10	4	16	.	12	89	17	118	114	233
Rockfish												
1990	33	48	4	.	11	.	33	63	9	105	78	183
1991	24	37	2	.	13	.	24	55	4	83	97	180
1992	35	56	5	1	7	.	36	69	8	113	109	223

Table 1 continued -- Number of vessels.

All gear and Alaska owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
Total gf.												
1990	999	106	1	.	3	.	999	115	1	1115	11	1126
1991	1148	120	1	1	2	.	1149	127	2	1278	74	1352
1992	1197	126	3	4	4	.	1201	136	5	1342	84	1426
Flatfish												
1990	21	39	1	.	3	.	21	48	1	70	7	77
1991	27	31	.	.	2	.	27	38	1	66	68	134
1992	33	31	.	4	4	.	37	41	2	80	72	152
Other gf.												
1990	31	16	1	.	3	.	31	24	1	56	8	64
1991	19	10	.	.	2	.	19	16	.	35	70	105
1992	28	12	.	4	4	.	32	22	2	56	82	138
Pacific cod												
1990	703	85	.	.	3	.	703	94	.	797	10	807
1991	828	103	1	.	2	.	828	110	1	939	71	1010
1992	935	106	3	3	4	.	938	116	5	1059	83	1142
Pollock												
1990	40	28	.	.	3	.	40	37	.	77	5	82
1991	36	30	.	1	2	.	37	37	1	75	64	139
1992	76	30	.	4	4	.	80	40	2	122	71	193
Rockfish												
1990	569	63	.	.	1	.	569	67	.	636	9	645
1991	678	77	.	.	2	.	678	84	.	762	65	827
1992	712	76	.	1	3	.	713	83	.	796	77	873
BSAI												
Total gf.												
1990	38	32	1	.	3	.	38	40	1	79	8	87
1991	71	34	1	.	2	.	71	39	2	112	71	183
1992	51	28	1	4	4	.	55	38	3	96	78	174
Flatfish												
1990	7	22	1	.	3	.	7	30	1	38	5	43
1991	8	11	.	.	2	.	8	16	1	25	67	92
1992	7	13	.	4	4	.	11	23	2	36	70	106
Other gf.												
1990	.	9	1	.	3	.	.	16	1	17	7	24
1991	4	4	.	.	2	.	4	7	.	11	69	80
1992	2	8	.	4	4	.	6	18	2	26	77	103
Pacific cod												
1990	31	28	.	.	3	.	31	36	.	67	8	75
1991	66	31	1	.	2	.	66	35	1	102	69	171
1992	47	23	1	3	4	.	50	33	3	86	78	164
Pollock												
1990	5	10	.	.	3	.	5	18	.	23	4	27
1991	4	9	.	.	2	.	4	12	1	17	63	80
1992	4	11	.	4	4	.	8	21	2	31	69	100
Rockfish												
1990	12	16	.	.	1	.	12	18	.	30	4	34
1991	17	10	.	.	2	.	17	13	.	30	60	90
1992	21	10	.	1	2	.	22	15	.	37	64	101

Table 1 continued -- Number of vessels.

All gear and non-Alaska owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
Total gf.												
1990	188	101	12	.	14	.	189	126	18	333	102	435
1991	227	132	8	1	14	.	228	159	13	400	51	451
1992	200	149	16	.	12	1	200	170	25	395	69	465
Flatfish												
1990	24	56	7	.	13	.	25	79	12	116	89	205
1991	8	49	7	1	13	.	9	73	12	94	44	138
1992	14	67	10	.	12	.	14	88	17	119	60	180
Other gf.												
1990	3	31	4	.	12	.	3	51	9	63	91	154
1991	6	28	4	.	5	.	6	37	6	49	44	93
1992	2	38	5	.	12	.	2	56	12	70	61	132
Pacific cod												
1990	102	82	12	.	14	.	103	107	18	228	100	328
1991	118	117	8	1	14	.	119	144	13	276	49	325
1992	110	124	16	.	12	1	110	145	25	280	67	348
Pollock												
1990	11	48	7	.	14	.	11	73	12	96	86	182
1991	11	55	7	1	12	.	12	79	12	103	41	144
1992	12	67	10	.	12	.	12	88	17	117	51	169
Rockfish												
1990	128	60	5	.	11	.	129	75	10	214	83	297
1991	162	65	2	.	12	.	162	84	4	250	42	292
1992	154	94	5	.	5	.	154	105	8	267	52	319
BSAI												
Total gf.												
1990	36	64	11	.	14	.	36	88	17	141	98	239
1991	46	95	7	1	14	.	47	121	12	180	50	230
1992	23	101	16	.	12	1	23	122	24	169	65	235
Flatfish												
1990	19	43	6	.	13	.	19	64	11	94	87	181
1991	7	42	7	1	12	.	8	64	12	84	42	126
1992	10	51	10	.	12	.	10	71	17	98	59	158
Other gf.												
1990	2	29	3	.	12	.	2	49	8	59	90	149
1991	2	25	4	.	5	.	2	34	6	42	43	85
1992	1	35	5	.	12	.	1	53	12	66	60	127
Pacific cod												
1990	20	59	11	.	14	.	20	83	17	120	98	218
1991	39	93	7	1	14	.	40	119	12	171	46	217
1992	13	90	16	.	12	1	13	111	24	148	63	212
Pollock												
1990	9	38	6	.	14	.	9	61	11	81	85	166
1991	5	43	7	1	12	.	6	65	12	83	40	123
1992	1	48	10	.	12	.	1	69	17	87	48	136
Rockfish												
1990	21	32	4	.	10	.	21	45	9	75	74	149
1991	7	28	2	.	11	.	7	43	4	54	37	91
1992	12	46	5	.	5	.	12	54	8	74	46	120

Table 1 continued -- Number of vessels.

Trawl gear and all owners

	Harvesters In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	At sea >124	Total <60	Total 60-124	Total >124	Harv	CP	All
All Alaska												
Total gf.												
1990	86	65	5	.	13	.	86	87	11	184	68	252
1991	37	75	6	2	14	.	39	99	10	148	68	216
1992	99	77	9	4	16	.	103	102	16	221	61	283
Flatfish												
1990	12	45	5	.	13	.	12	67	10	89	66	155
1991	16	53	6	1	14	.	17	77	10	104	67	171
1992	16	67	9	4	16	.	20	92	16	128	58	187
Other gf.												
1990	5	29	3	.	12	.	5	50	8	63	65	128
1991	4	30	3	.	7	.	4	43	5	52	66	118
1992	4	42	5	4	16	.	8	65	12	85	58	144
Pacific cod												
1990	41	64	5	.	13	.	41	86	11	138	68	206
1991	31	75	6	1	14	.	32	99	10	141	67	208
1992	53	77	9	3	16	.	56	102	16	174	60	235
Pollock												
1990	10	48	5	.	13	.	10	70	10	90	67	157
1991	11	60	6	2	13	.	13	83	10	106	67	173
1992	25	73	9	4	16	.	29	98	16	143	58	202
Rockfish												
1990	52	38	3	.	12	.	52	56	8	116	60	176
1991	9	34	1	.	14	.	9	55	3	67	63	130
1992	49	53	5	1	8	.	50	67	8	125	57	182
BSAI												
Total gf.												
1990	7	41	5	.	13	.	7	62	11	80	67	147
1991	9	59	6	1	14	.	10	83	10	103	67	170
1992	11	55	9	4	16	.	15	80	16	111	59	171
Flatfish												
1990	1	24	5	.	13	.	1	45	10	56	65	121
1991	7	40	6	1	13	.	8	63	10	81	66	147
1992	6	43	9	4	16	.	10	67	16	93	57	151
Other gf.												
1990	1	24	3	.	12	.	1	44	8	53	64	117
1991	3	25	3	.	7	.	3	36	5	44	65	109
1992	3	37	5	4	16	.	7	60	12	79	57	137
Pacific cod												
1990	5	40	5	.	13	.	5	61	11	77	67	144
1991	5	58	6	1	14	.	6	81	10	97	65	162
1992	9	53	9	3	16	.	12	78	16	106	59	166
Pollock												
1990	3	31	5	.	13	.	3	52	10	65	66	131
1991	4	43	6	1	13	.	5	64	10	79	66	145
1992	5	49	9	4	16	.	9	74	16	99	57	157
Rockfish												
1990	3	20	3	.	11	.	3	34	8	45	57	102
1991	1	14	1	.	13	.	1	31	3	35	59	94
1992	1	28	5	1	7	.	2	38	8	48	50	98

Table 1 continued -- Number of vessels.

Trawl gear and Alaska owners

	Harvesters In shore <60	Harvesters In shore 60-124	Harvesters In shore >124	Harvesters At sea <60	Harvesters At sea 60-124	Harvesters At sea >124	Harvesters Total <60	Harvesters Total 60-124	Harvesters Total >124	Harv	CP	All
All Alaska												
Total gf.												
1990	68	26	.	.	2	.	68	32	.	100	1	101
1991	27	16	.	1	2	.	28	21	1	50	41	91
1992	60	19	.	4	4	.	64	28	2	94	35	129
Flatfish												
1990	8	19	.	.	2	.	8	25	.	33	1	34
1991	10	13	.	.	2	.	10	18	1	29	40	69
1992	7	18	.	4	4	.	11	27	2	40	34	74
Other gf.												
1990	3	10	.	.	2	.	3	16	.	19	1	20
1991	2	7	.	.	2	.	2	12	.	14	40	54
1992	1	8	.	4	4	.	5	17	2	24	34	58
Pacific cod												
1990	38	26	.	.	2	.	38	32	.	70	1	71
1991	23	16	.	.	2	.	23	21	.	44	41	85
1992	29	19	.	3	4	.	32	28	2	62	35	97
Pollock												
1990	7	18	.	.	2	.	7	24	.	31	1	32
1991	6	14	.	1	2	.	7	19	1	27	41	68
1992	10	19	.	4	4	.	14	28	2	44	34	78
Rockfish												
1990	37	16	.	.	1	.	37	19	.	56	.	56
1991	6	8	.	.	2	.	6	13	.	19	38	57
1992	33	16	.	1	3	.	34	22	.	56	34	90
BSAI												
Total gf.												
1990	4	12	.	.	2	.	4	17	.	21	.	21
1991	3	9	.	.	2	.	3	13	1	17	41	58
1992	3	9	.	4	4	.	7	18	2	27	35	62
Flatfish												
1990	.	7	.	.	2	.	.	12	.	12	.	12
1991	2	7	.	.	2	.	2	11	1	14	40	54
1992	.	8	.	4	4	.	4	17	2	23	34	57
Other gf.												
1990	.	6	.	.	2	.	.	11	.	11	.	11
1991	1	4	.	.	2	.	1	7	.	8	40	48
1992	.	6	.	4	4	.	4	15	2	21	34	55
Pacific cod												
1990	4	11	.	.	2	.	4	16	.	20	.	20
1991	2	8	.	.	2	.	2	11	.	13	41	54
1992	3	7	.	3	4	.	6	16	2	24	35	59
Pollock												
1990	1	7	.	.	2	.	1	12	.	13	.	13
1991	1	7	.	.	2	.	1	10	1	12	41	53
1992	1	8	.	4	4	.	5	17	2	24	34	58
Rockfish												
1990	1	4	.	.	1	.	1	5	.	6	.	6
1991	.	1	.	.	2	.	.	4	.	4	37	41
1992	.	4	.	1	2	.	1	8	.	9	31	40

Table 1 continued -- Number of vessels.

Trawl gear and non-Alaska owners

	Harvesters In shore <60	Harvesters In shore 60-124	Harvesters In shore >124	Harvesters At sea <60	Harvesters At sea 60-124	Harvesters At sea >124	Harvesters Total <60	Harvesters Total 60-124	Harvesters Total >124	Harv	CP	All
All Alaska												
Total gf.												
1990	18	42	5	.	13	.	18	62	11	91	67	158
1991	10	61	6	1	13	.	11	83	10	104	27	131
1992	26	58	9	.	12	.	26	75	16	117	30	148
Flatfish												
1990	4	28	5	.	12	.	4	47	10	61	65	126
1991	6	41	6	1	13	.	7	62	10	79	27	106
1992	4	49	9	.	12	.	4	66	16	86	28	115
Other gf.												
1990	2	19	3	.	11	.	2	35	8	45	64	109
1991	2	23	3	.	5	.	2	31	5	38	26	64
1992	1	34	5	.	12	.	1	48	12	61	28	90
Pacific cod												
1990	3	41	5	.	13	.	3	61	11	75	67	142
1991	8	61	6	1	13	.	9	83	10	102	26	128
1992	12	58	9	.	12	.	12	75	16	103	28	132
Pollock												
1990	3	32	5	.	13	.	3	52	10	65	66	131
1991	5	48	6	1	12	.	6	69	10	85	26	111
1992	9	54	9	.	12	.	9	71	16	96	27	124
Rockfish												
1990	15	22	3	.	11	.	15	37	8	60	60	120
1991	3	27	1	.	12	.	3	43	3	49	25	74
1992	13	37	5	.	5	.	13	45	8	66	24	90
BSAI												
Total gf.												
1990	3	32	5	.	13	.	3	51	11	65	67	132
1991	6	52	6	1	13	.	7	74	10	91	26	117
1992	3	46	9	.	12	.	3	63	16	82	28	111
Flatfish												
1990	1	18	5	.	12	.	1	35	10	46	65	111
1991	5	34	6	1	12	.	6	54	10	70	26	96
1992	3	35	9	.	12	.	3	51	16	70	27	98
Other gf.												
1990	1	18	3	.	11	.	1	34	8	43	64	107
1991	2	21	3	.	5	.	2	29	5	36	25	61
1992	1	31	5	.	12	.	1	45	12	58	27	86
Pacific cod												
1990	1	32	5	.	13	.	1	51	11	63	67	130
1991	3	52	6	1	13	.	4	74	10	88	24	112
1992	1	46	9	.	12	.	1	63	16	80	27	108
Pollock												
1990	2	25	5	.	13	.	2	43	10	55	66	121
1991	3	38	6	1	12	.	4	58	10	72	25	97
1992	1	41	9	.	12	.	1	58	16	75	26	102
Rockfish												
1990	2	16	3	.	10	.	2	29	8	39	57	96
1991	1	14	1	.	11	.	1	28	3	32	22	54
1992	.	24	5	.	5	.	.	30	8	38	20	58

Table 1 continued -- Number of vessels.

Other gear and all owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
Total gf.												
1990	990	98	4	.	.	.	990	98	4	1092	42	1134
1991	1175	125	2	.	1	.	1175	126	2	1303	49	1352
1992	1139	154	8	.	.	1	1139	154	10	1303	68	1371
Flatfish												
1990	30	28	.	.	.	.	30	28	.	58	27	85
1991	8	8	.	.	.	.	8	8	.	16	38	54
1992	27	18	.	.	.	.	27	18	.	45	50	95
Other gf.												
1990	22	2	.	.	.	.	22	2	.	24	31	55
1991	17	1	.	.	.	.	17	1	.	18	42	60
1992	19	.	.	.	.	.	19	.	.	19	62	81
Pacific cod												
1990	693	60	4	.	.	.	693	60	4	757	39	796
1991	793	95	2	.	1	.	793	96	2	891	45	936
1992	856	109	8	.	.	1	856	109	10	975	67	1042
Pollock												
1990	30	3	.	.	.	.	30	3	.	33	21	54
1991	19	3	.	.	.	.	19	3	.	22	31	53
1992	45	6	.	.	.	.	45	6	.	51	41	92
Rockfish												
1990	571	69	1	.	.	.	571	69	1	641	30	671
1991	713	69	.	.	.	.	713	69	.	782	36	818
1992	681	91	.	.	.	.	681	91	.	772	51	823
BSAI												
Total gf.												
1990	54	32	4	.	.	.	54	32	4	90	36	126
1991	86	53	1	.	1	.	86	54	1	141	47	188
1992	57	54	6	.	.	1	57	54	7	118	61	179
Flatfish												
1990	23	26	.	.	.	.	23	26	.	49	24	73
1991	5	8	.	.	.	.	5	8	.	13	37	50
1992	13	16	.	.	.	.	13	16	.	29	49	78
Other gf.												
1990	1	1	.	.	.	.	1	1	.	2	30	32
1991	2	.	.	.	.	.	2	.	.	2	41	43
1992	.	.	.	.	.	.	.	.	.	.	57	57
Pacific cod												
1990	40	24	4	.	.	.	40	24	4	68	36	104
1991	82	50	1	.	1	.	82	51	1	134	43	177
1992	46	41	6	.	.	1	46	41	7	94	60	154
Pollock												
1990	3	1	.	.	.	.	3	1	.	4	20	24
1991	1	1	.	.	.	.	1	1	.	2	31	33
1992	1	1	.	.	.	.	1	1	.	2	38	40
Rockfish												
1990	28	26	1	.	.	.	28	26	1	55	20	75
1991	20	19	.	.	.	.	20	19	.	39	33	72
1992	29	24	.	.	.	.	29	24	.	53	42	95

Table 1 continued -- Number of vessels.

Other gear and Alaska owners

	Harvesters In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	At sea >124	Total <60	Total 60-124	Total >124	Harv	CP	All
All Alaska												
Total gf.												
1990	835	60	.	.	.	.	835	60	.	895	9	904
1991	977	63	1	.	.	.	977	63	1	1041	29	1070
1992	954	78	3	.	.	.	954	78	3	1035	34	1069
Flatfish												
1990	12	12	.	.	.	.	12	12	.	24	5	29
1991	7	3	.	.	.	.	7	3	.	10	24	34
1992	17	5	.	.	.	.	17	5	.	22	23	45
Other gf.												
1990	21	1	.	.	.	.	21	1	.	22	6	28
1991	14	.	.	.	.	.	14	.	.	14	27	41
1992	18	.	.	.	.	.	18	.	.	18	34	52
Pacific cod												
1990	602	39	.	.	.	.	602	39	.	641	8	649
1991	696	47	1	.	.	.	696	47	1	744	26	770
1992	753	58	3	.	.	.	753	58	3	814	33	847
Pollock												
1990	28	1	.	.	.	.	28	1	.	29	3	32
1991	18	1	.	.	.	.	18	1	.	19	19	38
1992	43	1	.	.	.	.	43	1	.	44	22	66
Rockfish												
1990	463	38	.	.	.	.	463	38	.	501	8	509
1991	563	35	.	.	.	.	563	35	.	598	23	621
1992	538	43	.	.	.	.	538	43	.	581	28	609
BSAI												
Total gf.												
1990	29	14	.	.	.	.	29	14	.	43	7	50
1991	54	17	1	.	.	.	54	17	1	72	27	99
1992	37	10	1	.	.	.	37	10	1	48	29	77
Flatfish												
1990	7	11	.	.	.	.	7	11	.	18	4	22
1991	4	3	.	.	.	.	4	3	.	7	24	31
1992	6	4	.	.	.	.	6	4	.	10	22	32
Other gf.												
1990	.	.	.	.	.	.	.	.	.	.	6	6
1991	2	.	.	.	.	.	2	.	.	2	26	28
1992	.	.	.	.	.	.	.	.	.	.	29	29
Pacific cod												
1990	24	11	.	.	.	.	24	11	.	35	7	42
1991	51	15	1	.	.	.	51	15	1	67	25	92
1992	35	8	1	.	.	.	35	8	1	44	29	73
Pollock												
1990	2	.	.	.	.	.	2	.	.	2	3	5
1991	1	.	.	.	.	.	1	.	.	1	19	20
1992	1	.	.	.	.	.	1	.	.	1	21	22
Rockfish												
1990	10	11	.	.	.	.	10	11	.	21	3	24
1991	14	8	.	.	.	.	14	8	.	22	20	42
1992	17	5	.	.	.	.	17	5	.	22	20	42

Table 1 continued -- Number of vessels.

Other gear and non-Alaska owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
Total gf.												
1990	155	38	4	.	.	.	155	38	4	197	33	230
1991	198	62	1	.	1	.	198	63	1	262	20	282
1992	165	76	5	.	.	1	165	76	7	248	34	282
Flatfish												
1990	18	16	.	.	.	.	18	16	.	34	22	56
1991	1	[illegible]	.	.	.	.	1	5	.	6	14	20
1992	10	1[illegible]	.	.	.	.	10	13	.	23	27	50
Other gf.												
1990	1	1	.	.	.	.	1	1	.	2	25	27
1991	3	1	.	.	.	.	3	1	.	4	15	19
1992	1	.	.	.	.	.	1	.	.	1	28	29
Pacific cod												
1990	91	21	4	.	.	.	91	21	4	116	31	147
1991	97	48	1	.	1	.	97	49	1	147	19	166
1992	92	51	5	.	.	1	92	51	7	150	34	184
Pollock												
1990	2	2	.	.	.	.	2	2	.	4	18	22
1991	1	2	.	.	.	.	1	2	.	3	12	15
1992	2	5	.	.	.	.	2	5	.	7	19	26
Rockfish												
1990	108	31	1	.	.	.	108	31	1	140	22	162
1991	150	34	.	.	.	.	150	34	.	184	13	197
1992	133	48	.	.	.	.	133	48	.	181	23	204
BSAI												
Total gf.												
1990	25	18	4	.	.	.	25	18	4	47	29	76
1991	32	36	.	.	1	.	32	37	.	69	20	89
1992	19	44	5	.	.	1	19	44	6	69	32	101
Flatfish												
1990	16	15	.	.	.	.	16	15	.	31	20	51
1991	1	5	.	.	.	.	1	5	.	6	13	19
1992	7	12	.	.	.	.	7	12	.	19	27	46
Other gf.												
1990	1	1	.	.	.	.	1	1	.	2	24	26
1991	.	.	.	.	.	.	.	.	.	.	15	15
1992	.	.	.	.	.	.	.	.	.	.	28	28
Pacific cod												
1990	16	13	4	.	.	.	16	13	4	33	29	62
1991	31	35	.	.	1	.	31	36	.	67	18	85
1992	11	33	5	.	.	1	11	33	6	50	31	81
Pollock												
1990	1	1	.	.	.	.	1	1	.	2	17	19
1991	.	1	.	.	.	.	.	1	.	1	12	13
1992	.	1	.	.	.	.	.	1	.	1	17	18
Rockfish												
1990	18	15	1	.	.	.	18	15	1	34	17	51
1991	6	11	.	.	.	.	6	11	.	17	13	30
1992	11	19	.	.	.	.	11	19	.	30	22	52

Table 1 continued -- Number of vessels.

All gear and all owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
Gulf											
Total gf.											
1990	1153	175	10	.	6	1154	189	16	1359	74	1433
1991	1333	219	8	1	8	1334	238	13	1585	76	1661
1992	1404	241	9	.	2	1404	256	16	1676	93	1770
Flatfish											
1990	20	42	5	.	3	21	51	9	81	49	130
1991	22	58	6	.	6	22	74	7	103	59	162
1992	36	61	4	.	2	36	73	8	117	66	183
Other gf.											
1990	32	12	1	.	.	32	15	3	50	65	115
1991	21	19	2	.	1	21	24	2	47	65	112
1992	27	25	2	.	2	27	33	5	65	80	145
Pacific cod											
1990	773	119	9	.	4	774	131	13	918	63	981
1991	877	177	8	.	7	877	195	12	1084	64	1148
1992	1028	182	7	.	2	1028	196	10	1234	78	1313
Pollock											
1990	38	47	5	.	3	38	56	8	102	47	149
1991	39	74	5	1	4	40	89	8	137	52	189
1992	87	82	5	.	2	87	95	11	193	63	257
Rockfish											
1990	685	100	2	.	2	686	106	2	794	61	855
1991	835	134	.	.	3	835	145	.	980	68	1048
1992	875	147	1	.	2	875	157	3	1035	74	1109
W.Gulf											
Total gf.											
1990	57	40	8	.	5	57	47	13	117	57	174
1991	132	90	6	.	2	132	101	10	243	63	306
1992	149	80	8	.	2	149	91	15	255	74	329
Flatfish											
1990	1	2	3	.	2	1	5	6	12	41	53
1991	2	21	6	.	.	2	23	7	32	49	81
1992	8	21	4	.	2	8	28	8	44	51	95
Other gf.											
1990	.	.	1	.	.	.	1	3	4	56	60
1991	2	10	2	.	.	2	11	2	15	55	70
1992	.	12	2	.	2	.	19	5	24	65	89
Pacific cod											
1990	46	22	7	.	4	46	28	10	84	44	128
1991	91	70	6	.	2	91	81	8	180	52	232
1992	98	45	5	.	2	98	55	8	161	62	223
Pollock											
1990	.	6	3	.	2	.	9	6	15	36	51
1991	7	34	5	.	.	7	36	8	51	37	88
1992	15	33	5	.	2	15	41	11	67	49	116
Rockfish											
1990	12	17	1	.	2	12	20	1	33	49	82
1991	51	43	.	.	.	51	43	.	94	54	148
1992	61	42	1	.	2	61	47	3	111	58	169

Table 1 continued -- Number of vessels.

All gear and Alaska owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
Gulf											
Total gf.											
1990	980	96	.	.	.	980	98	.	1078	9	1087
1991	1124	114	.	1	1	1125	119	.	1244	49	1293
1992	1181	123	2	.	.	1181	128	2	1311	55	1366
Flatfish											
1990	15	23	.	.	.	15	25	.	40	3	43
1991	20	25	.	.	1	20	30	.	50	38	88
1992	30	24	.	.	.	30	28	.	58	42	100
Other gf.											
1990	31	9	.	.	.	31	11	.	42	7	49
1991	16	7	.	.	1	16	11	.	27	44	71
1992	26	6	.	.	.	26	9	.	35	53	88
Pacific cod											
1990	687	71	.	.	.	687	73	.	760	8	768
1991	789	97	.	.	1	789	102	.	891	42	933
1992	911	100	2	.	.	911	105	2	1018	47	1065
Pollock											
1990	36	24	.	.	.	36	26	.	62	3	65
1991	32	27	.	1	1	33	32	.	65	35	100
1992	73	28	.	.	.	73	32	.	105	38	143
Rockfish											
1990	561	57	.	.	.	561	59	.	620	8	628
1991	674	76	.	.	1	674	81	.	755	45	800
1992	709	74	.	.	.	709	78	.	787	48	835
W.Gulf											
Total gf.											
1990	48	11	.	.	.	48	11	.	59	6	65
1991	98	34	.	.	.	98	35	.	133	38	171
1992	108	20	1	.	.	108	23	1	132	45	177
Flatfish											
1990	1	1	.	.	.	1	1	.	2	2	4
1991	1	2	.	.	.	1	2	.	3	31	34
1992	6	3	.	.	.	6	5	.	11	33	44
Other gf.											
1990	.	.	.	.	.	.	.	.	.	6	6
1991	1	1	.	.	.	1	1	.	2	36	38
1992	.	1	.	.	.	.	3	.	3	43	46
Pacific cod											
1990	41	6	.	.	.	41	6	.	47	3	50
1991	78	25	.	.	.	78	26	.	104	31	135
1992	81	11	1	.	.	81	14	1	96	39	135
Pollock											
1990	.	1	.	.	.	.	1	.	1	1	2
1991	4	4	.	.	.	4	4	.	8	24	32
1992	11	6	.	.	.	11	8	.	19	28	47
Rockfish											
1990	8	4	.	.	.	8	4	.	12	5	17
1991	28	18	.	.	.	28	18	.	46	35	81
1992	36	12	.	.	.	36	13	.	49	38	87

Table 1 continued -- Number of vessels.

All gear and non-Alaska owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
Gulf											
Total gf.											
1990	173	79	10	.	6	174	91	16	281	65	346
1991	209	105	8	.	7	209	120	13	342	27	369
1992	195	118	7	.	2	195	128	14	337	38	375
Flatfish											
1990	5	19	5	.	3	6	26	9	41	46	87
1991	2	33	6	.	5	2	45	7	54	21	75
1992	4	37	4	.	2	4	45	8	57	24	81
Other gf.											
1990	1	3	1	.	.	1	4	3	8	58	66
1991	5	12	2	.	.	5	13	2	20	21	41
1992	1	19	2	.	2	1	24	5	30	27	57
Pacific cod											
1990	86	48	9	.	4	87	58	13	158	55	213
1991	88	80	8	.	6	88	94	12	194	22	216
1992	99	82	5	.	2	99	91	8	198	31	229
Pollock											
1990	2	23	5	.	3	2	30	8	40	44	84
1991	7	47	5	.	3	7	58	8	73	17	90
1992	11	54	5	.	2	11	63	11	85	25	110
Rockfish											
1990	124	43	2	.	2	125	47	2	174	53	227
1991	161	58	.	.	2	161	64	.	225	23	248
1992	154	73	1	.	2	154	79	3	236	26	262
W.Gulf											
Total gf.											
1990	9	29	8	.	5	9	36	13	58	51	109
1991	34	56	6	.	2	34	66	10	110	25	135
1992	37	60	7	.	2	37	68	14	119	29	148
Flatfish											
1990	.	1	3	.	2	.	4	6	10	39	49
1991	1	19	6	.	.	1	21	7	29	18	47
1992	2	18	4	.	2	2	23	8	33	18	51
Other gf.											
1990	.	.	1	.	.	.	1	3	4	50	54
1991	1	9	2	.	.	1	10	2	13	19	32
1992	.	11	2	.	2	.	16	5	21	22	43
Pacific cod											
1990	5	16	7	.	4	5	22	10	37	41	78
1991	13	45	6	.	2	13	55	8	76	21	97
1992	13	34	4	.	2	13	41	7	61	23	84
Pollock											
1990	.	5	3	.	2	.	8	6	14	35	49
1991	3	30	5	.	.	3	32	8	43	13	56
1992	4	27	5	.	2	4	33	11	48	21	69
Rockfish											
1990	4	13	1	.	2	4	16	1	21	44	65
1991	23	25	.	.	.	23	25	.	48	19	67
1992	25	30	1	.	2	25	34	3	62	20	82

Table 1 continued -- Number of vessels.

Trawl gear and all owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
Gulf											
Total gf.											
1990	80	53	5	.	6	80	66	11	157	43	200
1991	30	66	6	1	8	31	81	10	122	48	170
1992	93	69	4	.	2	93	80	11	184	37	221
Flatfish											
1990	11	31	3	.	3	11	40	7	58	39	97
1991	10	40	5	.	6	10	52	6	68	46	114
1992	10	47	3	.	2	10	56	7	73	29	102
Other gf.											
1990	4	6	.	.	.	4	9	2	15	40	55
1991	2	15	1	.	1	2	19	1	22	43	65
1992	1	22	2	.	2	1	28	5	34	31	65
Pacific cod											
1990	37	49	4	.	4	37	60	8	105	41	146
1991	26	66	6	.	7	26	80	10	116	45	161
1992	47	64	3	.	2	47	74	6	127	30	157
Pollock											
1990	7	33	4	.	3	7	41	7	55	41	96
1991	8	52	4	1	4	9	63	6	78	44	122
1992	21	61	4	.	2	21	71	10	102	35	137
Rockfish											
1990	49	20	.	.	2	49	26	.	75	33	108
1991	9	29	.	.	3	9	36	.	45	44	89
1992	48	36	1	.	2	48	44	3	95	31	126
W.Gulf											
Total gf.											
1990	16	20	5	.	5	16	27	10	53	37	90
1991	20	38	5	.	2	20	47	8	75	40	115
1992	35	35	4	.	2	35	43	11	89	29	118
Flatfish											
1990	.	1	2	.	2	.	4	5	9	34	43
1991	1	19	5	.	.	1	21	6	28	38	66
1992	.	15	3	.	2	.	20	7	27	21	48
Other gf.											
1990	.	.	.	.	.	.	1	2	3	36	39
1991	1	10	1	.	.	1	11	1	13	36	49
1992	.	11	2	.	2	.	16	5	21	23	44
Pacific cod											
1990	16	17	4	.	4	16	23	7	46	32	78
1991	19	38	5	.	2	19	47	7	73	37	110
1992	34	30	2	.	2	34	37	5	76	23	99
Pollock											
1990	.	6	3	.	2	.	9	6	15	34	49
1991	5	29	4	.	.	5	31	6	42	33	75
1992	11	26	4	.	2	11	32	10	53	27	80
Rockfish											
1990	.	2	.	.	2	.	5	.	5	31	36
1991	3	12	.	.	.	3	12	.	15	35	50
1992	1	9	1	.	2	1	13	3	17	21	38

Table 1 continued -- Number of vessels.

Trawl gear and Alaska owners

	Harvesters: In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	Total <60	Total 60-124	Total >124	Harv	CP	All
Gulf											
Total gf.											
1990	65	22	.	.	.	65	24	.	89	1	90
1991	24	15	.	1	1	25	18	.	43	30	73
1992	59	19	.	.	.	59	23	.	82	23	105
Flatfish											
1990	8	16	.	.	.	8	18	.	26	1	27
1991	8	10	.	.	1	8	13	.	21	29	50
1992	7	16	.	.	.	7	19	.	26	21	47
Other gf.											
1990	3	5	.	.	.	3	7	.	10	1	11
1991	1	4	.	.	1	1	7	.	8	28	36
1992	1	4	.	.	.	1	7	.	8	22	30
Pacific cod											
1990	35	22	.	.	.	35	24	.	59	1	60
1991	21	15	.	.	1	21	18	.	39	29	68
1992	28	19	.	.	.	28	23	.	51	21	72
Pollock											
1990	6	16	.	.	.	6	18	.	24	1	25
1991	5	11	.	1	1	6	14	.	20	27	47
1992	10	19	.	.	.	10	22	.	32	22	54
Rockfish											
1990	36	13	.	.	.	36	15	.	51	.	51
1991	6	8	.	.	1	6	11	.	17	28	45
1992	33	14	.	.	.	33	17	.	50	20	70
W.Gulf											
Total gf.											
1990	16	4	.	.	.	16	4	.	20	1	21
1991	16	4	.	.	.	16	5	.	21	24	45
1992	23	4	.	.	.	23	7	.	30	18	48
Flatfish											
1990	.	.	.	.	.	.	.	.	.	1	1
1991	.	2	.	.	.	.	2	.	2	24	26
1992	.	2	.	.	.	.	4	.	4	15	19
Other gf.											
1990	.	.	.	.	.	.	.	.	.	1	1
1991	.	1	.	.	.	.	1	.	1	23	24
1992	.	1	.	.	.	.	3	.	3	16	19
Pacific cod											
1990	16	4	.	.	.	16	4	.	20	1	21
1991	16	4	.	.	.	16	5	.	21	22	43
1992	22	4	.	.	.	22	7	.	29	16	45
Pollock											
1990	.	1	.	.	.	.	1	.	1	1	2
1991	3	2	.	.	.	3	2	.	5	20	25
1992	7	4	.	.	.	7	6	.	13	16	29
Rockfish											
1990	.	.	.	.	.	.	.	.	.	.	.
1991	1	2	.	.	.	1	2	.	3	23	26
1992	1	1	.	.	.	1	2	.	3	13	16

Table 1 continued -- Number of vessels.

Trawl gear and non-Alaska owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
Gulf											
Total gf.											
1990	15	31	5	.	6	15	42	11	68	42	110
1991	6	51	6	.	7	6	64	10	80	18	98
1992	26	50	4	.	2	26	57	11	94	14	108
Flatfish											
1990	3	15	3	.	3	3	22	7	32	38	70
1991	2	30	5	.	5	2	40	6	48	17	65
1992	1	31	3	.	2	1	37	7	45	8	53
Other gf.											
1990	1	1	.	.	.	1	2	2	5	39	44
1991	1	11	1	.	.	1	12	1	14	15	29
1992	.	18	2	.	2	.	21	5	26	9	35
Pacific cod											
1990	2	27	4	.	4	2	36	8	46	40	86
1991	5	51	6	.	6	5	63	10	78	16	94
1992	12	45	3	.	2	12	51	6	69	9	78
Pollock											
1990	1	17	4	.	3	1	23	7	31	40	71
1991	3	41	4	.	3	3	50	6	59	17	76
1992	8	42	4	.	2	8	49	10	67	13	80
Rockfish											
1990	13	7	.	.	2	13	11	.	24	33	57
1991	3	21	.	.	2	3	25	.	28	16	44
1992	13	22	1	.	2	13	27	3	43	11	54
W.Gulf											
Total gf.											
1990	.	16	5	.	5	.	23	10	33	36	69
1991	4	34	5	.	2	4	42	8	54	16	70
1992	8	31	4	.	2	8	36	11	55	11	66
Flatfish											
1990	.	1	2	.	2	.	4	5	9	33	42
1991	1	17	5	.	.	1	19	6	26	14	40
1992	.	13	3	.	2	.	16	7	23	6	29
Other gf.											
1990	.	.	.	.	.	.	1	2	3	35	38
1991	1	9	1	.	.	1	10	1	12	13	25
1992	.	10	2	.	2	.	13	5	18	7	25
Pacific cod											
1990	.	13	4	.	4	.	19	7	26	31	57
1991	3	34	5	.	2	3	42	7	52	15	67
1992	8	26	2	.	2	8	30	5	43	7	50
Pollock											
1990	.	5	3	.	2	.	8	6	14	33	47
1991	2	27	4	.	.	2	29	6	37	13	50
1992	4	22	4	.	2	4	26	10	40	11	51
Rockfish											
1990	.	2	.	.	2	.	5	.	5	31	36
1991	2	10	.	.	.	2	10	.	12	12	24
1992	.	8	1	.	2	.	11	3	14	8	22

Table 1 continued -- Number of vessels.

Other gear and all owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
Gulf											
Total gf.											
1990	972	92	2	.	.	972	92	2	1066	29	1095
1991	1146	105	1	.	.	1146	105	1	1252	22	1274
1992	1120	131	3	.	.	1120	131	3	1254	41	1295
Flatfish											
1990	8	2	.	.	.	8	2	.	10	8	18
1991	3	.	.	.	.	3	.	.	3	9	12
1992	18	4	.	.	.	18	4	.	22	24	46
Other gf.											
1990	21	1	.	.	.	21	1	.	22	23	45
1991	16	1	.	.	.	16	1	.	17	18	35
1992	19	.	.	.	.	19	.	.	19	36	55
Pacific cod											
1990	669	41	2	.	.	669	41	2	712	20	732
1991	736	64	1	.	.	736	64	1	801	15	816
1992	823	79	3	.	.	823	79	3	905	35	940
Pollock											
1990	28	2	.	.	.	28	2	.	30	4	34
1991	18	2	.	.	.	18	2	.	20	5	25
1992	44	5	.	.	.	44	5	.	49	15	64
Rockfish											
1990	563	66	1	.	.	563	66	1	630	26	656
1991	708	68	.	.	.	708	68	.	776	19	795
1992	679	88	.	.	.	679	88	.	767	31	798
W.Gulf											
Total gf.											
1990	32	17	.	.	.	32	17	.	49	19	68
1991	79	34	.	.	.	79	34	.	113	18	131
1992	92	31	2	.	.	92	31	2	125	31	156
Flatfish											
1990	1	1	.	.	.	1	1	.	2	7	9
1991	.	.	.	.	.	.	.	.	.	8	8
1992	8	4	.	.	.	8	4	.	12	19	31
Other gf.											
1990	.	.	.	.	.	.	.	.	.	19	19
1991	.	.	.	.	.	.	.	.	.	15	15
1992	.	.	.	.	.	.	.	.	.	29	29
Pacific cod											
1990	23	2	.	.	.	23	2	.	25	12	37
1991	43	16	.	.	.	43	16	.	59	12	71
1992	47	6	2	.	.	47	6	2	55	27	82
Pollock											
1990	.	.	.	.	.	.	.	.	.	2	2
1991	.	.	.	.	.	.	.	.	.	4	4
1992	1	.	.	.	.	1	.	.	1	10	11
Rockfish											
1990	10	15	.	.	.	10	15	.	25	17	42
1991	39	23	.	.	.	39	23	.	62	15	77
1992	51	28	.	.	.	51	28	.	79	27	106

Table 1 continued -- Number of vessels.

Other gear and Alaska owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
Gulf											
Total gf.											
1990	822	56	.	.	.	822	56	.	878	7	885
1991	957	58	.	.	.	957	58	.	1015	16	1031
1992	940	76	2	.	.	940	76	2	1018	21	1039
Flatfish											
1990	6	1	.	.	.	6	1	.	7	1	8
1991	3	.	.	.	.	3	.	.	3	6	9
1992	15	1	.	.	.	15	1	.	16	11	27
Other gf.											
1990	21	1	.	.	.	21	1	.	22	5	27
1991	13	.	.	.	.	13	.	.	13	14	27
1992	18	.	.	.	.	18	.	.	18	21	39
Pacific cod											
1990	590	31	.	.	.	590	31	.	621	6	627
1991	664	42	.	.	.	664	42	.	706	10	716
1992	731	53	2	.	.	731	53	2	786	17	803
Pollock											
1990	27	1	.	.	.	27	1	.	28	1	29
1991	17	1	.	.	.	17	1	.	18	5	23
1992	42	1	.	.	.	42	1	.	43	7	50
Rockfish											
1990	457	36	.	.	.	457	36	.	493	7	500
1991	559	34	.	.	.	559	34	.	593	14	607
1992	536	43	.	.	.	536	43	.	579	18	597
W.Gulf											
Total gf.											
1990	26	5	.	.	.	26	5	.	31	4	35
1991	55	16	.	.	.	55	16	.	71	12	83
1992	65	8	1	.	.	65	8	1	74	17	91
Flatfish											
1990	1	1	.	.	.	1	1	.	2	1	3
1991	.	.	.	.	.	.	.	.	.	5	5
1992	6	1	.	.	.	6	1	.	7	10	17
Other gf.											
1990	.	.	.	.	.	.	.	.	.	4	4
1991	.	.	.	.	.	.	.	.	.	11	11
1992	.	.	.	.	.	.	.	.	.	17	17
Pacific cod											
1990	20	.	.	.	.	20	.	.	20	2	22
1991	37	9	.	.	.	37	9	.	46	7	53
1992	43	1	1	.	.	43	1	1	45	15	60
Pollock											
1990	.	.	.	.	.	.	.	.	.	.	.
1991	.	.	.	.	.	.	.	.	.	4	4
1992	1	.	.	.	.	1	.	.	1	4	5
Rockfish											
1990	7	4	.	.	.	7	4	.	11	4	15
1991	21	10	.	.	.	21	10	.	31	10	41
1992	27	7	.	.	.	27	7	.	34	16	50

Table 1 continued -- Number of vessels.

Other gear and non-Alaska owners

	Harvesters In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	Total <60	Total 60-124	Total >124	Harv	CP	All
Gulf											
Total gf.											
1990	150	36	2	.	.	150	36	2	188	22	210
1991	189	47	1	.	.	189	47	1	237	6	243
1992	160	55	1	.	.	160	55	1	216	20	236
Flatfish											
1990	2	1	.	.	.	2	1	.	3	7	10
1991	.	.	.	.	.	.	.	.	.	3	3
1992	3	3	.	.	.	3	3	.	6	13	19
Other gf.											
1990	.	.	.	.	.	.	.	.	.	18	18
1991	3	1	.	.	.	3	1	.	4	4	8
1992	1	.	.	.	.	1	.	.	1	15	16
Pacific cod											
1990	79	10	2	.	.	79	10	2	91	14	105
1991	72	22	1	.	.	72	22	1	95	5	100
1992	81	26	1	.	.	81	26	1	108	18	126
Pollock											
1990	1	1	.	.	.	1	1	.	2	3	5
1991	1	1	.	.	.	1	1	.	2	.	2
1992	2	4	.	.	.	2	4	.	6	8	14
Rockfish											
1990	106	30	1	.	.	106	30	1	137	19	156
1991	149	34	.	.	.	149	34	.	183	5	188
1992	133	45	.	.	.	133	45	.	178	13	191
W.Gulf											
Total gf.											
1990	6	12	.	.	.	6	12	.	18	15	33
1991	24	18	.	.	.	24	18	.	42	6	48
1992	27	23	1	.	.	27	23	1	51	14	65
Flatfish											
1990	.	.	.	.	.	.	.	.	.	6	6
1991	.	.	.	.	.	.	.	.	.	3	3
1992	2	3	.	.	.	2	3	.	5	9	14
Other gf.											
1990	.	.	.	.	.	.	.	.	.	15	15
1991	.	.	.	.	.	.	.	.	.	4	4
1992	.	.	.	.	.	.	.	.	.	12	12
Pacific cod											
1990	3	2	.	.	.	3	2	.	5	10	15
1991	6	7	.	.	.	6	7	.	13	5	18
1992	4	5	1	.	.	4	5	1	10	12	22
Pollock											
1990	.	.	.	.	.	.	.	.	.	2	2
1991	.	.	.	.	.	.	.	.	.	.	.
1992	.	.	.	.	.	.	.	.	.	6	6
Rockfish											
1990	3	11	.	.	.	3	11	.	14	13	27
1991	18	13	.	.	.	18	13	.	31	5	36
1992	24	21	.	.	.	24	21	.	45	11	56

Table 1 continued -- Number of vessels.

All gear and all owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
C.Gulf											
Total gf.											
1990	363	139	6	.	3	364	149	8	521	52	573
1991	505	163	4	1	5	506	179	7	692	52	744
1992	591	188	3	.	.	591	197	4	792	65	858
Flatfish											
1990	8	37	2	.	2	9	45	3	57	32	89
1991	12	39	.	.	5	12	53	.	65	35	100
1992	17	41	1	.	.	17	47	1	65	41	106
Other gf.											
1990	4	10	.	.	.	4	13	.	17	43	60
1991	8	8	.	.	1	8	12	.	20	43	63
1992	13	14	.	.	.	13	16	.	29	61	90
Pacific cod											
1990	232	101	6	.	2	233	110	8	351	40	391
1991	378	135	3	.	5	378	151	6	535	37	572
1992	462	144	2	.	.	462	153	3	618	53	672
Pollock											
1990	33	40	3	.	1	33	47	3	83	32	115
1991	23	42	1	1	4	24	55	1	80	35	115
1992	72	64	2	.	.	72	71	2	145	40	186
Rockfish											
1990	183	76	1	.	.	184	80	1	265	44	309
1991	273	93	.	.	2	273	103	.	376	43	419
1992	356	102	.	.	.	356	107	.	463	54	517
E.Gulf											
Total gf.											
1990	847	49	.	.	.	847	49	.	896	4	900
1991	874	54	1	.	1	874	55	1	930	25	955
1992	876	68	.	.	.	876	69	.	945	3	948
Flatfish											
1990	11	4	.	.	.	11	4	.	15	.	15
1991	8	.	.	.	1	8	1	.	9	11	20
1992	11	.	.	.	.	11	.	.	11	.	11
Other gf.											
1990	28	2	.	.	.	28	2	.	30	.	30
1991	11	1	.	.	.	11	1	.	12	21	33
1992	14	.	.	.	.	14	.	.	14	.	14
Pacific cod											
1990	514	9	.	.	.	514	9	.	523	1	524
1991	492	15	1	.	.	492	15	1	508	7	515
1992	574	28	.	.	.	574	29	.	603	1	604
Pollock											
1990	7	1	.	.	.	7	1	.	8	.	8
1991	9	.	.	.	.	9	.	.	9	10	19
1992	7	.	.	.	.	7	.	.	7	.	7
Rockfish											
1990	587	44	.	.	.	587	44	.	631	4	635
1991	615	45	.	.	1	615	46	.	661	21	682
1992	588	57	.	.	.	588	57	.	645	2	647

Table 1 continued -- Number of vessels.

All gear and Alaska owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
C.Gulf											
Total gf.											
1990	283	78	.	.	.	283	80	.	363	7	370
1991	429	89	.	1	1	430	94	.	524	37	561
1992	492	100	1	.	.	492	104	1	597	44	641
Flatfish											
1990	7	21	.	.	.	7	23	.	30	2	32
1991	11	23	.	.	1	11	28	.	39	27	66
1992	15	21	.	.	.	15	24	.	39	29	68
Other gf.											
1990	4	7	.	.	.	4	9	.	13	6	19
1991	6	6	.	.	1	6	10	.	16	31	47
1992	13	5	.	.	.	13	7	.	20	42	62
Pacific cod											
1990	201	61	.	.	.	201	63	.	264	4	268
1991	344	77	.	.	1	344	82	.	426	28	454
1992	408	88	1	.	.	408	92	1	501	35	536
Pollock											
1990	32	22	.	.	.	32	24	.	56	2	58
1991	22	24	.	1	1	23	.29	.	52	24	76
1992	59	26	.	.	.	59	29	.	88	29	117
Rockfish											
1990	125	45	.	.	.	125	47	.	172	7	179
1991	218	57	.	.	1	218	62	.	280	31	311
1992	288	50	.	.	.	288	53	.	341	39	380
E.Gulf											
Total gf.											
1990	717	24	.	.	.	717	24	.	741	2	743
1991	725	30	.	.	.	725	30	.	755	19	774
1992	731	36	.	.	.	731	36	.	767	.	767
Flatfish											
1990	7	1	.	.	.	7	1	.	8	.	8
1991	8	.	.	.	.	8	.	.	8	8	16
1992	9	.	.	.	.	9	.	.	9	.	9
Other gf.											
1990	27	2	.	.	.	27	2	.	29	.	29
1991	9	.	.	.	.	9	.	.	9	17	26
1992	13	.	.	.	.	13	.	.	13	.	13
Pacific cod											
1990	460	8	.	.	.	460	8	.	468	1	469
1991	442	11	.	.	.	442	11	.	453	5	458
1992	512	18	.	.	.	512	18	.	530	.	530
Pollock											
1990	6	1	.	.	.	6	1	.	7	.	7
1991	6	.	.	.	.	6	.	.	6	7	13
1992	7	.	.	.	.	7	.	.	7	.	7
Rockfish											
1990	482	21	.	.	.	482	21	.	503	2	505
1991	491	24	.	.	.	491	24	.	515	16	531
1992	465	27	.	.	.	465	27	.	492	.	492

Table 1 continued -- Number of vessels.

A' gear and non-Alaska owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
C.Gulf											
Total gf.											
1990	80	61	6	.	3	81	69	8	158	45	203
1991	76	74	4	.	4	76	86	7	169	15	184
1992	91	88	2	.	.	91	93	3	187	21	208
Flatfish											
1990	1	16	2	.	2	2	22	3	27	30	57
1991	1	16	.	.	4	1	26	.	27	8	35
1992	.	20	1	.	.	.	23	1	24	12	36
Other gf.											
1990	.	3	.	.	.	.	4	.	4	37	41
1991	2	2	.	.	.	2	2	.	4	12	16
1992	.	9	.	.	.	.	9	.	9	19	28
Pacific cod											
1990	31	40	6	.	2	32	47	8	87	36	123
1991	34	58	3	.	4	34	70	6	110	9	119
1992	48	56	1	.	.	48	61	2	111	18	129
Pollock											
1990	1	18	3	.	1	1	23	3	27	30	57
1991	1	18	1	.	3	1	27	1	29	11	40
1992	10	38	2	.	.	10	42	2	54	11	65
Rockfish											
1990	58	31	1	.	.	59	33	1	93	37	130
1991	55	36	.	.	1	55	41	.	96	12	108
1992	65	52	.	.	.	65	54	.	119	15	134
E.Gulf											
Total gf.											
1990	130	25	.	.	.	130	25	.	155	2	157
1991	149	24	1	.	1	149	25	1	175	6	181
1992	129	32	.	.	.	129	33	.	162	3	165
Flatfish											
1990	4	3	.	.	.	4	3	.	7	.	7
1991	.	.	.	.	1	.	1	.	1	3	4
1992	2	.	.	.	.	2	.	.	2	.	2
Other gf.											
1990	1	.	.	.	.	1	.	.	1	.	1
1991	2	1	.	.	.	2	1	.	3	4	7
1992	1	.	.	.	.	1	.	.	1	.	1
Pacific cod											
1990	54	1	.	.	.	54	1	.	55	.	55
1991	50	4	1	.	.	50	4	1	55	2	57
1992	54	10	.	.	.	54	11	.	65	1	66
Pollock											
1990	1	.	.	.	.	1	.	.	1	.	1
1991	3	.	.	.	.	3	.	.	3	3	6
1992	.	.	.	.	.	.	.	.	.	.	.
Rockfish											
1990	105	23	.	.	.	105	23	.	128	2	130
1991	124	21	.	.	1	124	22	.	146	5	151
1992	114	30	.	.	.	114	30	.	144	2	146

Table 1 continued -- Number of vessels.

Trawl gear and all owners

	Harvesters								Harv	CP	All
	In shore			At sea		Total					
	<60	60-124	>124	<60	60-124	<60	60-124	>124			
C.Gulf											
Total gf.											
1990	20	41	2	.	3	20	50	4	74	28	102
1991	20	50	3	1	5	21	62	6	89	33	122
1992	34	51	1	.	.	34	58	2	94	23	117
Flatfish											
1990	5	28	1	.	2	5	36	2	43	26	69
1991	5	23	.	.	5	5	33	.	38	29	67
1992	5	33	1	.	.	5	38	1	44	23	67
Other gf.											
1990	1	5	.	.	.	1	8	.	9	25	34
1991	.	5	.	.	1	.	8	.	8	30	38
1992	.	12	.	.	.	.	14	.	14	23	37
Pacific cod											
1990	16	40	2	.	2	16	48	4	68	27	95
1991	20	50	2	.	5	20	62	5	87	28	115
1992	29	46	1	.	.	29	53	2	84	22	106
Pollock											
1990	6	26	2	.	1	6	32	2	40	27	67
1991	3	24	1	1	4	4	33	1	38	30	68
1992	14	45	1	.	.	14	51	1	66	23	89
Rockfish											
1990	9	18	.	.	.	9	22	.	31	23	54
1991	4	19	.	.	2	4	25	.	29	28	57
1992	8	27	.	.	.	8	31	.	39	23	62
E.Gulf											
Total gf.											
1990	46	3	.	.	.	46	3	.	49	.	49
1991	4	1	.	.	1	4	2	.	6	10	16
1992	46	.	.	.	.	46	.	.	46	1	47
Flatfish											
1990	6	3	.	.	.	6	3	.	9	.	9
1991	4	.	.	.	1	4	1	.	5	9	14
1992	5	.	.	.	.	5	.	.	5	.	5
Other gf.											
1990	3	1	.	.	.	3	1	.	4	.	4
1991	1	.	.	.	.	1	.	.	1	10	11
1992	1	.	.	.	.	1	.	.	1	.	1
Pacific cod											
1990	7	1	.	.	.	7	1	.	8	.	8
1991	1	1	.	.	.	1	1	.	2	5	7
1992	3	.	.	.	.	3	.	.	3	.	3
Pollock											
1990	1	1	.	.	.	1	1	.	2	.	2
1991	.	.	.	.	.	.	.	.	.	9	9
1992	2	.	.	.	.	2	.	.	2	.	2
Rockfish											
1990	40	1	.	.	.	40	1	.	41	.	41
1991	2	.	.	.	1	2	1	.	3	8	11
1992	41	.	.	.	.	41	.	.	41	1	42

Table 1 continued -- Number of vessels.

Trawl gear and Alaska owners

	Harvesters In shore <60	60-124	>124	At sea <60	60-124	Total <60	60-124	>124	Harv	CP	All
C.Gulf											
Total gf.											
1990	17	18	.	.	.	17	20	.	37	.	37
1991	15	12	.	1	1	16	15	.	31	22	53
1992	21	18	.	.	.	21	21	.	42	17	59
Flatfish											
1990	4	15	.	.	.	4	17	.	21	.	21
1991	4	8	.	.	1	4	11	.	15	21	36
1992	3	14	.	.	.	3	16	.	19	17	36
Other gf.											
1990	1	4	.	.	.	1	6	.	7	.	7
1991	.	3	.	.	1	.	6	.	6	20	26
1992	.	3	.	.	.	.	5	.	5	17	22
Pacific cod											
1990	14	18	.	.	.	14	20	.	34	.	34
1991	15	12	.	.	1	15	15	.	30	21	51
1992	17	18	.	.	.	17	21	.	38	16	54
Pollock											
1990	5	14	.	.	.	5	16	.	21	.	21
1991	2	9	.	1	1	3	12	.	15	19	34
1992	4	17	.	.	.	4	19	.	23	17	40
Rockfish											
1990	7	12	.	.	.	7	14	.	21	.	21
1991	3	6	.	.	1	3	9	.	12	20	32
1992	7	13	.	.	.	7	15	.	22	17	39
E.Gulf											
Total gf.											
1990	34	1	.	.	.	34	1	.	35	.	35
1991	4	.	.	.	.	4	.	.	4	7	11
1992	31	.	.	.	.	31	.	.	31	.	31
Flatfish											
1990	4	1	.	.	.	4	1	.	5	.	5
1991	4	.	.	.	.	4	.	.	4	6	10
1992	4	.	.	.	.	4	.	.	4	.	4
Other gf.											
1990	2	1	.	.	.	2	1	.	3	.	3
1991	1	.	.	.	.	1	.	.	1	7	8
1992	1	.	.	.	.	1	.	.	1	.	1
Pacific cod											
1990	7	1	.	.	.	7	1	.	8	.	8
1991	1	.	.	.	.	1	.	.	1	3	4
1992	3	.	.	.	.	3	.	.	3	.	3
Pollock											
1990	1	1	.	.	.	1	1	.	2	.	2
1991	.	.	.	.	.	.	.	.	.	6	6
1992	2	.	.	.	.	2	.	.	2	.	2
Rockfish											
1990	29	1	.	.	.	29	1	.	30	.	30
1991	2	.	.	.	.	2	.	.	2	6	8
1992	27	.	.	.	.	27	.	.	27	.	27

Table 1 continued -- Number of vessels.

Trawl gear and non-Alaska owners

	Harvesters In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	Total <60	Total 60-124	Total >124	Harv	CP	All
C.Gulf											
Total gf.											
1990	3	23	2	.	3	3	30	4	37	28	65
1991	5	38	3	.	4	5	48	6	59	11	70
1992	10	33	1	.	.	10	37	2	49	6	55
Flatfish											
1990	1	13	1	.	2	1	19	2	22	26	48
1991	1	15	.	.	4	1	23	.	24	8	32
1992	.	19	1	.	.	.	22	1	23	6	29
Other gf.											
1990	.	1	.	.	.	.	2	.	2	25	27
1991	.	2	.	.	.	.	2	.	2	10	12
1992	.	9	.	.	.	.	9	.	9	6	15
Pacific cod											
1990	2	22	2	.	2	2	28	4	34	27	61
1991	5	38	2	.	4	5	48	5	58	7	65
1992	9	28	1	.	.	9	32	2	43	6	49
Pollock											
1990	1	12	2	.	1	1	16	2	19	27	46
1991	1	15	1	.	3	1	22	1	24	11	35
1992	7	28	1	.	.	7	32	1	40	6	46
Rockfish											
1990	2	6	.	.	.	2	8	.	10	23	33
1991	1	13	.	.	1	1	16	.	17	8	25
1992	.	14	.	.	.	.	16	.	16	6	22
E.Gulf											
Total gf.											
1990	12	2	.	.	.	12	2	.	14	.	14
1991	.	1	.	.	1	.	2	.	2	3	5
1992	14	.	.	.	.	14	.	.	14	1	15
Flatfish											
1990	2	2	.	.	.	2	2	.	4	.	4
1991	.	.	.	.	1	.	1	.	1	3	4
1992	1	.	.	.	.	1	.	.	1	.	1
Other gf.											
1990	1	.	.	.	.	1	.	.	1	.	1
1991	.	.	.	.	.	.	.	.	.	3	3
1992	.	.	.	.	.	.	.	.	.	.	.
Pacific cod											
1990	.	.	.	.	.	.	.	.	.	.	.
1991	.	1	.	.	.	.	1	.	1	2	3
1992	.	.	.	.	.	.	.	.	.	.	.
Pollock											
1990	.	.	.	.	.	.	.	.	.	.	.
1991	.	.	.	.	.	.	.	.	.	3	3
1992	.	.	.	.	.	.	.	.	.	.	.
Rockfish											
1990	11	.	.	.	.	11	.	.	11	.	11
1991	.	.	.	.	1	.	1	.	1	2	3
1992	13	.	.	.	.	13	.	.	13	1	14

Table 1 continued -- Number of vessels.

Other gear and all owners

	Harvesters In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	Total <60	Total 60-124	Total >124	Harv	CP	All
C.Gulf											
Total gf.											
1990	311	69	2	.	.	311	69	2	382	22	404
1991	408	71	.	.	.	408	71	.	479	15	494
1992	443	101	1	.	.	443	101	1	545	32	577
Flatfish											
1990	2	.	.	.	.	2	.	.	2	4	6
1991	1	.	.	.	.	1	.	.	1	3	4
1992	5	.	.	.	.	5	.	.	5	11	16
Other gf.											
1990	3	.	.	.	.	3	.	.	3	16	19
1991	8	.	.	.	.	8	.	.	8	11	19
1992	7	.	.	.	.	7	.	.	7	29	36
Pacific cod											
1990	191	33	2	.	.	191	33	2	226	11	237
1991	287	44	.	.	.	287	44	.	331	6	337
1992	324	63	1	.	.	324	63	1	388	24	412
Pollock											
1990	25	2	.	.	.	25	2	.	27	3	30
1991	12	2	.	.	.	12	2	.	14	2	16
1992	39	5	.	.	.	39	5	.	44	10	54
Rockfish											
1990	159	45	1	.	.	159	45	1	205	19	224
1991	218	44	.	.	.	218	44	.	262	11	273
1992	278	59	.	.	.	278	59	.	337	21	358
E.Gulf											
Total gf.											
1990	729	45	.	.	.	729	45	.	774	4	778
1991	792	46	1	.	.	792	46	1	839	11	850
1992	735	59	.	.	.	735	59	.	794	2	796
Flatfish											
1990	5	1	.	.	.	5	1	.	6	.	6
1991	2	.	.	.	.	2	.	.	2	.	2
1992	5	.	.	.	.	5	.	.	5	.	5
Other gf.											
1990	18	1	.	.	.	18	1	.	19	.	19
1991	8	1	.	.	.	8	1	.	9	9	18
1992	12	.	.	.	.	12	.	.	12	.	12
Pacific cod											
1990	467	8	.	.	.	467	8	.	475	1	476
1991	455	11	1	.	.	455	11	1	467	.	467
1992	512	23	.	.	.	512	23	.	535	1	536
Pollock											
1990	4	.	.	.	.	4	.	.	4	.	4
1991	6	.	.	.	.	6	.	.	6	.	6
1992	5	.	.	.	.	5	.	.	5	.	5
Rockfish											
1990	482	42	.	.	.	482	42	.	524	4	528
1991	544	39	.	.	.	544	39	.	583	9	592
1992	466	49	.	.	.	466	49	.	515	1	516

Table 1 continued -- Number of vessels.

Other gear and Alaska owners

	Harvesters In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	Total <60	Total 60-124	Total >124	Harv	CP	All
C.Gulf											
Total gf.											
1990	237	42	.	.	.	237	42	.	279	6	285
1991	343	40	.	.	.	343	40	.	383	12	395
1992	362	55	1	.	.	362	55	1	418	18	436
Flatfish											
1990	2	.	.	.	.	2	.	.	2	1	3
1991	1	.	.	.	.	1	.	.	1	3	4
1992	5	.	.	.	.	5	.	.	5	6	11
Other gf.											
1990	3	.	.	.	.	3	.	.	3	5	8
1991	6	.	.	.	.	6	.	.	6	9	15
1992	7	.	.	.	.	7	.	.	7	17	24
Pacific cod											
1990	163	25	.	.	.	163	25	.	188	3	191
1991	263	29	.	.	.	263	29	.	292	4	296
1992	285	43	1	.	.	285	43	1	329	13	342
Pollock											
1990	25	1	.	.	.	25	1	.	26	1	27
1991	12	1	.	.	.	12	1	.	13	2	15
1992	37	1	.	.	.	37	1	.	38	6	44
Rockfish											
1990	105	25	.	.	.	105	25	.	130	6	136
1991	168	22	.	.	.	168	22	.	190	8	198
1992	213	24	.	.	.	213	24	.	237	13	250
E.Gulf											
Total gf.											
1990	617	23	.	.	.	617	23	.	640	2	642
1991	651	23	.	.	.	651	23	.	674	9	683
1992	613	30	.	.	.	613	30	.	643	.	643
Flatfish											
1990	3	.	.	.	.	3	.	.	3	.	3
1991	2	.	.	.	.	2	.	.	2	.	2
1992	4	.	.	.	.	4	.	.	4	.	4
Other gf.											
1990	18	1	.	.	.	18	1	.	19	.	19
1991	7	.	.	.	.	7	.	.	7	8	15
1992	11	.	.	.	.	11	.	.	11	.	11
Pacific cod											
1990	416	7	.	.	.	416	7	.	423	1	424
1991	409	8	.	.	.	409	8	.	417	.	417
1992	454	16	.	.	.	454	16	.	470	.	470
Pollock											
1990	3	.	.	.	.	3	.	.	3	.	3
1991	5	.	.	.	.	5	.	.	5	.	5
1992	5	.	.	.	.	5	.	.	5	.	5
Rockfish											
1990	393	20	.	.	.	393	20	.	413	2	415
1991	426	18	.	.	.	426	18	.	444	7	451
1992	364	22	.	.	.	364	22	.	386	.	386

Table 1 continued -- Number of vessels.

Other gear and non-Alaska owners

	Harvesters In shore <60	Harvesters In shore 60-124	Harvesters In shore >124	Harvesters At sea <60	Harvesters At sea 60-124	Harvesters Total <60	Harvesters Total 60-124	Harvesters Total >124	Harv	CP	All
C.Gulf											
Total gf.											
1990	74	27	2	.	.	74	27	2	103	16	119
1991	65	31	.	.	.	65	31	.	96	3	99
1992	76	46	.	.	.	76	46	.	122	14	136
Flatfish											
1990	.	.	.	.	.	.	.	.	.	3	3
1991	.	.	.	.	.	.	.	.	.	.	.
1992	.	.	.	.	.	.	.	.	.	5	5
Other gf.											
1990	.	.	.	.	.	.	.	.	.	11	11
1991	2	.	.	.	.	2	.	.	2	2	4
1992	.	.	.	.	.	.	.	.	.	12	12
Pacific cod											
1990	28	8	2	.	.	28	8	2	38	8	46
1991	24	15	.	.	.	24	15	.	39	2	41
1992	36	20	.	.	.	36	20	.	56	11	67
Pollock											
1990	.	1	.	.	.	.	1	.	1	2	3
1991	.	1	.	.	.	.	1	.	1	.	1
1992	2	4	.	.	.	2	4	.	6	4	10
Rockfish											
1990	54	20	1	.	.	54	20	1	75	13	88
1991	50	22	.	.	.	50	22	.	72	3	75
1992	63	35	.	.	.	63	35	.	98	8	106
E.Gulf											
Total gf.											
1990	112	22	.	.	.	112	22	.	134	2	136
1991	141	23	1	.	.	141	23	1	165	2	167
1992	107	29	.	.	.	107	29	.	136	2	138
Flatfish											
1990	2	1	.	.	.	2	1	.	3	.	3
1991	.	.	.	.	.	.	.	.	.	.	.
1992	1	.	.	.	.	1	.	.	1	.	1
Other gf.											
1990	.	.	.	.	.	.	.	.	.	.	.
1991	1	1	.	.	.	1	1	.	2	1	3
1992	1	.	.	.	.	1	.	.	1	.	1
Pacific cod											
1990	51	1	.	.	.	51	1	.	52	.	52
1991	46	3	1	.	.	46	3	1	50	.	50
1992	50	7	.	.	.	50	7	.	57	1	58
Pollock											
1990	1	.	.	.	.	1	.	.	1	.	1
1991	1	.	.	.	.	1	.	.	1	.	1
1992	.	.	.	.	.	.	.	.	.	.	.
Rockfish											
1990	89	22	.	.	.	89	22	.	111	2	113
1991	118	21	.	.	.	118	21	.	139	2	141
1992	94	27	.	.	.	94	27	.	121	1	122

Source: Data set prepared by council staff.
Note: Totals in these tables are not indicative of crossover within a category since the total includes the unknowns of that category.

Table 2 -- Number of vessels catching crab in the BSAI by residence, vessel type, area, species and year, 1990-92.

	Any Residence						Alaska						Other states					
	Harvester			Harv	CP	All	Harvester			Harv	CP	All	Harvester			Harv	CP	All
	<60	60-124	>124				<60	60-124	>124				<60	60-124	>124			
Crab BSAI																		
Tot. spec.																		
1990	16	196	43	255	21	277	9	82	6	97	4	101	7	114	37	158	17	176
1991	7	239	60	306	20	327	3	91	12	106	4	110	4	148	48	200	16	217
1992	7	239	60	306	20	327	3	91	12	106	4	110	4	148	48	200	16	217
Tan. areas																		
Tot. spec.																		
1990	15	188	39	242	19	261	8	77	6	91	4	95	7	111	33	151	15	166
1991	5	231	57	293	20	313	2	86	12	100	4	104	3	145	45	193	16	209
1992	5	231	57	293	20	313	2	86	12	100	4	104	3	145	45	193	16	209
Bairdi																		
1990	14	187	39	240	19	259	8	77	6	91	4	95	6	110	33	149	15	164
1991	3	230	57	290	20	310	2	85	12	99	4	103	1	145	45	191	16	207
1992	3	230	57	290	20	310	2	85	12	99	4	103	1	145	45	191	16	207
Opilio																		
1990	1	130	32	163	17	180	.	45	5	50	3	53	1	85	27	113	14	127
1991	2	174	55	231	19	250	.	61	11	72	3	75	2	113	44	159	16	175
1992	2	174	55	231	19	250	.	61	11	72	3	75	2	113	44	159	16	175
E.Aleutians																		
Tot. spec.																		
1990	8	2	.	10	1	11	7	1	.	8	.	8	1	1	.	2	1	3
1991	2	5	.	7	.	7	2	1	.	3	.	3	.	4	.	4	.	4
1992	2	5	.	7	.	7	2	1	.	3	.	3	.	4	.	4	.	4
Bairdi																		
1990	8	2	.	10	1	11	7	1	.	8	.	8	1	1	.	2	1	3
1991	2	5	.	7	.	7	2	1	.	3	.	3	.	4	.	4	.	4
1992	2	5	.	7	.	7	2	1	.	3	.	3	.	4	.	4	.	4
Opilio																		
1991	.	3	.	3	.	3	.	.	.	.	.	.	.	3	.	3	.	3
1992	.	3	.	3	.	3	.	.	.	.	.	.	.	3	.	3	.	3

Table 2 continued -- Number of vessels.

	Any Residence						Alaska						Other states					
	Harvester <60	Harvester 60-124	Harvester >124	Harv	CP	All	Harvester <60	Harvester 60-124	Harvester >124	Harv	CP	All	Harvester <60	Harvester 60-124	Harvester >124	Harv	CP	All
W.Aleutians																		
Tot. spec.																		
1990	4	.	.	4	2	6	.	.	.	.	.	.	4	.	.	4	2	6
1991	.	4	.	4	.	4	.	2	.	2	.	2	.	2	.	2	.	2
1992	.	4	.	4	.	4	.	2	.	2	.	2	.	2	.	2	.	2
Bairdi																		
1990	4	.	.	4	2	6	.	.	.	.	.	.	4	.	.	4	2	6
1991	.	2	.	2	.	2	.	1	.	1	.	1	.	1	.	1	.	1
1992	.	2	.	2	.	2	.	1	.	1	.	1	.	1	.	1	.	1
Opilio																		
1991	.	2	.	2	.	2	.	1	.	1	.	1	.	1	.	1	.	1
1992	.	2	.	2	.	2	.	1	.	1	.	1	.	1	.	1	.	1
W.Bering																		
Tot. spec.																		
1990	1	103	30	134	16	150	.	31	4	35	2	37	1	72	26	99	14	113
1991	.	17	23	40	13	53	.	5	2	7	1	8	.	12	21	33	12	45
1992	.	17	23	40	13	53	.	5	2	7	1	8	.	12	21	33	12	45
Bairdi																		
1990	.	8	3	11	4	15	.	3	.	3	.	3	.	5	3	8	4	12
1991	.	6	11	17	2	19	.	4	2	6	.	6	.	2	9	11	2	13
1992	.	6	11	17	2	19	.	4	2	6	.	6	.	2	9	11	2	13
Opilio																		
1990	1	103	30	134	16	150	.	31	4	35	2	37	1	72	26	99	14	113
1991	.	17	23	40	13	53	.	5	2	7	1	8	.	12	21	33	12	45
1992	.	17	23	40	13	53	.	5	2	7	1	8	.	12	21	33	12	45
E.Bering																		
Tot. spec.																		
1990	2	188	39	229	18	247	1	77	6	84	4	88	1	111	33	145	14	159
1991	3	230	57	290	20	310	.	85	12	97	4	101	3	145	45	193	16	209
1992	3	230	57	290	20	310	.	85	12	97	4	101	3	145	45	193	16	209
Bairdi																		
1990	2	187	39	228	18	246	1	77	6	84	4	88	1	110	33	144	14	158
1991	1	229	57	287	20	307	.	84	12	96	4	100	1	145	45	191	16	207
1992	1	229	57	287	20	307	.	84	12	96	4	100	1	145	45	191	16	207
Opilio																		
1990	.	122	31	153	17	170	.	44	5	49	3	52	.	78	26	104	14	118

1991	2	174	55	231	19	250	.	61	11	72	3	75	2	113	44	159	16	175
1992	2	174	55	231	19	250	.	61	11	72	3	75	2	113	44	159	16	175

Table 2 continued -- Number of vessels.

	Any Residence					Alaska					Other states				
	Harvester			Harv	CP	All	Harvester			Harv	CP	All	Harvester			Harv	CP	All
	<60	60- 124	>124				<60	60- 124	>124				<60	60- 124	>124			
King areas																		
Tot. spec.																		
1990	1	190	40	231	20	252	1	77	6	84	4	88	.	113	34	147	16	164
1991	2	229	55	286	14	301	1	86	11	98	4	102	1	143	44	188	10	199
1992	2	229	55	286	14	301	1	86	11	98	4	102	1	143	44	188	10	199
Blue king																		
1990	.	17	10	27	4	31	.	6	1	7	1	8	.	11	9	20	3	23
1991	.	133	35	168	6	175	.	41	9	50	2	52	.	92	26	118	4	123
1992	.	133	35	168	6	175	.	41	9	50	2	52	.	92	26	118	4	123
Brown king																		
1990	.	15	10	25	6	31	.	4	.	4	.	4	.	11	10	21	6	27
1991	.	9	10	19	.	19	.	3	.	3	.	3	.	6	10	16	.	16
1992	.	9	10	19	.	19	.	3	.	3	.	3	.	6	10	16	.	16
Red king																		
1990	1	189	37	227	18	246	1	77	6	84	4	88	.	112	31	143	14	158
1991	2	224	49	275	14	290	1	86	11	98	4	102	1	138	38	177	10	188
1992	2	224	49	275	14	290	1	86	11	98	4	102	1	138	38	177	10	188
Bristol																		
Tot. spec.																		
1990	1	187	36	224	16	240	1	75	6	82	4	86	.	112	30	142	12	154
1991	2	216	48	266	13	280	1	83	11	95	4	99	1	133	37	171	9	181
1992	2	216	48	266	13	280	1	83	11	95	4	99	1	133	37	171	9	181
Red king																		
1990	1	187	36	224	16	240	1	75	6	82	4	86	.	112	30	142	12	154
1991	2	216	48	266	13	280	1	83	11	95	4	99	1	133	37	171	9	181
1992	2	216	48	266	13	280	1	83	11	95	4	99	1	133	37	171	9	181

Table 2 continued -- Number of vessels.

	Any Residence					Alaska			Other states				
	Harvester 60-124	Harvester >124	Harv	CP	All	Harv 60-124	Harv	All	Harvester 60-124	Harvester >124	Harv	CP	All
Dutch													
Tot. spec.													
1990	8	6	14	3	17	1	1	1	7	6	13	3	16
1991	3	7	10	.	10	1	1	1	2	7	9	.	9
1992	3	7	10	.	10	1	1	1	2	7	9	.	9
Brown king													
1990	8	6	14	3	17	1	1	1	7	6	13	3	16
1991	3	7	10	.	10	1	1	1	2	7	9	.	9
1992	3	7	10	.	10	1	1	1	2	7	9	.	9
Pribilof													
Tot. spec.													
1991	1	1	2	.	2	1	1	1	.	1	1	.	1
1992	1	1	2	.	2	1	1	1	.	1	1	.	1
Brown king													
1991	.	1	1	.	1	.	.	.	.	1	1	.	1
1992	.	1	1	.	1	.	.	.	.	1	1	.	1
Red king													
1991	1	.	1	.	1	1	1	1	.	.	.	.	.
1992	1	.	1	.	1	1	1	1	.	.	.	.	.
Adak													
Tot. spec.													
1990	15	11	26	4	30	4	4	4	11	11	22	4	26
1991	16	9	25	1	26	4	4	4	12	9	21	1	22
1992	16	9	25	1	26	4	4	4	12	9	21	1	22
Brown king													
1990	14	10	24	3	27	4	4	4	10	10	20	3	23
1991	8	9	17	.	17	2	2	2	6	9	15	.	15
1992	8	9	17	.	17	2	2	2	6	9	15	.	15
Red king													
1990	5	2	7	2	9	2	2	2	3	2	5	2	7
1991	10	1	11	1	12	3	3	3	7	1	8	1	9
1992	10	1	11	1	12	3	3	3	7	1	8	1	9

Table 2 continued -- Number of vessels.

	Any Residence					Alaska					Other states				
	Harvester 60-124	Harvester >124	Harv	CP	All	Harvester 60-124	Harvester >124	Harv	CP	All	Harvester 60-124	Harvester >124	Harv	CP	All
St.Matthew															
Tot. spec.															
1990	17	10	27	4	31	6	1	7	1	8	11	9	20	3	23
1991	133	35	168	6	174	41	9	50	2	52	92	26	118	4	122
1992	133	35	168	6	174	41	9	50	2	52	92	26	118	4	122
Blue king															
1990	17	10	27	4	31	6	1	7	1	8	11	9	20	3	23
1991	133	35	168	6	174	41	9	50	2	52	92	26	118	4	122
1992	133	35	168	6	174	41	9	50	2	52	92	26	118	4	122
Norton															
Tot. spec.															
1990	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
1991	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
1992	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
Red king															
1990	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
1991	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
1992	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
St.Lawrence															
Tot. spec.															
1991	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
1992	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
Blue king															
1991	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
1992	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1

Source: Data set prepared by council staff.
Note: Totals in these tables are not indicative of crossover within a category since the total includes the unknowns of that category.

Table 3 -- Cumulative number of vessels over 11 catch weight classes (in pounds) catching groundfish by gear, residence, vessel type and area for the year 1992.

All gear and all owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
<10,000	997	73	4	.	.	.	997	73	4	1074	4	1078
<20,000	1092	93	5	.	.	.	1092	93	5	1190	4	1194
<30,000	1134	103	5	.	.	.	1134	103	5	1242	4	1246
<40,000	1186	109	6	.	.	.	1186	109	6	1301	4	1305
<50,000	1215	115	6	.	.	.	1215	115	6	1336	4	1340
<60,000	1244	120	6	.	.	.	1244	120	6	1370	4	1374
<70,000	1269	122	6	.	.	.	1269	122	6	1397	5	1402
<80,000	1291	124	6	.	.	.	1291	124	6	1421	7	1428
<90,000	1304	127	6	.	.	.	1304	127	6	1437	8	1445
<100,000	1309	129	6	.	.	.	1309	129	7	1445	9	1454
Any weight	1430	275	19	4	16	1	1434	305	28	1767	149	1918
BSAI												
<10,000	45	26	3	.	.	.	45	26	3	74	1	76
<20,000	56	34	3	.	.	.	56	34	3	93	1	95
<30,000	63	38	3	.	.	.	63	38	3	104	1	106
<40,000	67	41	4	.	.	.	67	41	4	112	1	114
<50,000	68	46	4	.	.	.	68	46	4	118	2	121
<60,000	70	47	4	.	.	.	70	47	4	121	2	124
<70,000	72	48	4	.	.	.	72	48	4	124	3	128
<80,000	72	49	4	.	.	.	72	49	4	125	4	130
<90,000	72	50	4	.	.	.	72	50	4	126	4	131
<100,000	72	51	4	.	.	.	72	51	4	127	4	132
Any weight	80	129	17	4	16	1	84	159	25	268	139	409
Gulf												
<10,000	992	74	3	.	.	.	992	74	3	1069	7	1076
<20,000	1086	92	4	.	.	.	1086	92	4	1182	8	1190
<30,000	1125	97	4	.	.	.	1125	97	4	1226	9	1235
<40,000	1172	101	4	.	.	.	1172	101	4	1277	10	1287
<50,000	1202	106	4	.	.	.	1202	106	4	1312	10	1322
<60,000	1228	110	4	.	.	.	1228	110	4	1342	11	1353
<70,000	1250	113	4	.	.	.	1250	113	4	1367	11	1378
<80,000	1271	115	4	.	.	.	1271	115	4	1390	15	1405
<90,000	1284	119	4	.	.	.	1284	119	4	1407	17	1424
<100,000	1289	119	4	.	.	.	1289	119	4	1412	19	1431
Any weight	1404	241	9	.	2	.	1404	256	16	1676	93	1770

Table 3 continued -- Cumulative number of vessels.

All gear and Alaska owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
<10,000	829	43	.	.	.	.	829	43	.	873	2	875
<20,000	909	52	.	.	.	.	909	52	.	963	2	965
<30,000	947	54	.	.	.	.	947	54	.	1003	2	1005
<40,000	991	59	.	.	.	.	991	59	.	1052	2	1054
<50,000	1015	61	.	.	.	.	1015	61	.	1078	2	1080
<60,000	1040	63	.	.	.	.	1040	63	.	1105	2	1107
<70,000	1061	65	.	.	.	.	1061	65	.	1128	2	[illegible]
<80,000	1083	66	.	.	.	.	1083	66	.	1151	4	1155
<90,000	1094	68	.	.	.	.	1094	68	.	1164	4	1168
<100,000	1098	68	.	.	.	.	1098	68	.	1168	4	1172
Any weight	1197	126	3	4	4	.	1201	136	5	1342	84	1426
BSAI												
<10,000	32	6	.	.	.	.	32	6	.	38	1	39
<20,000	40	8	.	.	.	.	40	8	.	48	1	49
<30,000	45	8	.	.	.	.	45	8	.	53	1	54
<40,000	47	9	.	.	.	.	47	9	.	56	1	57
<50,000	48	10	.	.	.	.	48	10	.	58	2	60
<60,000	49	10	.	.	.	.	49	10	.	59	2	61
<70,000	49	10	.	.	.	.	49	10	.	59	2	61
<80,000	49	10	.	.	.	.	49	10	.	59	2	61
<90,000	49	10	.	.	.	.	49	10	.	59	2	61
<100,000	49	10	.	.	.	.	49	10	.	59	2	61
Any weight	51	28	1	4	4	.	55	38	3	96	78	174
Gulf												
<10,000	822	46	.	.	.	.	822	46	.	869	3	872
<20,000	902	53	.	.	.	.	902	53	.	957	4	961
<30,000	939	56	.	.	.	.	939	56	.	997	5	1002
<40,000	979	59	.	.	.	.	979	59	.	1040	6	1046
<50,000	1006	62	.	.	.	.	1006	62	.	1070	6	1076
<60,000	1029	64	.	.	.	.	1029	64	.	1095	6	1101
<70,000	1049	66	.	.	.	.	1049	66	.	1117	6	1123
<80,000	1070	67	.	.	.	.	1070	67	.	1139	10	1149
<90,000	1081	71	.	.	.	.	1081	71	.	1154	11	1165
<100,000	1085	71	.	.	.	.	1085	71	.	1158	12	1170
Any weight	1181	123	2	.	.	.	1181	128	2	1311	55	1366

Table 3 continued -- Cumulative number of vessels.

All gear and non-Alaska owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
<10,000	148	30	3	.	.	.	148	30	3	181	2	183
<20,000	161	41	3	.	.	.	161	41	3	205	2	207
<30,000	165	49	3	.	.	.	165	49	3	217	2	219
<40,000	172	50	4	.	.	.	172	50	4	226	2	228
<50,000	174	54	4	.	.	.	174	54	4	232	2	234
<60,000	177	57	4	.	.	.	177	57	4	238	2	240
<70,000	180	57	4	.	.	.	180	57	4	241	3	244
<80,000	180	58	4	.	.	.	180	58	4	242	3	245
<90,000	182	59	4	.	.	.	182	59	4	245	4	249
<100,000	182	61	4	.	.	.	182	61	5	248	5	253
Any weight	200	149	16	.	12	1	200	170	25	395	69	465
BSAI												
<10,000	12	20	3	.	.	.	12	20	3	35	.	35
<20,000	15	26	3	.	.	.	15	26	3	44	.	44
<30,000	17	30	3	.	.	.	17	30	3	50	.	50
<40,000	19	32	4	.	.	.	19	32	4	55	.	55
<50,000	19	36	4	.	.	.	19	36	4	59	.	59
<60,000	19	37	4	.	.	.	19	37	4	60	.	60
<70,000	20	38	4	.	.	.	20	38	4	62	1	63
<80,000	20	39	4	.	.	.	20	39	4	63	2	65
<90,000	20	40	4	.	.	.	20	40	4	64	2	66
<100,000	20	41	4	.	.	.	20	41	4	65	2	67
Any weight	23	101	16	.	12	1	23	122	24	169	65	235
Gulf												
<10,000	149	28	2	.	.	.	149	28	2	179	4	183
<20,000	162	39	2	.	.	.	162	39	2	203	4	207
<30,000	164	41	2	.	.	.	164	41	2	207	4	211
<40,000	170	42	2	.	.	.	170	42	2	214	4	218
<50,000	170	44	2	.	.	.	170	44	2	216	4	220
<60,000	173	46	2	.	.	.	173	46	2	221	5	226
<70,000	175	47	2	.	.	.	175	47	2	224	5	229
<80,000	175	48	2	.	.	.	175	48	2	225	5	230
<90,000	177	48	2	.	.	.	177	48	2	227	6	233
<100,000	177	48	2	.	.	.	177	48	2	227	7	234
Any weight	195	118	7	.	2	.	195	128	14	337	38	375

Table 3 continued -- Cumulative number of vessels.

Trawl gear and all owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
<10,000	51	.	.	.	.	.	51	.	.	51	2	53
<20,000	52	.	.	.	.	.	52	.	.	52	2	54
<30,000	53	.	.	.	.	.	53	.	.	53	2	55
<40,000	53	.	.	.	.	.	53	.	.	53	2	55
<50,000	56	.	.	.	.	.	56	.	.	56	2	58
<60,000	58	.	.	.	.	.	58	.	.	58	2	60
<70,000	59	.	.	.	.	.	59	.	.	59	3	62
<80,000	59	.	.	.	.	.	59	.	.	59	3	62
<90,000	60	.	.	.	.	.	60	.	.	60	3	63
<100,000	61	.	.	.	.	.	61	.	.	61	3	64
Any weight	99	77	9	4	16	.	103	102	16	221	61	283
BSAI												
<10,000	2	.	.	.	.	.	2	.	.	2	1	3
<20,000	2	.	.	.	.	.	2	.	.	2	1	3
<30,000	3	.	.	.	.	.	3	.	.	3	1	4
<40,000	3	.	.	.	.	.	3	.	.	3	1	4
<50,000	3	.	.	.	.	.	3	.	.	3	1	4
<60,000	4	1	.	.	.	.	4	1	.	5	1	6
<70,000	5	1	.	.	.	.	5	1	.	6	2	8
<80,000	5	1	.	.	.	.	5	1	.	6	2	8
<90,000	5	1	.	.	.	.	5	1	.	6	2	8
<100,000	5	1	.	.	.	.	5	1	.	6	2	8
Any weight	11	55	9	4	16	.	15	80	16	111	59	171
Gulf												
<10,000	50	.	.	.	.	.	50	.	.	50	1	51
<20,000	51	.	.	.	.	.	51	.	.	51	1	52
<30,000	52	.	.	.	.	.	52	.	.	52	1	53
<40,000	52	.	.	.	.	.	52	.	.	52	1	53
<50,000	55	1	.	.	.	.	55	1	.	56	1	57
<60,000	56	1	.	.	.	.	56	1	.	57	1	58
<70,000	56	1	.	.	.	.	56	1	.	57	1	58
<80,000	56	1	.	.	.	.	56	1	.	57	1	58
<90,000	57	1	.	.	.	.	57	1	.	58	1	59
<100,000	58	1	.	.	.	.	58	1	.	59	2	61
Any weight	93	69	4	.	2	.	93	80	11	184	37	221

Table 3 continued -- Cumulative number of vessels.

Trawl gear and Alaska owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
<10,000	34	.	.	.	.	.	34	.	.	34	1	35
<20,000	34	.	.	.	.	.	34	.	.	34	1	35
<30,000	35	.	.	.	.	.	35	.	.	35	1	36
<40,000	35	.	.	.	.	.	35	.	.	35	1	36
<50,000	36	.	.	.	.	.	36	.	.	36	1	37
<60,000	36	.	.	.	.	.	36	.	.	36	1	37
<70,000	36	.	.	.	.	.	36	.	.	36	1	37
<80,000	36	.	.	.	.	.	36	.	.	36	1	37
<90,000	37	.	.	.	.	.	37	.	.	37	1	38
<100,000	37	.	.	.	.	.	37	.	.	37	1	38
Any weight	60	19	.	4	4	.	64	28	2	94	35	129
BSAI												
<10,000	2	.	.	.	.	.	2	.	.	2	1	3
<20,000	2	.	.	.	.	.	2	.	.	2	1	3
<30,000	3	.	.	.	.	.	3	.	.	3	1	4
<40,000	3	.	.	.	.	.	3	.	.	3	1	4
<50,000	3	.	.	.	.	.	3	.	.	3	1	4
<60,000	3	.	.	.	.	.	3	.	.	3	1	4
<70,000	3	.	.	.	.	.	3	.	.	3	1	4
<80,000	3	.	.	.	.	.	3	.	.	3	1	4
<90,000	3	.	.	.	.	.	3	.	.	3	1	4
<100,000	3	.	.	.	.	.	3	.	.	3	1	4
Any weight	3	9	.	4	4	.	7	18	2	27	35	62
Gulf												
<10,000	33	.	.	.	.	.	33	.	.	33	.	33
<20,000	33	.	.	.	.	.	33	.	.	33	.	33
<30,000	34	.	.	.	.	.	34	.	.	34	.	34
<40,000	34	.	.	.	.	.	34	.	.	34	.	34
<50,000	35	1	.	.	.	.	35	1	.	36	.	36
<60,000	35	1	.	.	.	.	35	1	.	36	.	36
<70,000	35	1	.	.	.	.	35	1	.	36	.	36
<80,000	35	1	.	.	.	.	35	1	.	36	.	36
<90,000	36	1	.	.	.	.	36	1	.	37	.	37
<100,000	36	1	.	.	.	.	36	1	.	37	1	38
Any weight	59	19	.	.	.	.	59	23	.	82	23	105

Table 3 continued -- Cumulative number of vessels.

Trawl gear and non-Alaska owners

	Harvesters In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	At sea >124	Total <60	Total 60-124	Total >124	Harv	CP	All
All Alaska												
<10,000	14	.	.	.	.	.	14	.	.	14	1	15
<20,000	14	.	.	.	.	.	14	.	.	14	1	15
<30,000	14	.	.	.	.	.	14	.	.	14	1	15
<40,000	14	.	.	.	.	.	14	.	.	14	1	15
<50,000	14	.	.	.	.	.	14	.	.	14	1	15
<60,000	15	.	.	.	.	.	15	.	.	15	1	16
<70,000	15	.	.	.	.	.	15	.	.	15	2	17
<80,000	15	.	.	.	.	.	15	.	.	15	2	17
<90,000	15	.	.	.	.	.	15	.	.	15	2	17
<100,000	15	.	.	.	.	.	15	.	.	15	2	17
Any weight	26	58	9	.	12	.	26	75	16	117	30	148
BSAI												
<10,000	.	.	.	.	.	.	.	.	.	.	.	.
<20,000	.	.	.	.	.	.	.	.	.	.	.	.
<30,000	.	.	.	.	.	.	.	.	.	.	.	.
<40,000	.	.	.	.	.	.	.	.	.	.	.	.
<50,000	.	.	.	.	.	.	.	.	.	.	.	.
<60,000	.	1	.	.	.	.	.	1	.	1	.	1
<70,000	.	1	.	.	.	.	.	1	.	1	1	2
<80,000	.	1	.	.	.	.	.	1	.	1	1	2
<90,000	.	1	.	.	.	.	.	1	.	1	1	2
<100,000	.	1	.	.	.	.	.	1	.	1	1	2
Any weight	3	46	9	.	12	.	3	63	16	82	28	111
Gulf												
<10,000	14	.	.	.	.	.	14	.	.	14	1	15
<20,000	14	.	.	.	.	.	14	.	.	14	1	15
<30,000	14	.	.	.	.	.	14	.	.	14	1	15
<40,000	14	.	.	.	.	.	14	.	.	14	1	15
<50,000	14	.	.	.	.	.	14	.	.	14	1	15
<60,000	15	.	.	.	.	.	15	.	.	15	1	16
<70,000	15	.	.	.	.	.	15	.	.	15	1	16
<80,000	15	.	.	.	.	.	15	.	.	15	1	16
<90,000	15	.	.	.	.	.	15	.	.	15	1	16
<100,000	15	.	.	.	.	.	15	.	.	15	1	16
Any weight	26	50	4	.	2	.	26	57	11	94	14	108

Table 3 continued -- Cumulative number of vessels.

Other gear and all owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
<10,000	862	68	3	.	.	.	862	68	3	933	2	935
<20,000	941	87	4	.	.	.	941	87	4	1032	2	1034
<30,000	974	96	4	.	.	.	974	96	4	1074	2	1076
<40,000	1014	102	5	.	.	.	1014	102	5	1121	2	1123
<50,000	1034	107	5	.	.	.	1034	107	5	1146	2	1148
<60,000	1056	112	5	.	.	.	1056	112	5	1173	2	1175
<70,000	1070	114	5	.	.	.	1070	114	5	1189	2	1191
<80,000	1087	116	5	.	.	.	1087	116	5	1208	4	1212
<90,000	1098	119	5	.	.	.	1098	119	5	1222	5	1227
<100,000	1100	120	5	.	.	.	1100	120	6	1226	6	1232
Any weight	1139	154	8	.	.	1	1139	154	10	1303	68	1371
BSAI												
<10,000	39	23	2	.	.	.	39	23	2	64	.	64
<20,000	47	30	2	.	.	.	47	30	2	79	.	79
<30,000	51	34	2	.	.	.	51	34	2	87	.	87
<40,000	54	37	3	.	.	.	54	37	3	94	.	94
<50,000	55	41	3	.	.	.	55	41	3	99	1	100
<60,000	56	41	3	.	.	.	56	41	3	100	1	101
<70,000	57	42	3	.	.	.	57	42	3	102	1	103
<80,000	57	43	3	.	.	.	57	43	3	103	2	105
<90,000	57	44	3	.	.	.	57	44	3	104	2	106
<100,000	57	44	3	.	.	.	57	44	3	104	2	106
Any weight	57	54	6	.	.	1	57	54	7	118	61	179
Gulf												
<10,000	855	70	.	.	.	.	855	70	.	927	6	933
<20,000	931	87	.	.	.	.	931	87	.	1021	7	1028
<30,000	963	91	.	.	.	.	963	91	.	1057	8	1065
<40,000	999	95	.	.	.	.	999	95	.	1097	9	1106
<50,000	1021	99	.	.	.	.	1021	99	.	1123	9	1132
<60,000	1041	103	.	.	.	.	1041	103	.	1147	10	1157
<70,000	1053	105	.	.	.	.	1053	105	.	1161	10	1171
<80,000	1069	107	.	.	.	.	1069	107	.	1179	13	1192
<90,000	1080	109	.	.	.	.	1080	109	.	1192	15	1207
<100,000	1082	109	.	.	.	.	1082	109	.	1194	16	1210
Any weight	1120	131	3	.	.	.	1120	131	3	1254	41	1295

Table 3 continued -- Cumulative number of vessels.

Other gear and Alaska owners

	Harvesters									Harv	CP	All
	In shore			At sea			Total					
	<60	60-124	>124	<60	60-124	>124	<60	60-124	>124			
All Alaska												
<10,000	717	40	.	.	.	.	717	40	.	758	1	759
<20,000	782	48	.	.	.	.	782	48	.	832	1	833
<30,000	811	49	.	.	.	.	811	49	.	862	1	863
<40,000	843	54	.	.	.	.	843	54	.	899	1	900
<50,000	861	56	.	.	.	.	861	56	.	919	1	920
<60,000	881	58	.	.	.	.	881	58	.	941	1	942
<70,000	892	60	.	.	.	.	892	60	.	954	1	955
<80,000	909	61	.	.	.	.	909	61	.	972	3	975
<90,000	918	63	.	.	.	.	918	63	.	983	3	986
<100,000	920	63	.	.	.	.	920	63	.	985	3	988
Any weight	954	78	3	.	.	.	954	78	3	1035	34	1069
BSAI												
<10,000	26	4	.	.	.	.	26	4	.	30	.	30
<20,000	31	5	.	.	.	.	31	5	.	36	.	36
<30,000	33	5	.	.	.	.	33	5	.	38	.	38
<40,000	35	6	.	.	.	.	35	6	.	41	.	41
<50,000	36	7	.	.	.	.	36	7	.	43	1	44
<60,000	37	7	.	.	.	.	37	7	.	44	1	45
<70,000	37	7	.	.	.	.	37	7	.	44	1	45
<80,000	37	7	.	.	.	.	37	7	.	44	1	45
<90,000	37	7	.	.	.	.	37	7	.	44	1	45
<100,000	37	7	.	.	.	.	37	7	.	44	1	45
Any weight	37	10	1	.	.	.	37	10	1	48	29	77
Gulf												
<10,000	708	44	.	.	.	.	708	44	.	753	3	756
<20,000	772	50	.	.	.	.	772	50	.	824	4	828
<30,000	802	52	.	.	.	.	802	52	.	856	5	861
<40,000	831	55	.	.	.	.	831	55	.	888	6	894
<50,000	852	57	.	.	.	.	852	57	.	911	6	917
<60,000	870	59	.	.	.	.	870	59	.	931	6	937
<70,000	880	61	.	.	.	.	880	61	.	943	6	949
<80,000	896	62	.	.	.	.	896	62	.	960	9	969
<90,000	905	64	.	.	.	.	905	64	.	971	10	981
<100,000	907	64	.	.	.	.	907	64	.	973	10	983
Any weight	940	76	2	.	.	.	940	76	2	1018	21	1039

Table 3 continued -- Cumulative number of vessels.

Other gear and non-Alaska owners

	Harvesters In shore <60	In shore 60-124	In shore >124	At sea <60	At sea 60-124	At sea >124	Total <60	Total 60-124	Total >124	Harv	CP	All
All Alaska												
<10,000	128	28	.	.	.	.	128	28	2	158	1	159
<20,000	141	39	.	.	.	.	141	39	2	182	1	183
<30,000	145	47	.	.	.	.	145	47	2	194	1	195
<40,000	152	48	.	.	.	.	152	48	3	203	1	204
<50,000	153	51	.	.	.	.	153	51	3	207	1	208
<60,000	155	54	.	.	.	.	155	54	3	212	1	213
<70,000	158	54	.	.	.	.	158	54	3	215	1	216
<80,000	158	55	.	.	.	.	158	55	3	216	1	217
<90,000	160	56	.	.	.	.	160	56	3	219	2	221
<100,000	160	57	.	.	.	.	160	57	4	221	3	224
Any weight	165	76	5	.	.	1	165	76	7	248	34	282
BSAI												
<10,000	12	19	.	.	.	.	12	19	.	33	.	33
<20,000	15	25	.	.	.	.	15	25	.	42	.	42
<30,000	.	29	.	.	.	.	.	29	.	48	.	48
<40,000	.	31	.	.	.	.	.	31	.	52	.	52
<50,000	.	34	.	.	.	.	.	34	.	55	.	55
<60,000	.	34	.	.	.	.	.	34	.	55	.	55
<70,000	.	35	.	.	.	.	.	35	.	57	.	57
<80,000	.	36	.	.	.	.	.	36	.	58	1	59
<90,000	.	37	.	.	.	.	.	37	.	59	1	60
<100,000	.	37	.	.	.	.	.	37	.	59	1	60
Any weight	19	44	5	.	.	1	19	44	6	69	32	101
Gulf												
<10,000	129	26	.	.	.	.	129	26	.	156	3	159
<20,000	141	37	.	.	.	.	141	37	.	179	3	182
<30,000	143	39	.	.	.	.	143	39	.	183	3	186
<40,000	149	40	.	.	.	.	149	40	.	190	3	193
<50,000	149	42	.	.	.	.	149	42	.	192	3	195
<60,000	151	44	.	.	.	.	151	44	.	196	4	200
<70,000	153	44	.	.	.	.	153	44	.	198	4	202
<80,000	153	45	.	.	.	.	153	45	.	199	4	203
<90,000	155	45	.	.	.	.	155	45	.	201	5	206
<100,000	155	45	.	.	.	.	155	45	.	201	6	207
Any weight	160	55	1	.	.	.	160	55	1	216	20	236

Source: Data set prepared by council staff.
Note: Totals in these tables are not indicative of crossover within a category since the total includes the unknowns of that category.

Table 4 -- Cumulative number of vessels over 11 catch weight classes (in pounds) catching crab by residence, vessel type and species for the year 1992.

	Any Residence						Alaska						Other states					
	Harvesters			Harv	CP	All	Harvesters			Harv	CP	All	Harvesters			Harv	CP	All
	<60	60-124	>124				<60	60-124	>124				<60	60-124	>124			
King crab areas																		
<10,000		15	.	16	.	16		10	.	11	.	11	.	5	.	5	.	5
<20,000		50	2	53	.	53		29	.	30	.	30	.	21	2	23	.	23
<30,000		101	10	113	1	114		53	2	56	.	56		48	8	57	1	58
<40,000		137	20	159	7	166		60	4	65	3	68		77	16	94	4	98
<50,000		180	27	209	11	220		74	7	82		85		106	20	127	8	135
<60,000		204	36	242	11	253		80		90		93		124	27	152		160
<70,000		213	40	255	13	268		83		93		97		130	31	162		171
<80,000		216	43	261	13	274		83		93		97		133	34	168		177
<90,000		219	44	265	13	278		83		94		98		136	34	171		180
<100,000		221	45	268	14	283		83		94		98		138	35	174		185
Any weight	2	229	55	286	14	301	1	86	11	98	4	102	1	143	44	188	10	199
Tanner crab areas																		
<10,000		5	.	6	.	6	.	3	.	3	.	3		2	.	3	.	3
<20,000		13	.	14	.	14	.	8	.	8	.	8		5	.	6	.	6
<30,000	3	20	.	23	.	23		12	.	13	.	13		8	.	10	.	10
<40,000		28	.	31	.	31		14	.	15	.	15		14	.	16	.	16
<50,000		40	.	43	.	43		19	.	20	.	20		21	.	23	.	23
<60,000		46	.	50	.	50		21	.	23	.	23		25	.	27	.	27
<70,000		50	1	55	.	55		23	.	25	.	25		27	1	30	.	30
<80,000		52	1	57	.	57		24	.	26	.	26		28	1	31	.	31
<90,000		53	1	58	.	58		25	.	27	.	27		28	1	31	.	31
<100,000		53	2	59	.	59		25	1	28	.	28		28	1	31	.	31
Any weight	5	231	57	293	20	313	2	86	12	100	4	104	3	145	45	193	16	209

Source: Data set prepared by council staff.
Note: Totals in these tables are not indicative of crossover within a category since the total includes the unknowns of that category.

Table 5 Mean, minimum and maximum vessel lengths by year, gear (longline, pot, trawl, other or multiple), mode of operation (catch for onshore or at-sea processing or both), and vessel class (<60', 60-124', >124' harvesting vessel and catcher/processor vessel), 1990-92.

Yr	Gear	Mode	Class	Mean	Min	Max
90	Longline	Both	C/P	78	48	141
90	Longline	Onshore	60-124'	70	60	114
90	Longline	Onshore	<60'	38	13	63
90	Longline	Onshore	>124'	134	134	134
90	Longline	At-sea	C/P	143	94	180
90	Pot	Both	C/P	158	98	180
90	Pot	Onshore	60-124'	85	58	114
90	Pot	Onshore	<60'	43	15	54
90	Pot	Onshore	>124'	142	127	166
90	Pot	At-sea	C/P	155	154	156
90	Trawl	Both	60-124'	94	66	125
90	Trawl	Both	>124'	168	126	193
90	Trawl	Both	C/P	157	147	166
90	Trawl	Onshore	60-124'	94	60	132
90	Trawl	Onshore	<60'	39	15	130
90	Trawl	Onshore	>124'	145	125	166
90	Trawl	At-sea	60-124'	104	86	122
90	Trawl	At-sea	C/P	186	79	302
90	Other	Onshore	<60'	37	18	50
90	Other	Onshore	>124'	150	150	150
90	Multiple	Both	60-124'	110	110	110
90	Multiple	Both	<60'	54	54	54
90	Multiple	Onshore	60-124'	80	64	122
90	Multiple	Onshore	<60'	39	21	58
90	Multiple	Onshore	>124'	150	134	165

Table 5 -- Continued

Yr	Gear	Mode	Class	Mean	Min	Max
91	Longline	Both	C/P	105	48	196
91	Longline	Onshore	60-124'	69	60	106
91	Longline	Onshore	<60'	39	14	59
91	Longline	At-sea	C/P	133	77	180
91	Pot	Both	C/P	168	150	180
91	Pot	Onshore	60-124'	84	60	124
91	Pot	Onshore	<60'	47	26	59
91	Pot	Onshore	>124'	166	166	166
91	Pot	At-sea	60-124'	111	111	111
91	Pot	At-sea	C/P	161	156	165
91	Trawl	Both	60-124'	95	73	125
91	Trawl	Both	>124'	179	165	193
91	Trawl	Both	C/P	181	104	276
91	Trawl	Onshore	60-124'	92	60	148
91	Trawl	Onshore	<60'	48	15	58
91	Trawl	Onshore	>124'	144	130	166
91	Trawl	At-sea	60-124'	103	84	122
91	Trawl	At-sea	C/P	225	90	376
91	Other	Onshore	<60'	34	16	58
91	Multiple	Both	60-124'	93	66	132
91	Multiple	Both	>124'	126	126	126
91	Multiple	Both	C/P	167	64	270
91	Multiple	Onshore	60-124'	79	60	117
91	Multiple	Onshore	<60'	42	15	59
91	Multiple	Onshore	>124'	125	125	125
91	Multiple	At-sea	C/P	144	94	185

Table 5 -- Continued

Yr	Gear	Mode	Class	Mean	Min	Max
92	Longline	Both	C/P	122	52	220
92	Longline	Onshore	60-124'	72	59	114
92	Longline	Onshore	<60'	40	14	59
92	Longline	At-sea	C/P	134	77	180
92	Pot	Both	>124'	161	161	161
92	Pot	Both	C/P	162	86	190
92	Pot	Onshore	60-124'	87	60	123
92	Pot	Onshore	<60'	46	26	69
92	Pot	Onshore	>124'	149	125	166
92	Pot	At-sea	>124'	156	156	156
92	Pot	At-sea	C/P	131	105	165
92	Trawl			167	167	167
92	Trawl	Both	60-124'	94	73	120
92	Trawl	Both	>124'	168	135	193
92	Trawl	Both	C/P	171	103	276
92	Trawl	Onshore	60-124'	91	60	124
92	Trawl	Onshore	<60'	42	14	58
92	Trawl	Onshore	>124'	150	125	180
92	Trawl	At-sea	60-124'	104	86	123
92	Trawl	At-sea	C/P	229	79	376
92	Other	Onshore	<60'	36	18	54
92	Multiple	Both	60-124'	98	76	125
92	Multiple	Both	C/P	129	78	174
92	Multiple	Onshore	60-124'	80	60	124
92	Multiple	Onshore	<60'	43	20	166
92	Multiple	Onshore	>124'	144	132	156
92	Multiple	At-sea	C/P	166	82	236

Source: Data set prepared by council staff.

Table 6 Mean, minimum and maximum vessel lengths by year, and vessel class (<60', 60-124', >124' harvesting vessel and catcher/processor vessel), BSAI crab fisheries, 1990-92.

Yr	Gear	Class	Mean	Min	Max
90	Pot	60-124'	95	62	125
90	Pot	<60'	40	17	50
90	Pot	>124'	152	104	212
90	Pot	C/P	141	83	180
91	Pot	60-124'	97	65	132
91	Pot	<60'	46	46	46
91	Pot	>124'	153	104	212
91	Pot	C/P	150	86	180
92	Pot	60-124'	97	65	125
92	Pot	<60'	38	23	46
92	Pot	>124'	153	124	212
92	Pot	C/P	153	86	180

Source: Data set prepared by council staff.

Table 7 Percentage of catch accounted for by the low, mid and top one-third of the vessels by vessel class in the BSAI and GOA groundfish fisheries, 1992.

(the percents for each gear add to 100).

	<60'			60-124'			>124'			C/P		
	Low	Mid	Top	Low	Mid	Top	Low	Mid	Top	Low	Mid	Top
BSAI												
Groundfish												
Longline	.0	.0	.2	.0	.1	.3	.	.	.	4.7	29.1	65.5
Pot	.	.	.	.1	1.6	20.7	.	.	.	10.5	21.6	45.5
Trawl	.0	.0	.2	1.4	5.1	13.8	1.2	2.7	7.0	7.1	19.9	41.4
Mult. gears	.0	.0	.8	.2	1.3	17.9	.	.	.	3.8	19.9	56.0
GOA												
Groundfish												
Longline	.1	1.3	32.4	.1	.5	6.6	.	.	.	1.0	8.6	49.5
Pot	1.2	9.1	38.6	3.7	10.5	36.9	.	.	.	.	.	.
Trawl	.0	.3	6.8	3.0	11.3	40.5	.	.	.	3.0	6.8	28.2
Other gear	.7	4.8	94.5	.	.	.	.	.	.	.	.	.
Mult. gears	.0	1.2	25.1	1.1	8.0	35.4	.	.	.	1.6	4.7	22.8

(the percents over all gear groups add to 100).

	<60'			60-124'			>124'			C/P		
	Low	Mid	Top	Low	Mid	Top	Low	Mid	Top	Low	Mid	Top
BSAI												
Groundfish												
Longline	.0	.0	.0	.0	.0	.0	.	.	.	.3	1.7	3.8
Pot	.	.	.	.0	.0	.2	.	.	.	.1	.2	.3
Trawl	.0	.0	.2	1.2	4.4	11.8	1.0	2.4	6.0	6.1	17.1	35.5
Mult. gears	.0	.0	.1	.0	.1	1.4	.	.	.	.3	1.5	4.4
GOA												
Groundfish												
Longline	.0	.1	2.5	.0	.0	.5	.	.	.	.1	.7	3.8
Pot	.0	.2	.8	.1	.2	.8	.	.	.	.	.	.
Trawl	.0	.2	4.7	2.1	7.8	27.7	.	.	.	2.0	4.6	19.3
Other gear	.0	.0	.1	.	.	.	.	.	.	.	.	.
Mult. gears	.0	.3	5.5	.2	1.7	7.7	.	.	.	.4	1.0	5.0

Table 7 Continued.

Note: The differences in the percentage of catch accounted for by vessels in any two performance groups for a given vessel class provides an estimate of the percentage change in harvesting capacity that would occur if the vessels in one group ere replaced by another. For example, if the mid performance vessels were replaced by top performance vessels in the 60-124' trawl vessel class in the BSAI, BSAI trawl harvesting capacity could increase by 8.7% (13.8% - 5.1%).

Table 8 Percentage of catch accounted for by the low, mid and top one-third of the vessels by vessel class in the BSAI and GOA crab fisheries, 1992, (the percents for each row add to 100).

	<60'			60-124'			>124'			C/P		
	Low	Mid	Top	Low	Mid	Top	Low	Mid	Top	Low	Mid	Top
W.Bering												
Opilio	.	.	.	1.7	6.6	12.2	4.8	15.4	39.9	.5	3.6	15.3
E.Bering												
Bairdi	.	.	.	6.6	19.9	41.2	2.6	7.1	12.7	.9	2.7	6.2
Opilio	.	.	.	9.2	21.3	32.7	5.0	8.7	12.6	2.5	3.3	4.6
St.Matthew												
Blue king	.	.	.	11.2	23.3	42.0	3.8	7.5	12.2	.	.	.
Bristol												
Red king	.	.	.	11.9	22.6	37.5	4.1	6.6	11.1	1.6	2.1	2.5

Note: The differences in the percentage of catch accounted for by vessels in any two performance groups for a given vessel class provides an estimate of the percentage change in harvesting capacity that would occur if the vessels in one group ere replaced by another. For example, if the mid performance vessels were replaced by top performance vessels in the 60-124' vessel class in the Bristol Bay red king crab fishery, harvesting capacity could increase by 14.9% (37.5% - 22.6%).

****

These estimates are only approximations if the number of vessels in a vessel class is not an integer multiple of 3. Because in that case, the vessels cannot be split into three groups of equal size. The extra one or two vessels were always put in the low and mid performance groups. Therefore, the difference between the percentages of catch accounted for by the mid and top groups will understate the potential increase in harvesting capacity if the vessels in the mid group were replaced by vessels with catch similar to that of the vessels in the top group.

APPENDIX III

Net National Benefits as Assessed for the Moratorium

Net National Benefits

Impacts on Consumers

The moratorium is not expected to have significant impacts on the consumer of affected seafood products, although there may be some implicit benefits gained by stabilizing harvest activities. The moratorium does not impact the total allowable catch available to the market, nor the product form and price to consumers. It is anticipated that a resolution of the underlying excess capacity problems would provide the quality and quantity of seafood products flowing to the market, but the moratorium is intended to prevent the problem from worsening, rather than solving the matter. Similarly, a more efficiently sized fleet might be capable of lower cost harvest, and could pass along these economies to the consumer in terms of reduced price, but the moratorium by itself does not achieve less costly production. The production and market environment in Council-managed fisheries might be stabilized through the imposition of a vessel moratorium, and consumers would be expected to benefit from these more orderly conditions.

Impacts on Producers

Net benefits could potentially be effected by the imposition of a moratorium in two ways: through preventing investment in unnecessary capital and through preventing deterioration in the operating profitability of the fleet. Considering the latter issue, there would appear to be very few reasons to expect that fleet size under any of the moratorium options would differ significantly from what would prevail under continued open access management. The moratorium options may provide an effective limit for the largest vessels, but for most of the fleet, there would be a considerable pool of currently unused qualifying vessels, which could be brought back into service in the moratorium fisheries. Historically, the largest annual increase in the number of catcher boats was roughly 900 boats, between 1982 and 1983. Even if a similar increase were assumed for both 1992 and 1993--representing an unprecedented 3-year increase--the actual participating fleet would still be smaller than the qualifying fleet under the most restrictive moratorium option, M3. Therefore, the constraint posed by the moratorium would not appear to be binding for most sizes of vessels. Certainly, as growth in the size of the active fleet under a moratorium approached the size of the qualifying fleet, it would become more difficult for a would-be entrant to secure a qualifying vessel. However, the active fleet would have to increase substantially in many size classes in order to reach this point. There are no other apparent reasons why, below the level of the M3 constraint, fleet size would differ between any of the moratorium options and continued open access. Economic forces which would lead to rapid growth of the fleet under a moratorium, would have a similar effect under open access. Therefore, it is not anticipated that any significant change in net national benefits would occur within the operational aspects of the fishery as a result of any of the moratorium options.

Individual and aggregate national impacts arising from overcapitalization can be characterized by considering the effects of one additional entrant into the fleet of representative fisheries. Cost and revenue budgets developed in 1990 for various components of the fleet are available to estimate income statements for specific classes of vessels, based on a representative harvest mix at prevailing market prices. Four representative vessel fleets were selected for this purpose; Southeast (Sitka) salmon/halibut skiffs, Kodiak longliners, GOA combination longline-trawlers, and large BSAI surimi factory trawlers. The impact of one additional vessel added to the existing size fleet in each fishery was simulated in order to estimate the impact on individual vessel net returns, as well as the aggregated net returns for the fleet of vessels participating in that particular fishery. These impacts are shown in Table 4.1.

Table 4.1 Estimated Impacts on Individual and Fleet Net Returns Due to the Entry of One Additional Vessel; by Selected Fisheries

Vessel Class	Fleet Size	Capital Investment Represented	Change in Individual Net Returns	Change in Fleet Net Returns	% Change in Fleet Net Returns
Sitka Halibut Skiff	50	$35,000	-$271	-$5,048	-1.2%
Kodiak Longliner	80	$375,000	-$1,340	-$64,333	-1.8%
Combination Trawler	22	$600,000	-$7,940	-$90,009	-4.4%
BSAI Surimi Factory Trawler	12	$25,000,000	-$526,065	-$3,890,739	-10.9%

For example, in a fleet of 80 Kodiak longline vessels targeting halibut, sablefish, and Pacific cod, the addition of one newly capitalized boat is estimated to reduce average per vessel net returns by $1,340 annually. By itself, the reduction in average returns need not be detrimental to the nation if it is associated with increased efficiency or output of the fleet. Presumably, new entry will stop as net returns fall to zero. The aggregate impact, however, of additional vessels when the fishery is already overcapitalized is to spread a fixed revenue base over higher and higher costs. The excess capital costs in the industry detract from the potential economic rents available to fishermen. This effect is illustrated in the change in fleet net returns, where the aggregated net revenues of 81 longliners are $64,333 less than the net returns obtained from the existing 80 vessel fleet.[1] The addition of one vessel to the designated Kodiak longliner fleet reduces net fleet returns by 1.8%, with no change in output or total revenues, given a fixed TAC or quota.

In many fisheries, the impact of additional vessels will spill over into other vessel categories, as well. The net national impact on producers due to additional vessels added to various fisheries will depend upon the existing level of capitalization, the size and cost structure of the fleet, and the capital costs represented by the additional vessel. From Table 4.1, the estimated impacts on fleet costs from the addition of a very large, capital-intensive vessel such as the surimi factory trawler operating in a relatively small fleet is much greater than the longliner discussed in the example. In addition to increased net costs due to the entry of new vessels, existing boats within the fleet may be compelled to increase effort and capitalization in order to maintain harvest shares. Such action would lead to even greater net losses to the fleet.

The intent of the moratorium is to prevent the entry of additional vessels, and thereby avert these losses associated with further capital expenditures. The aggregate national magnitude of the potential savings cannot be empirically estimated with reliability in the absence of accurate information about how many vessels of a given capital cost will enter a given fleet. The representative cost estimates in Table 4.1 are

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[1]The addition to capital costs will be proportional to the amount of new capital costs represented by the new entering vessel and the existing fleet. For an existing, twenty year old boat with outdated equipment, capital costs are likely to be much less than for a brand new vessel designed and built specifically to enter the fleet. In overcapitalized fisheries, the entry of additional vessels representing new capital investment will impose a greater cost on the nation than do vessels representing prior capital investment (sunk costs).

intended to illustrate the potential cost savings impact of each additional vessel that is restricted from entering the fishery.

There is potential for increased national benefits through discouraging additional investment in either unneeded vessels or capacity enhancements for existing vessels. It is estimated that roughly 700 non-qualifying vessels would enter the fishery each year over the next several years. This number of entrants might be fully or partially offset by vessels exiting the fishery. To the extent that these vessels represent new construction that could be discouraged by a moratorium, a national benefit would accrue. In the extreme, if all "new entrants" under open access were previously-built vessels, the only economic benefit of the moratorium would arise from inhibiting investment for capacity expansion of the qualifying fleet. Given the surplus of small vessels in other fisheries such as salmon, and given the historical interaction of these other fleets with the fisheries included in the moratorium proposal, it would seem reasonable to assume that most of the "new entrants" in the small vessel categories would actually be existing vessels from other fisheries. Furthermore, the likelihood of a "new entrant" being newly constructed would appear to increase with vessel size. Since construction of the largest vessels also represents a much greater drain, per vessel, on the net benefits of the fishery, it is apparent that a major source of benefits from any of the moratorium options will depend upon the extent to which new catcher-processors and other large vessels are kept from entering the fishery. Given the current overcapacity in factory-trawler fisheries and the recent inshore-offshore allocation actions by the Council, it is questionable how many of these vessels would be constructed in the near future for use in the fishery. If 3 new large surimi factory trawlers were not built because of the moratorium, the expected annual national benefit would be in the $12-15 million range. Discouraging the construction of 11 large combination trawlers could save an additional $1 million.

Because of the lack of information on annual vessel improvement expenditures, it is extremely difficult to estimate the national benefit associated with moratorium provisions restricting the upgrading of capacity of qualifying vessels. Across the entire moratorium fleet, the total could range from nothing to millions of dollars, annually. It should be noted, however that the provisions of the moratorium will probably not eliminate all increases in the capacity of qualifying vessels. Individuals are likely to find unregulated ways to increase capacity, or to avoid detection of changes that are prohibited. Unless penalties for violating capacity restrictions create an effective deterrent to such efforts, much of the potential benefit, with regard to the existing fleet, may be lost.

Under provisions of Executive Order 12866, regulatory actions that are estimated to have an annual effect of over $100 million are considered to be a "significant regulation actions." A rough upper estimate of net national impacts can be developed by applying the number of potential entrants times the changes in the respective fleet net returns. This is accomplished by weighting the representative net national impacts presented in Table 4.1 with general projections concerning the number and capitalization of vessels that might be denied entry under a moratorium. As projected in Section 4.1.1, approximately 725 new entrants might be expected in 1993, 90% of them small vessels less than 60 ft, 36 between 60 and 90 ft, and 43 over 90 ft. Under these broad assumptions, the upper limit of net national impacts are estimated to be in the range from $15 to $30 million annually, significantly below the criteria for a major rule. The present discounted value of the lower end of this projected annual net impact ($15 million annually), discounted at 10% over a 4 year moratorium is approximately $50 million.

APPENDIX IV

METHODS OF CONSTRUCTION AND ASSUMPTIONS IN THE GROUNDFISH AND CRAB LICENSE LIMITATION DATA BASES

A data base was designed specifically for the license alternatives developed by the Council, and approved at their January meeting. Because of the Council request to expedite the license limitation analysis, the database contains only those variables necessary for its construction. For example, because gear designations were specifically eliminated by the Council, the data set as constructed does not contain a variable for gear. Various other assumptions were made while building the data base which may impact the number and distribution of licenses issued. Those assumptions will be discussed in this appendix as they pertain to groundfish and crab.

Both data bases were built around the need to provide answers to the questions raised in the five sets of components for the license limitation alternatives. Discussion of the two data base's construction and assumptions will be grouped by these five components. Groundfish will be discussed first in terms of nature of license, license recipients, use restrictions, qualifying period, and minimum landings. Crab will then be discussed by these same five components.

GROUNDFISH

Nature of Licenses - The nature of groundfish licenses contains the species and area information. Species were divided into pollock, Pacific cod, rockfish, flatfish, and other (Table 1). Pollock and Pacific cod are single species. The rockfish category contains all of the rockfish species (except demersal shelf), as well as thornyheads. Demersal shelf rockfish were excluded by the Council during discussions at their January meeting. Flatfish under Council management are all included in the flatfish category. All other groundfish species under Council management not accounted for in the above categories and not managed under IFQs were placed in the "other" category.

Geographic information was separated into the five FMP sub-areas. These sub-areas are the Bering Sea, Aleutian Islands, Western Gulf of Alaska, Central Gulf of Alaska, and Eastern Gulf of Alaska. Data from Weekly Processor Reports (WPR), Domestic Observer Reports and Joint Venture Observer reports were easily transferred to FMP sub-areas. The three digit areas (i.e., 540 for the Aleutian Islands) used by NMFS are easily aggregated into the five FMP sub-areas (Table 2). Areas in the Commercial Fisheries Entry Commission's Condensed Gross Earnings (CGE) files were requested to be translated into NMFS statistical areas. This was accomplished for most fish ticket records from 1984-92 by using the one degree longitude by one-half degree latitude blocks listed in the data those years. Fish ticket data prior to 1984 doesn't contain the longitude/latitude information. Therefore, data for 1978-83 were received in State of Alaska management areas. These areas were then translated into FMP sub-areas according to the areas they best fit into.

License Recipients - Granting licenses to current owners, owners at the time of landing, and permit holders was also studied.

For vessels from the CGE data, i.e., fish ticket landings, current owners were defined as the owner of the vessel at the time of the most recent landing. State of Alaska vessel registration files may have provided more up-to-date information. However, this data was not available to staff in time to complete this analysis. Data sets which may be constructed for implementation of the program, if the program is adopted by the Council and the Secretary of Commerce will probably use the State of Alaska Vessel Registration files. Federal vessel permit files were used to determine the current vessel owner for vessels reported in the WPR and observer data sets.

Owners at the time of landing were listed in the WKP and CGE data. Observer program data for catcher vessels delivering to motherships contained a vessel identifier. That vessel identifier was then linked to the owner of that vessel listed in the Federal Vessel Permit file for that year. Of the owners at the time of landing listed in the data set from June 28, 1989 through June 27, 1992, 216 sold their vessels and are not listed in the current vessel owners list.

Permit holders are only listed on State of Alaska fish ticket data, from which CGE data are generated. CFEC issues permits to commercial fishers and each permit designates which fishery the person is licensed to operate. Vessels which do not fish in state waters or deliver to processors in state waters do not need State of Alaska fishing permits. Vessels processing fish in federal waters report their catch to NMFS and need federal permits. NMFS issues permits to vessels fishing in federal waters. These federal vessel permits are linked to owner rather than skipper. Therefore, only fishers reporting landings through the fish ticket system would receive licenses as permit holders. A total of 3,181 permit holders made landings between June 28, 1989 and June 27, 1992, 1,259 of these permit holders were not listed as current owners during this time period.

Use Restrictions - The Council requested that the analysis data base separate catcher vessels from catcher processors, vessels landing their catch inshore from vessels landing their catch offshore, and vessels by three length categories.

Vessels that both catch and process fish have been required to report the fish they process in WKP from 1986-present. Before 198,6 catcher processors that operated in the EEZ reported their catch in fish tickets. It was possible to distinguish these vessels as catcher processors by their ADF&G number or their federal processor number.

Catcher vessels were defined as all the vessels delivering fish to foreign motherships, domestic motherships, and shoreside processors. In other words, catcher vessels didn't process any of their catch.

Vessel lengths were divided into three categories. The small vessel length category included vessels that were between 0-59 feet in overall length. Medium size vessels had lengths from 60-124 feet in overall length. The largest of the vessel classes included vessels that had lengths of 125 feet or greater.

Vessels delivering their catch for processing inshore were separated from vessels delivering their catch offshore. This distinction was not made on a haul by haul basis. Instead the inshore-offshore field, in the groundfish data base, reflects the mode of operation that catcher vessels used during the last year they were listed in the data. Vessels could be categorized in one of three ways. A catcher vessel delivering its catch only to shoreside plants would have been given an "I" designation. Vessels that delivered catch both to motherships and shoreside plants, during their most recent year of operation in the data, would have been designated as "O". All catcher processors were designated as offshore processors. Catcher vessels that delivered to both motherships and shoreside plants were designated as "B."

Qualifying Period - Six qualifying periods were requested by the Council to be studied. These periods ranged from as early a January 1, 1978, to as late as the date of the final Council decision. Data was only available through 1992 when the analysis began. Four of the qualifying period alternatives ended after 1992. These periods were truncated because the data was not available.

Minimum Landings - The data base contains round pounds and a landings field, aggregated on an annual basis, for each harvesting vessel, species group, and area. Catcher vessels delivering to motherships did not contain information on the number of landings. Catcher processors were considered to have made one landing for each week they were listed in the WKP data. Vessels making deliveries on fish tickets had the number of landings listed. It was difficult to determine the actual number of landings made by a vessel. For example, the CGE data had the number of landings listed on a species by species basis. However, if the catcher vessel landed two different species on the same trip she would have been credited with two trips when those species were aggregated together in the license limitation species groups.

CRAB

Nature of License - The crab data base contains catch information for red king crab, blue king crab, golden king crab, *C. bairdi*, and *C. opilio* (Table 1). All information on crab harvests was derived from CFEC's CGE files.

Area information from the CGE files were translated to the current crab management areas using the Longitude and latitude method outlined under the ground section. Because the areas reported in the CGE files required further division, the assumptions used to subdivide the Bering Sea, area "Q," will be detailed.

If the area listed in the CGE files was "Q" in 1978 and the species listed was red or golden king crab the area was changed to the Pribilof district. If the species was blue king crab and the landing was less than or equal to 40,000 pounds then area was changed to the Pribilof district; however, if the catch was greater than 40,000 pounds the area was changed to St. Matthew. In 1979, the areas were changed in the same manner except the cutoff for blue king crab was lowered to 15,000 pounds. Again in 1980, the same methodology was used for red and golden king crab. Blue king crab in that year was also all assigned to the Pribilof district. From 1981-92 a methodology like that used in 1978 for assigning Bering Sea catch to sub-districts was used except the cutoff point was 20,000 pounds. These assumptions were discussed with ADF&G crab managers.

License Recipients - Only current owners and permit holders were included in the crab data base. These recipients were treated the same as those fishers in the groundfish data base whose catch was reported in the CGE files.

Use Restrictions - Again, these restrictions were treated the same as those fishers in the groundfish data base whose catch was reported in the CGE files, except no inshore-offshore division was included in the crab data base.

Qualifying Period - Only two qualifying periods were studied for crab. The June 28, 1989 through June 27, 1992 time period was complete in the data set. Data for 1993 was not yet available when this analysis began and was not included in the January 1, 1978 through December 31, 1993 alternative.

Minimum Landings - The minimum landings requirements in the crab data base should be accurate. A field in the CGE files contain the number of landings by species for each vessel. Because species were not aggregated no double counting of landings occurred.

Table 1. List of Species in License Limitation Program		
Species Name	Scientific Name	License Limitation Species Group
Pacific cod	Gadus Macrocephalus	Pacific cod
Deep water flatfish		Flatfish
Shallow water flatfish		Flatfish
Flounder	Family Pleuronectidae	Flatfish
Arrowtooth flounder	Atheresthes Stomias	Flatfish
Flathead sole	Hippoglossoides Ellasadon	Flatfish
Rock sole	Lepidopsetta Bilineata	Flatfish
Dover sole	Microstomas Pacificus	Flatfish
Rex sole	Glyptocephalus Zachirus	Flatfish
Butter sole	Isopsetta Isolepsis	Flatfish
Yellowfin sole	Limanda Aspera	Flatfish
English sole	Parophyrys Vetulus	Flatfish
Starry flounder	Platichthys Stellatus	Flatfish
Petrale sole	Eopsetta Jordani	Flatfish
Sand sole	Psettichthys Melanosticus	Flatfish
Alaska flounder	Plaicepleuronectes Quadrituberculatus	Flatfish
Greenland flounder	Reinhardtius Hippoglossoides	Flatfish
Greenstripe rockfish	Sebastes Elongatus	Rockfish
Northern rockfish	Sebastes Polyspinus	Rockfish
Boccacio rockfish	Sebastes Paucispinis	Rockfish
Other rockfish	Sebastes Unspecified	Rockfish
Red rockfish	Genus Sebastodes and Sebastes	Rockfish
Pac ocean perch	Sebastes Alutus	Rockfish
Black rockfish	Sebastes Melanops	Rockfish
Thornyhead (idiot) rockfish	Sebastolobus Species	Rockfish
Unspecified slope rockfish		Rockfish
Rougheye rockfish	Sebastes Aleutianus	Rockfish
Shortraker rockfish	Sebastes Borealis	Rockfish
Dusky rockfish	Sebastes Ciliatus	Rockfish
Yellowtail rockfish	Sebastes Flavidus	Rockfish

Widow rockfish	Sebastes Entomelas	Rockfish
Silvergray rockfish	Sebastes Brevispinis	Rockfish
Redstrip rockfish	Sebastes Proriger	Rockfish
Darkblotched rockfish	Sebastes Crameri	Rockfish
Bullhead,sculpin	Family Cottidae	Other
Coastrange sculpin	Cottus Aleuticus	Other
Slimy sculpin	Cottus Cognatus	Other
Fourhorn sculpin	Myoxocephalus Quadricornis	Other
Prickly sculpin	Cottus Asper	Other
Riffle sculpin	Cottus Gulosus	Other
Sharpchin rockfish	Sebastes Zacentrus	Rockfish
Blue rockfish	Sebastes Mystinus	Rockfish
Unspecified pelagic rckf		Rockfish
Pilchard	Sardinops Sagax	Rockfish
Rougheye/shortraker	NMFS combo of 151 and 152	Rockfish
Northern/sharpchin	NMFS combo of 136 and 166	Rockfish
Rgheye/shortr/north/sharp	Nmfs combo of 151/152/136/166	Rockfish
Yellowmouth rockfish	Sebastes Reedi	Rockfish
Atka mackerel	Pleurogrammus Monopyrtygius	Other
Pollock	Theragra Chalcogrammus	Pollock
Smelt	Family Osmeridae	Other
Longfin smelt	Spirinchus Dilatus	Other
Rainbow smelt	Osmerus Mordax	Other
Pond smelt	Hypomesus Olidus	Other
Surf smelt	Hypomesus Pretiosus	Other
Shark (general)	Order Pleurotremata	Other
Salmon shark	Lamna Ditropis	Other
Spiny dog fish	Squalus Suckleyi	Other
Skates	Family Rajidae	Other
Blackcod (sablefish)	Anoplopoma Fimbria	Other
Octopus	Octopus Dofleini (old 150)	Other
Squid	Loligo Opalescens	Other
Red king	Paralithodes Camtschatica	Red king crab
Blue king	Paralithodes Platypus	Blue king crab

Brown king	Lithodes Aequispina	Golden king crab
Tanner bairdi	Chionoecetes Bairdi	C. Bairdi
Tanner opilio	Chionoecetes Opilio	C. Opilio

Table 2. Area Translation Table for Data Received			
Area Listed in Data Received from State and Federal Sources	Groundfish FMP Sub-Areas	King Crab Areas	Tanner Crab Areas
510	Bering Sea		
511	Bering Sea		
512	Bering Sea		
513	Bering Sea		
514	Bering Sea		
515	Bering Sea		
516	Bering Sea		
517	Bering Sea		
521	Bering Sea		
522	Bering Sea		
530	Bering Sea		
540	Aleutian Islands		
610	Western Gulf		
620	Central Gulf		
621	Central Gulf		
630	Central Gulf		
631	Central Gulf		
640	Eastern Gulf		
650	Eastern Gulf		
680	Eastern Gulf		
?	Unknown		
E	Eastern Gulf		
H	Central Gulf		
J4			J4
J5			J5
J6			J6
J7			J7
J8			J8
K	Central Gulf		
L	Central Gulf		

M	Western Gulf		
O	Western Gulf	Dutch Harbor	
QL	Bering Sea	St. Lawrence	
QM	Bering Sea	St. Matthew	
QN	Bering Sea	Norton Sound	
QP	Bering Sea	Pribilof	
Q	Bering Sea		
R	Aleutian Islands	Adak	
SW	Eastern Gulf		
T	Bering Sea	Bristol Bay	
U	Unknown		
W	Bering Sea		

APPENDIX V

Individual Transferable Pot Quotas

in the BSAI Crab Fisheries

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By

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Introduction

The S[illegible] of Alaska, through its Board of Fisheries (Board) and Department of Fish and Game (ADFG), and the North Pacific Fishery Management Council (Council) manage the commercial king, snow, and Tanner crab fisheries of the Bering Sea and Aleutian Islands (BSAI) under the terms of a cooperative fishery management plan (FMP) approved by the U.S. Secretary of Commerce in June 1989. The FMP incorporates management measures in three different categories. Category one measures are fixed in the FMP and require a plan amendment to change. These include legal gear definitions, permit requirements, federal observer requirements, limited access, individual fishery quotas (IFQs), and individual fishery pot quotas (ITPQs). Category two measures are framework measures in the FMP and can be changed by the state following criteria set out in the FMP. Category three measures may be changed at the discretion of the state and include reporting requirements, gear placement and removal, gear storage, vessel live tank inspections, gear modifications, bycatch limits in crab fisheries, state observer requirements, and other measures.

At its January meeting, the Council requested that a variety of measures for managing the groundfish and crab fisheries be studied for consideration at its planned April meeting. Management measures to be considered included ITPQs, and various other forms of limited entry. Subsequently, the Council staff asked fishery economists at the University of Alaska Fairbanks (UAF) to provide a discussion paper addressing economic aspects of ITPQ programs for the Bering Sea snow crab (*Chinoecetes opilio*) and Bristol Bay red king crab (*Paralithodes camtschaticus*) fisheries.

In the Comprehensive Rationalization Planning for Groundfish and Crab Fisheries off Alaska, the Council stated that their overriding concern regarding management changes is:

> ".... to maintain the health of the marine ecosystem to ensure the long-term conservation and abundance of the groundfish and crab resources. In addition, the Council must address the competing and oftentimes conflicting needs of the domestic fisheries that have developed rapidly under open access, fisheries which have become overcapitalized and mismatched to the finite fisheries resources available."

The Council staff identified a variety of problems as being symptomatic of the intense pressures within the overcapitalized crab fisheries. These problems include:

- Harvesting and processing capacity in excess of that required to utilize the available resource;
- Gear conflict within fisheries where there is overcrowding of fishing gear due to excessive participation and surplus fishing effort on limited grounds;
- Wastage of fishery resources through bycatch, discards, and dead-loss such as with ghost fishing by lost or discarded gear;
- Concerns regarding vessel and crew safety which are often compromised in the race for fish;
- Economic instability within various sectors of the fishing industry, and in fishing communities caused by short and unpredictable fishing seasons or preemption which denies access to nearby fishery resources;
- Inability to provide for long-term, stable fisheries based economies in small economically disadvantaged adjacent coastal communities;
- Inability to achieve long-term sustainable economic benefits to the nation.

ADFG managers have also cited that, in certain crab fisheries, season length must be extended or maintained at levels that permit sufficient time for inseason analysis of fishery performance and setting closure dates.

There are three types of crab fisheries in the Bering Sea which could benefit from various types of effort limitations.

1) Type 1 Fisheries: Fisheries with a Guideline Harvest Level (GHL) so small that without some means to predetermine fishing effort and make estimates of daily catch rates, ADFG has in the past been reluctant to open the fisheries at all. Fisheries of this type include: Norton Sound red king crab, Pribilof Islands blue king crab, and Alaska Peninsula king and Tanner crab.

2) Type 2 Fisheries: High-value, high effort fisheries in which past increases in the number of vessels and pots, combined with moderate GHLs, led to derby-style fishing, short seasons, and difficult inseason management. Fisheries in this category include Bristol Bay red king crab and St. Matthew Island blue king crab. These fisheries face a situation similar to the halibut and blackcod fisheries, where there is so much gear on the ground that remaining within the GHL becomes more and more a matter of chance.

3) Type 3 Fisheries: Fisheries where fast moving ice conditions can result in considerable pot loss, especially when vessels fish more than one load of pots. The Bering Sea snow crab fishery is an example of a type 3 fishery.

These and other concerns led the Board to amend the FMP at its March 1993 meeting, imposing pot limits in the Bering Sea Aleutian Island king, snow, and Tanner crab fisheries. The pot limits varied by fishery, according to specific fisheries characteristics.

This document provides a qualitative discussion of economic considerations regarding implementation of ITPQ programs with respect to the Council's stated goals of: (1) assure the long-term health and productivity of fish stocks and other living marine resources of the North Pacific and Bering Sea ecosystem; (2) support the stability, economic well-being, and the diversity of the seafood industry, and provide for the economic and social needs of the communities dependent on that industry; and (3) efficiently manage the resources within its jurisdiction to reduce bycatch, minimize waste, and improve the utilization of fish resources in order to provide the maximum benefit to present and future generations of fishermen, associated fishing industry sectors, communities, consumers, and the nation as a whole.

Individual Fishery Pot Quota

A variety of gear limitations are currently in effect in Alaska crab fisheries. Attachment one provides ADFG designation of crab fisheries districts and current management measures. Current pot limits in the Bering Sea snow crab and Bristol Bay red king crab fisheries are based on vessel size. Vessels under 125 feet may fish a maximum of 200 pots; vessels equal to or exceeding 125 feet may fish a maximum of 250 pots. For the purposes of this report the fisheries under these pot limits will be considered the status quo.

The researchers were asked to consider the following ITPQ program design. Fishery specific licenses would be allocated to current owners of vessels which recorded at least one landing in the Bristol Bay red king crab fishery, or at least three landings in the Bering Sea snow crab fishery, between June 28, 1989 and June 27, 1992. Each qualified licensee will receive pot quotas (PQs), which represent the initial number of pots they are entitled to fish. The initial number of PQs allocated to vessel owners will equal the maximum number of pots that the vessel qualifies for under the existing status quo pot limit: 200 pots for vessels under 125 feet, and 250 pots for vessels greater than or equal to 125 feet. The PQs will be transferable through market sales.

Two transfer scenarios are to be considered: (1) no transfers between vessel size classes; and (2) unrestricted transfers between vessel classes. Although vessel licenses would be designated as catcher vessels (CV) and catcher-processor vessels (CPs), the PQs will be transferable between CVs and CPs. Finally, gear reduction measures are considered. Gear reduction could be achieved by reducing the pot allowance associated with each PQ. For example, a 10% reduction in total fishery pots could be achieved by announcing that each PQ would give the owner the right to fish 0.90 pots. A 50% reduction could be achieved over a 5-year period through 10% reductions per annum, e.g., a PQ would give the owner the right to fish 0.90 pots in year 1, 0.80 pots in year 2, and so on, continuing through year five, when each PQ would give the owner the right to fish 0.50 pots.

The Florida Spiny Lobster Fishery is the only domestic fishery, of which we aware, currently managed under a ITPQ. Attachments 2 and 3 provide a description and legislation of this ITPQ program. Applicability of the Florida experience to the Alaska crab fisheries is limited due to substantial differences in fishery characteristics and management objectives. For example, the Florida fishery is comprised primarily of numerous small scale operators fishing relatively low cost pots close to their home port. Many of the current participants are part-time fishers, including recreational harvesters who obtain commercial licenses to increase their allowable harvests. Management's objective was to reduce pot crowding, ghost pots, and debris and pollution from the numerous vessels in the fishery. Stock protection is not a concern since stock recruitment has been stable in the past irrespective of the fleet fishing power.

Fishery Characteristics

The fishing power of both the Bristol Bay red king crab and the Bering Sea snow crab fleets dramatically increased in recent years, prior to pot limit implementation. The expanded fleet capacity has interfered with the effectiveness of fishery management in both fisheries. This section documents the changes which have occurred in the fisheries in recent years, beginning with a discussion of the Bristol Bay red king crab fishery, followed by a discussion of Bering Sea snow crab fishery. It was our intention to include more recent data in the description of the fisheries and in the following discussion of ITPQs. Unfortunately, expected fish ticket data did not arrive in time for inclusion.

In the following discussion, crab vessels are divided into two size categories: small vessels (S), classified as vessels under 125 feet; and large vessels (L), classified as vessels equal to, or greater than, 125 feet.

Bristol Bay Red King Crab
Fishery Characteristics

The Bristol Bay red king crab fishery has been the dominant domestic red king crab fishery since the collapse of the Kodiak king crab fishery in the late 1960s. Bristol Bay harvests increased rapidly throughout the 1970s, and peaked at 130 million pounds in 1980. The record statewide catch of 180 million pounds was also harvested that same year. High harvest levels resulted in high revenues for participants. High revenues, in turn, attracted additional participation. Unfortunately, the boom was short lived. Bristol Bay stocks began a precipitous collapse in 1981, and by 1983 the Bristol Bay fishery was closed. Although the Bristol Bay fishery reopened in 1984, harvests have remained comparatively low.

Despite continued low harvests, the Bristol Bay fishery has remained economically lucrative because of high exvessel prices. Consequently, fleet size and pot numbers continued to increase. More fishing power applied to the depressed stock has necessitated shortened seasons.

Table 1 provides aggregate 1980-1992 seasonal data for the Bristol Bay red king crab fishery. The increased fishing intensity documented in Table 1 can be attributed to three factors: fleet expansion; increased vessel size; and an increase in the number of pots per vessel for all vessel sizes. The trend toward fishing additional gear was halted in 1992 by a flat 250 per vessel pot limit. This limit was revoked following the 1992 season, and subsequently replaced with the current pot limit (200 pots for vessels under 125 feet, and 250 pots for vessels 125 feet or more).

Table 2 reports fleet composition for 1986 through 1991. Fleet composition changed, as increasing numbers of large vessels entered the fishery. Between 1986 and 1991 the number of vessels with reported length equal to, or exceeding, 125 feet increased from 15 to 63.

Table 3 documents the pre-pot limit trend of increased pot usage. Large vessels have, on average, fished substantially more pots than small vessels. However, both large and small vessels increased the number of pots fished, from 272 and 189 in 1986, to 394 and 267 in 1991, respectively.

There are several advantages to increasing the number of pots fished. Higher pot numbers permit longer soak times for each pot. In general, optimal soak time in the Bristol Bay king crab fishery prior to pot limit implementation was reported to range from two to three days, varying according to stock conditions. A longer soak time can compensate for low population densities because the pot is able to attract crabs from a broader area. Moreover, additional gear allows pots to be placed at several locations on the fishing grounds. This allows operators to begin fishing in one area, and if fishing becomes unproductive, move to another location where soaked pots are already in place. Thus, an increase in the number of pots improves search efficiency by increasing the probability of locating concentrations of crab. In addition, fishing a large number of pots decreases the necessity of moving pots inseason, which decreases vessel downtime. These benefits of additional pots are particularly advantageous in derby style fisheries, such as the Bristol Bay red king crab fishery.

Table 4 reports average harvests for large and small vessels for the 1986 through 1991 seasons. Large vessels' harvests were significantly higher in all time periods than their small vessel counterparts.

Harvest per vessel is an inadequate measure of the effectiveness of vessel effort, because harvest can be increased by applying additional effort to the fishery. One measure of the actual effectiveness of each unit of effort is the harvest per potlift, referred to as catch per unit effort (CPUE, measured in pounds). The 1986-1991 seasonal average CPUE, by vessel size class, is reported in Table 5. Large vessel CPUEs were higher than those reported for small vessels for all time periods, although, the CPUEs of the two vessel classes were similar in 1988 and 1989.

A final statistic of interest to fishery managers is the number of times individual pots are lifted. Each potlift provides information on current stock abundance. ADFG has determined that sufficient catch information for inseason stock assessment requires that each pot be picked five times, on average (Nippes 1989).[1] Examination of Table 6 reveals that the fishery has not achieved this goal since 1986.

Bering Sea Snow Crab
Fishery Characteristics

The Bering Sea snow crab fishery has recently undergone unprecedented growth to become the largest Alaska crab fishery, in terms of harvest. As recently as 1977-78, the harvest of snow crab was limited to incidental catch in the harvest of the target species, Tanner crab (*C. bairdi*). Declines in the Tanner crab stocks led to a transfer of effort to the snow crab fishery. Increasing snow crab stocks in recent years have resulted in harvests of over 100 million pounds since 1987. In 1991 and 1992, harvests exceeded 300 million pounds.

[1]Source: Nippes, William E. "Gear Limitations for Better Management". ADFG Westward Region, 211 Mission Road, Kodiak, AK 99615. March, 1989.

Harvests, although still high in relationship to historical levels, have declined over the past two seasons to 220 million pounds in 1993 and an expected 125 million pounds in the current 1994 season.

In contrast to the Bristol Bay red king crab fishery, the Bering Sea snow crab fishery has been characterized by extended seasons. Since 1986, the fishery has opened on January 15th, and the earliest seasonal closure date, April 22, occurred in 1992.

A common practice in the Bering Sea snow crab fishery is to crab near the ice edge. This practice had contributed to high pot losses in the past, because rapid movements of the ice pack can entrap pots. The lost pots may become self-baiting and continue to catch crab for an extended period of time. This is commonly referred to as ghost fishing. The occurrence of ghost fishing was a primary justification for the imposition of pot limits in 1993.

The trends in this fishery toward increased fleet size and increased gear on the fishing grounds parallel those of the Bristol Bay king crab fishery. Most of the vessels which participate in this fishery also participate in the Bristol Bay red king crab fishery.

Recent increases in effort in the Bering Sea snow crab fishery are documented in Table 7. The number of vessels participating in the fishery nearly tripled between 1986 and 1992, increasing from 88 to 250 vessels. Potlifts and harvest also display increases of similar magnitudes. Examination of Table 8 reveals the changes that have occurred in fleet composition. The number of large vessels in the fleet increased from eleven in 1986 to 54 in 1991.

Table 9 documents the pre-pot limit trend of vessels fishing increasing amounts of gear. The average pot numbers per vessel increased from 237 in 1986, to 275 in 1990.[2] Prior to pot limit implementation, large vessels, on average, fished considerably more pots than small vessels. Large vessels have also reported greater harvests than small vessels. Furthermore, the difference between average harvests by large and small vessels has increased since 1987.

Table 10 reports average harvest by vessel size class for the 1986-1991 period. As with the Bristol Bay red king crab fishery, large vessels averaged significantly higher harvests than small vessels. Average 1986-1991 CPUEs by vessel size class are reported in Table 11. Large vessels' average CPUE exceeded that of small vessels for 4 of the 6 time periods.

Discussion

Under an ITPQ program, pot quotas would be expected to gravitate toward those vessels for which an additional pot has the highest expected net benefit. Net benefits are a function of expected gross revenue (the product of harvest and exvessel price), and costs. ITPQ programs would introduce an additional cost to fishers, the market value of PQs. To current fishers who would receive PQs, the market price of PQs would represent an opportunity cost, i.e., a cost of holding a PQ is the foregone capital; gains which could have been realized had the PQ been sold. To new entrants or vessels which plan to increase pot numbers, the PQ market price would represent an additional capital expenditure. The introduction of this new cost in the crab fisheries should be expected to change individual operators' business strategies. For some current fishery participants the added windfall gains from PQs may provide sufficient inducement to exit the fishery. In making this determination, vessel owners will internalize the value of fixed asset liquidation–the resale value of crab vessels may be substantially below their original purchase price.

[2] The reported 1988 and 1986 figures may not reflect true fleet and vessel class averages. Observations on 1988 vessel pot numbers were only available for 90 of the 171 vessels that participated in the fishery. In addition, pot observations were only available for 57 of the 87 vessels participating in the 1986 fishery.

We consider four areas to be central to consideration of crab fisheries rationalization through ITPQs: (1) economic efficiency; (2) fleet composition and compensation to fishery participants; (3) management objectives; and (4) other considerations. The discussion of ITPQs will focus on these areas.

Efficiency

From an economic perspective, efficient vessel configurations are those that maximize profit per crab landed. Efficient operations minimize the cost per crab landed. Economic efficiency should not be confused with *effectiveness*. Fishing effectiveness relates to a vessel's (or fleet's) catching power, e.g., the quantity harvested within a specified period of time. Effectiveness of fishing effort can be improved by investment in gear and equipment, even though such an investment may reduce total fishery profitability.

The status quo management regimes in the Bristol Bay red king crab and Bering Sea snow crab fisheries are inconsistent with economic efficiency. As a consequence of the race for fish, each individual fisher is compelled to increase their effort through additional investment in harvest capacity simply to maintain their current harvest share. This has led in the past to overcapitalized fisheries and a derby style Bristol Bay red king crab fishery. Additionally, past fleet expansion has increased crowding externalities, driving up fishing costs. Finally, the current pot limits force many vessels to fish with fewer pots than they can effectively handle.

Changing to ITPQs will not eliminate overcapitalization. Operators would continue to lack exclusive rights to a portion of fishery harvest. Therefore, fishers would continue to have an incentive to race each other in an attempt to secure harvest share. In fact, an ITPQ program may exasperate the race for fish. Under an ITPQ program, vessels could only fish additional pots if they were successful in bidding for PQs. The amount operators would be willing to bid for a PQ is going to be a function, in part, of returns to each pot. Thus, vessels owners would have an added incentive to maximize the returns to each pot, which may be accomplished through additional investment in gear, equipment, and/or vessels. This additional capitalization may increase the fishing power of the fleet which, in turn, may shorten fishing seasons.

An ITPQ crab fishery could be expected to be similar to the salmon or herring limited entry fisheries. These fisheries continue to be plagued by the race for fish which drives up operating costs without increasing the total catch. In other words, the race for fish results in ever increasing costs, and no overall increase in benefits. In the race for fish, those who do not expand their effort will lose out to those who do, but if everyone expands effort, catches are unchanged while costs are increased.

An additional feature of an ITPQ program that may further compress season lengths is that it may lead to more effective utilization of allowable gear. Vessel owners who receive PQs in excess of the number of pots they currently fish will either utilize the additional pot rights or sell them to other operators. Additionally, vessel owners may reduce current fishing practices of utilizing pots for prospecting, because higher benefits may be obtainable through selling the PQ to operators who will fish the pot intensively during the fishing season rather than letting it sit idle for extended periods of time.

An ITPQ program does place a cap on the total number of pots in a fishery. Total gear in the fishery could not be increased in the future by fishery participants if market/fishery conditions were to make the fishery more attractive to potential entrants, except by government mandate. New entrants could only enter the fishery if they purchase PQs from current vessel owners. This feature could mitigate potential reductions in fishery season lengths from overcapitalization. Additionally, season lengths could be increased through a planned reduction in fishery pot caps.

The ITPQ program could be effective in reducing fleet size. Some consolidation of the crab fleet should occur under ITPQs. We would expect that currently marginal operations may take advantage of revenues gained from selling PQs to exit the fishery. Industry representative have indicated that there may be numerous fishery participants who have delayed exiting the fishery in anticipation of an economic windfall from the final Council crab management plan. Also, fishing operations which have become financially stressed by having to fish fewer pots (than that fished prior to pot limits) would have a strong incentive to buy additional pot rights. The pot limits have been particularly constraining on the larger vessels in the crab fleet. Consolidation may be expected to occur fairly rapidly as economically marginal boats exit the fishery and vessels buy additionally PQs to stem losses introduced by current pot limits. However, because the market for used fishery vessels is soft, the opportunity cost of remaining in the fishery is reduced for potential sellers of PQs, while PQ buyers must expect to fully recover capital investments. Consequently, some fishers who are not earning enough to recover their capital investment in vessels and equipment may remain in the fishery as long as they can to at least recoup their annual operating costs.

Despite a potentially reduced fleet size, an ITPQ program may increase crowding externalities in the crab fisheries. Under an ITPQ program that did not include a planned pot reduction, the total number of pots in the fishery would stay the same or increase. Since the race for fish may be intensified by an ITPQ program, there is added pressure on operators to increase the fishing effectiveness of pots. This could lead to increased concentrations of pots in favored fishing grounds and, thereby, increase both the difficulty of gear retrieval and the likelihood of gear conflicts. These events would increase fishing costs.

Intuitively, it might be expected that an ITPQ program would enhance economic efficiency of the crab fleets by giving vessel owners the flexibility to choose that number of pots which maximizes net returns. Current pot limits have led to under utilization of many vessels' fishing capacity, particularly larger vessels in the crab fleets. However, while a pot limit may increase the profitability of many operators (in comparison to the status quo), it is not clear whether this represents long-run improvements in economic efficiency of the entire harvesting sector. Under the status quo management, the crab fisheries are being prosecuted inefficiently. Given this characteristic, the relevant issue is whether introduced gear flexibility under ITPQ programs compounds the current inefficiencies or offsets them. Permitting operators to more fully utilize vessel capacity should enhance economic efficiency, everything else remaining equal. But, everything else will not remain equal, as an ITPQ program introduces incentives which should exasperate the current race for fish. We cannot state a priori which of these characteristics of an ITPQ program will dominate, and therefore, cannot predict efficiency effects of an ITPQ program.

An ITPQ program may have the beneficial characteristic of reducing uncertainty to operators in the crab fisheries, unless the pot cap is frequently changed. Operators could formulate business strategies (regarding investment in equipment, gear, and vessels) with complete knowledge of how many pots will be on the fishing grounds. Effects to uncertainty are an important consideration in crab fisheries where volatile stock populations and market prices, and past changes in management measures have led to a risky business setting.

It is not possible to identify pot caps which would be consistent with economic efficiency, given currently available information. The optimal number of pots will change according to a fisheries GHL. Thus, determination of an optimal long-run pot cap would require accurate stock projections, which are unavailable. It would also require currently unavailable operating cost information, and price forecasts.

Furthermore, changing the number of PQs would engender massive rent-seeking outlays. Current participants would lobby to prevent dissipation of the value of their existing PQs, while would be participants seek to avoid the costs of open-market purchases of PQs.

Fleet Composition and Participant Compensation

Fleet Compensation

Of particular interest to fishery participants, is potential impacts of management plans to current fleet composition and fishery participants' earnings. Relevant issues regarding an ITPQ program include: (1) the extensiveness of fleet consolidation; (2) the effects to current fleet composition, i.e., "will the management plan lead to increased dominance in the fisheries of large or small vessels, and similarly, will it impact the competitiveness of CVs versus CPs?"; and (3) the effects of the management plan to the earnings of vessel owners, skippers and crews.

One important constraint on fleet consolidation would be imposition of an anti-monopoly cap within the ITPQ framework. This type of cap would prevent any legal entity from extracting monopoly rents by acquiring a controlling share of PQs. Currently the Florida spiny lobster fishery has a 1.5% anti-monopoly cap. Setting anti-monopoly caps in the crab fisheries requires determination of what constitutes a controlling share of PQs. This determination is probably best set in close consultation with current fishery participants. It also requires definition of a legal entity. The legislation for the Florida Spiny Lobster program may provide a useful guideline in this matter.

The ability to more effectively fish additional pots has been reported to be a primary advantage of larger vessels (other advantages include a more stable work platform, greater live tank capacity, and their potential for being equipped for processing). In the 1991 Bristol red king crab fishery (the last pre-pot limit year), large vessels averaged 394 pots and small vessels averaged 267 pots. Similar differences existed in the Bering Sea snow crab fishery. Given historical practices, it seems reasonable that larger vessels would have been hit hardest financially by the pot limits (although, this has not been confirmed). This would be expected to apply particularly to many of the more recent large vessel entrants in the crab fisheries. These vessels were not initially constructed as dedicated crab vessels, but rather, retrofitted and modified for crabbing.

In the short-run, we would expect ITPQ induced fleet consolidations to result in the crab fleet being increasingly dominated by larger vessels because these vessels are more effective. However, we would not expect large vessels to obtain PQs consistent with fishing their pre-pot limit number of pots. Purchases of PQs represent an added cost of acquiring and maintaining a given number of pots. Expected returns from pots used in the pre-pot limit practices of prospecting and fishing ground preemption may be insufficient to cover this additional operating cost.

There is an additional reason that an ITPQ program may lead to a change in fleet composition toward large vessels. Catcher-processors, which are primarily larger vessels, may be better able to compete for PQs than their CV counterparts. CPs accrue rents from both harvesting and processing activities. CPs ability to extract rents from two sources increases returns per pot. The extent of this advantage will depend on how efficient CPs are at catching and processing, and the willingness of shore-based processors to share processing rents with CVs through exvessel prices adjustments.

As an additional point, we note that when seasons were less compressed the fishery was dominated by smaller vessels. Larger vessels have only become prominent in recent years as the race for fish has intensified. One explanation for this event, is that smaller vessels may be more efficient while large vessels are more effective.

We want to be cautious not to overstate advantages large vessels would have in acquiring PQs. Design features of some of the smaller large vessels and small vessels (e.g., greater maneuverability) may lead to their having a significant advantage in fishing effectiveness per pot. This could lead to owners of smaller vessels being effective bidders for PQs. In fact, if their design was sufficiently advantageous, then in the long run, where all costs are variable, operators may determine that smaller vessels are preferred to larger vessels.

Long-run changes in fleet composition will also be affected by the cost of leaving the fishery. Vessel owners will have to consider the selling price of potentially idled vessels and gear. Given currently depressed financial conditions, vessel owners may find that the selling prices are substantially below initial acquisition costs. Financial shortfalls may be particularly acute to large vessel owners, given their substantially higher initial investments, and soft markets for used vessels.

Finally, changes to fleet composition may also be affected by the risk and uncertainty from stock fluctuations and market conditions associated with the crab fisheries. A PQ will be a risky asset. Returns to the PQ are going to be dependent on highly volatile crab stocks, and fluctuating wholesale and exvessel prices. Fishing operations which are better able to accommodate this risk within their current portfolio of business operations and debt-to-asset ratios will be in an advantageous position to purchase PQs. For example, the contribution of a PQ to overall risk of an operation would be lower for larger diversified firms. Large firms with greater access to capital would also be better able to withstand losses which might be incurred in periods of low GHLs.

The ITPQ program could be directly designed to limit changes in fleet composition. A current consideration is to restrict PQ transfers, allowing PQs to be sold only to vessels in the same vessels class designation (either small < 125 feet, or large ≥ 125 feet).

Compensation to Fishery Participants

Vessel owners who qualify for initial PQs will receive an economic windfall. They will be given rights to a scarce capital asset. This economic windfall would only be received by the first generation of PQ holders. Expected economic rents accruing from pot rights will become capitalized into the market price paid by subsequent generations of PQ holders. The size of the initial windfall will depend on the number of qualifying vessels, and the associated number of PQs allotted, as well as any planned future PQ reduction program.

Transferability restrictions on PQs would affect their value. Such restrictions limit the supply of available PQs. If, as expected in at least the short run, there is greater demand for PQs from larger vessel operators, then any restr[illegible]on on transferability across vessel classes should drive up the price of large vessel PQs. In contrast, a supply transferability restrictions would reduce demand for small vessel PQs, depressing their market price.

The market price of PQs will also depend on the number initially created. Several factors may drive up the initial PQ supply. Under the proposed plan, the current owner of any vessel would qualify for PQs in Bristol Bay red king crab fishery if the vessel recorded one landing between 1989 and 1991. Similarly, the owner of any vessel that has recorded at least three landings in the Bering Sea snow crab fishery for the vessel owner would be a qualified recipient. The number of qualifying vessels will, therefore, include all vessels which have recently participated in the crab fisheries. This should exceed the number of vessels which have participated in any recent single fishing season. Additionally, the design feature of allotting PQs on the basis of current pot limits rather than historical usage, will lead to some vessels receiving PQs in excess of the number of pots currently fished. Therefore, the initially allotted pot rights should exceed the total amount of gear that would have been on the fishing grounds under the status quo.

An ITPQ program would be expected to preserve skill rents currently earned by skippers and crews. Skilled skippers and crews would still be highly sought since the race for fish would remain an ongoing characteristic of the crab fisheries. In fact, since an ITPQ program may increase competitiveness within the fisheries, vessel owners may place an additional premium on skill, and increase compensation to the most skilled skippers and crews.

Management Objectives

Past management concerns in the crab fisheries regarding abbreviated season lengths and ghost fishing led to the imposition of pot limits. As previously noted, the increased incentive for full utilization of a pot's catching power under an ITPQ program would be expected to reduce season lengths from the status quo. Additional downward pressure will also result from the number of pots associated with the initial allocation of PQs exceeding current pot numbers in the fisheries. However, the status quo is a moving target and can also be expected to result in further season compression.

Season lengths could be extended through a planned pot reduction program, such as that presented earlier. Determination of a final target pot cap that is consistent with management's objectives is problematic. Crab populations are highly variable. What may be viewed as an acceptable number of pots by mangers in periods of high crab stock populations, will be viewed as excessive in periods of low stock populations. Ideally, from a management perspective the pot cap would be adjusted yearly, depending on forecasted stock populations. However, this would be inconsistent with development of a stable well operating market for PQs. Market stability requires that potential buyers and sellers have full information as to the commodity being traded. Thus, a pot cap should not be viewed as a flexible management tool, and adjustments to any announced planned pot reduction program should be minimized.

Since a fundamental responsibility of fishery managers is to ensure stock viability, pot caps may need to be set conservatively in order to protect crab stocks during potential depressed conditions. Conservatively set pot caps would result in the crab fleet requiring somewhat extended seasons in periods of high stock populations. From a management perspective this would not seem to present any particular problem, and may be advantageous in making it easier to monitor catch and avoid exceeding GHL. Many crab seasons could be extended well beyond recent season lengths. The stocks only need to be protected during vulnerable soft shell periods, and during mating seasons. Processors, would also probably resist, or discount, crab harvested soon after molting when there is poor infill.

It should be noted that conservative initial allocations of PQs would be more disruptive to the industry than liberal allocations. Large vessels may not profitably operate with very limited number of pots. Some smaller vessels may remain profitable with small number of pots. The price of PQs could be bid up rapidly, and many firms exit the industry. Conservatively set pot caps would lead to a highly inefficient harvesting sector in periods of high stock populations and high GHLs.

Ghost fishing has been a major problem in several crab fisheries, particularly, the Bering sea snow crab fishery. Pot limits, by reducing the amount of gear a vessel has to retrieve, were viewed as an effective way of limiting lost pots. This restriction on total vessel gear would be lost under an ITPQ program, and the program might increase ghost fishing in comparison to the status quo. This could be controlled by including in the ITPQ program a separate cap on the number of pots an individual vessel could fish.

Safety of fishery participants may also be affected by the amount of onboard gear storage. Increased pots on a vessel may affect vessel stability, a concern in the rough waters of the Bering Sea, particularly in the fall/winter seasons when severe onboard icing occurs. Again, potential stability problems could be addressed through an individual vessel pot cap. Additional safety concerns revolve around the derby style nature of many crab fisheries. The race for fish leads to dangerous working conditions, which are not alleviated by ITPQ programs.

A final management issue to be addressed is that of bycatch. It is commonly believed that there is high mortality to non-targeted sublegal and female bycatch. Some industry participants have contended that bycatch is inversely related to soak time. There have been unconfirmed reports that bycatch was increased under pot limits because fishers reduced soak time in response to fishing less gear. This contention should be examined and industry should be consulted regarding the potential effects of an ITPQ program to soak time and bycatch. Effects of any rationalization measure to bycatch should be a critical concern in policy formulation.

Additional Considerations

An ITPQ program will create new markets for PQs. From inception, these markets are expected to be very active. As previously noted, the volatility of GHLs, as well as changing market conditions, should contribute to PQs being viewed as risky assets. Accordingly, individuals or corporations with better ability to withstand the market risks may be more active participants in PQ markets.

The risk associated with highly unpredictable GHLs and market conditions cannot be alleviated. However, added risk from uncertainty regarding the ITPQ program can be alleviated through the program design and implementation. One important way for this to be accomplished is to announce at the onset the policy regarding restrictions on PQ ownership and transfers, such as size class restrictions and monopoly caps, and planned pot cap reductions. This will allow industry participants to more accurately assess the value of a PQ and better plan future operations. More complete market information should enhance PQ market liquidity, and thereby facilitate PQ sales and purchases, and keep the market price of PQs closer to their actual value.

It may also be advisable to delay implementing any planned pot reduction program for a transitory period. This would allow for operators to adjust to the new management setting, and allow the PQ market to develop and settle.

It is also important for market stability that fishery participants believe there is stability in the ITPQ program. Uncertainty associated with fluctuating polices will lead to industry hesitation in the market for PQs. This will limit the ability of ITPQ programs to achieve their desired objectives. In some respects, the implementation of a ITPQ program represents a commitment on the part of the managers to manage the crab fisheries within the designated parameters.

An important consideration in rationalization of the fisheries is potential effects of a management plan to the economies of coastal communities. An ITPQ program could negatively impact coastal communities dependent on on-shore processing if they led to increased harvest shares by CPs. As previously noted, CPs may be in a better financial position to acquire PQs than CVs. Thus, an ITPQ program may lead to expansion of the CP fleet, reducing the availability of crab to shore-based processors. Potential concentration of PQs among CPs would be mitigated by restriction of PQs according to vessel class. Another option, that was not included in the ITPQ program we were asked to consider, would be a restriction on PQ transfers between CPs and CVs.

An additional concern in some coastal communities that are home to primarily smaller vessel fleets, is that these vessels will be displaced under the adopted management plan. This would have secondary impacts to the general economies of the communities. We have previously discussed expected changes in fleet composition. A restriction on PQ transfers across size classes may address this concern.

Concluding Comments

It is difficult to predict how an ITPQ program will affect the current practices of the Alaska crab fisheries fleet. This would represent a fundamental change in the institutional setting under which the crab fisheries are prosecuted, and past behavior may not be a good indicator of future behavior under this changed setting. However, there are certain effects that are likely to take place.

We would expect some fleet consolidation to occur under an ITPQ program. However, the race for fish will continue under ITPQ programs, and may be exasperated as PQs gravitate toward fishers who fish pots most effectively. Some efficiency gains may be achieved through owners being able to make investment decisions with full knowledge of how many pots will be on the fishing grounds.

Fishing effectiveness would be enhanced by allowing vessels to determine the optimal number of pots that they fish. Participants in the fishery may prefer the ability to make their own decisions and to use their skill to determine their financial success. Skill rents will still be available to the most successful skippers and crew. Vessels which wish to exit the fishery or to downsize would receive compensation from those wishing to enter the fishery or expand harvest, in other words, from those able to fish pots more effectively.

The fishing season may be shortened due to pots being fished more effectively, and increased fishery capitalization. Desired minimum season lengths could be achieved through a planned pot reduction program that would, over time, lower the total pot caps in the crab fisheries. A pot cap reduction could protect stock viability in periods of depressed stock conditions. In periods of stock abundance, extensive season lengths may be necessary to harvest the GHL.

Allowing vessels to increase the number of pots they fish could allow for the occurrence of increased ghost fishing, and decreased crew safety. If this is deemed a potentially significant problem it could be addressed through an individual vessel pot cap.

Given the uncertainties that already exist in the crab fisheries, every effort should be taken to minimize any additional uncertainties introduced with an ITPQ program. Because the PQs are a risky asset, vessel owners which can best absorb risk will be in an advantageous position to acquire PQs. The program needs to be well defined at the onset to reduce these risks, including any information regarding future planned pot reductions. In addition, it is important that fishery participants are confident that there is stability in the ITPQ program.

An ITPQ program may result in an increased CP fleet, which could negatively affect on-shore processors and coastal communities. Potential displacement may be mitigated by eliminating PQ transfers across vessel size classes. However, restrictions on transfers could reduce returns to PQ holders in the vessel size class that has the lowest demand for PQs. We would expect this to be the small size class.

The ITPQ program should be viewed as an alternative to license limitations. Both policies restrict the amount of effort in the fishery. Therefore, enacting both management programs would be redundant, and unnecessarily increase the programs' complexity and costs to both fishery managers and participants. Additionally, a license limitation program would needlessly interfere with the liquidity of PQ markets, reducing the value of PQs, and limit the markets' ability to allocate PQs to their highest and best use.

A more complete analysis of potential effects of an ITPQ program could be accomplished through consideration of recent fishery performance data. Unfortunately, there was not time for this to be completed prior to the April Council meeting. However, it is the intention of the authors to carry forth this task in the near future. This will provide better information for policy setting.

Finally, we note that there should be additional analysis comparing the benefits and costs of an ITPQ program to those associated with alternative rationalization programs. It is likely that the benefits of an ITPQ program could also be obtained under an IFQ program, and that some of the problems that continue under an ITPQ program would be eliminated under an IFQ program.

Year	Vessels	Harvest (nos.)	Harvest (lbs.)	Potlifts	No. Pots Registered	Season Length (days)
80	236	20845350	129948463	567292	78352	40
81	177	5307947	33703903	542425	75756	91
82	90	541006	3001210	141656	36166	30
83	0	0	0	0	0	0
84	89	794040	4182406	112556	21762	15
85	128	796181	4174953	85003	30117	8
86	159	2099576	11393934	178370	32468	13
87	236	2112202	12289067	220871	63000	12
88	200	1236131	7387795	153004	50099	8
89	211	1684706	10264971	208684	55000	12
90	240	3120326	20362342	262131	69906	12
91	302	2630446	17177894	227565	89068	7
92	281	1196958	8043018	205940	68189	7

Source: Westward Region Report to the Alaska Board of Fisheries

Table 1: Bristol Bay Red King Crab Fishery: Total Number of Vessels in the Fleet; Fleet Harvest by Number of Crab; Fleet Harvest by Weight; Total Fleet Potlifts; Total Number of Registered Pots; and Season Length.

		VESSELS		
		LENGTH	NUMBER	PCTN
YEAR	SIZE			
86	LARGE	151.13	15.00	9.62
	SMALL	91.35	141.00	90.38
	ALL	97.10	156.00	100.00
87	SIZE			
	LARGE	150.73	44.00	19.47
	SMALL	90.28	182.00	80.53
	ALL	102.05	226.00	100.00
88	SIZE			
	LARGE	153.18	44.00	22.22
	SMALL	93.12	154.00	77.78
	ALL	106.46	198.00	100.00
89	SIZE			
	LARGE	153.51	43.00	20.87
	SMALL	92.52	163.00	79.13
	ALL	105.25	206.00	100.00
90	SIZE			
	LARGE	153.96	47.00	19.58
	SMALL	94.54	193.00	80.42
	ALL	106.17	240.00	100.00
91	SIZE			
	LARGE	153.70	63.00	21.14
	SMALL	96.20	235.00	78.86
	ALL	108.36	298.00	100.00

Table 2. Bristol Bay Red King Crab Fishery 1986-1991. Average Vessel Length by Vessel Size Class; Number of Vessels Within Each Size Class; and Percentage of Fleet Within Vessel Size Class (PCTN).

		POTS
		MEAN
YEAR	SIZE	
86	LARGE	271.87
	SMALL	189.30
	ALL	197.24
87	SIZE	
	LARGE	277.68
	SMALL	172.63
	ALL	193.08
88	SIZE	
	LARGE	328.39
	SMALL	216.62
	ALL	241.46
89	SIZE	
	LARGE	350.65
	SMALL	232.17
	ALL	256.90
90	SIZE	
	LARGE	393.94
	SMALL	262.33
	ALL	288.10
91	SIZE	
	LARGE	394.10
	SMALL	266.97
	ALL	293.51

Table 3. Bristol Bay Red King Crab Fishery 1986-1991. Average Number of Pots Registered Per Vessel, by Vessel Size Class.

		HARVEST		
		MEAN	SUM	PCTN
YEAR	SIZE			
86	LARGE	100415.80	1506237.00	9.55
	SMALL	67012.12	9515721.00	90.45
	ALL	70203.55	11021958.00	100.00
87	SIZE			
	LARGE	78292.73	3444880.00	19.21
	SMALL	47122.58	8717677.00	80.79
	ALL	53111.60	12162557.00	100.00
88	SIZE			
	LARGE	45516.39	2002721.00	22.00
	SMALL	34587.55	5395658.00	78.00
	ALL	36991.89	7398379.00	100.00
89	SIZE			
	LARGE	62013.98	2666601.00	20.77
	SMALL	45176.30	7408914.00	79.23
	ALL	48673.99	10075515.00	100.00
90	SIZE			
	LARGE	123022.96	5782079.00	19.50
	SMALL	74844.83	14519897.00	80.50
	ALL	84240.56	20301976.00	100.00
91	SIZE			
	LARGE	78645.89	4954691.00	21.07
	SMALL	51131.17	12066955.00	78.93
	ALL	56928.58	17021646.00	100.00

Table 4. Bristol Bay Red King Crab Fishery 1986-1991. Average Vessel Harvest, by Vessel Size Class.

		CPUE
		MEAN
YEAR	SIZE	
86	LARGE	78.37
	SMALL	61.61
	ALL	63.22
87	SIZE	
	LARGE	64.22
	SMALL	52.28
	ALL	54.57
88	SIZE	
	LARGE	51.85
	SMALL	49.05
	ALL	49.67
89	SIZE	
	LARGE	50.95
	SMALL	49.34
	ALL	49.68
90	SIZE	
	LARGE	91.53
	SMALL	73.93
	ALL	77.37
91	SIZE	
	LARGE	86.63
	SMALL	71.78
	ALL	74.91

Table 5. Bristol Bay Red King Crab Fishery 1986-1991. Average Catch Per Unit Effort, by Vessel Size Class (in pounds).

		POTPICKS
		MEAN
YEAR	SIZE	
86	LARGE	4.56
	SMALL	6.11
	ALL	5.96
87	SIZE	
	LARGE	3.81
	SMALL	4.73
	ALL	4.54
88	SIZE	
	LARGE	2.82
	SMALL	3.22
	ALL	3.14
89	SIZE	
	LARGE	3.61
	SMALL	4.08
	ALL	3.98
90	SIZE	
	LARGE	3.66
	SMALL	3.91
	ALL	3.86
91	SIZE	
	LARGE	2.41
	SMALL	2.90
	ALL	2.80

Table 6. Bristol Bay Red King Crab Fishery 1986-1991. Average Number of Times Each Pot is Lifted, by Vessel Size Class.

		VESSELS		
		LENGTH	NUMBER	PCTN
YEAR	SIZE			
86	LARGE	147.09	11.00	13.25
	SMALL	96.56	72.00	86.75
	ALL	103.25	83.00	100.00
87	SIZE			
	LARGE	147.81	16.00	15.84
	SMALL	94.88	85.00	84.16
	ALL	103.27	101.00	100.00
88	SIZE			
	LARGE	154.53	43.00	25.44
	SMALL	94.47	126.00	74.56
	ALL	109.75	169.00	100.00
89	SIZE			
	LARGE	153.00	45.00	27.11
	SMALL	97.12	121.00	72.89
	ALL	112.27	166.00	100.00
90	SIZE			
	LARGE	153.43	44.00	24.58
	SMALL	95.67	135.00	75.42
	ALL	109.87	179.00	100.00
91	SIZE			
	LARGE	208.24	54.00	24.88
	SMALL	98.04	163.00	75.12
	ALL	125.47	217.00	100.00

Table 8. Bering Sea Snow Crab Fishery 1986-1991. Average Vessel Length by Vessel Size Class; Number of Vessels Within Each Vessel Size Class; and Percentage of Fleet Within Vessel Size Class (PCTN).

		POTS
		MEAN
YEAR	SIZE	
86	LARGE	233.25
	SMALL	238.06
	ALL	237.39
87	SIZE	
	LARGE	287.13
	SMALL	220.68
	ALL	231.76
88	SIZE	
	LARGE	367.00
	SMALL	289.49
	ALL	313.97
89	SIZE	
	LARGE	319.40
	SMALL	259.89
	ALL	276.95
90	SIZE	
	LARGE	341.57
	SMALL	251.33
	ALL	274.32

Table 9. Bering Sea Snow Crab 1986-1990. Average Number of Pots Registered Per Vessel, by Vessel Size Class.

		HARVEST		
		MEAN	SUM	PCTN
YEAR	SIZE			
86	L	1576811.73	17344929.00	12.64
	S	1034320.03	78608322.00	87.36
	ALL	1102910.93	95953251.00	100.00
87	SIZE			
	L	1207572.81	19321165.00	15.53
	S	937974.41	81603774.00	84.47
	ALL	979853.78	100924939.00	100.00
88	SIZE			
	L	969717.12	41697836.00	25.15
	S	696248.99	89119871.00	74.85
	ALL	765015.83	130817707.00	100.00
89	SIZE			
	L	1258554.51	56634953.00	26.63
	S	733921.88	91006313.00	73.37
	ALL	873616.96	147641266.00	100.00
90	SIZE			
	L	1440789.66	63394745.00	23.28
	S	664583.14	96364556.00	76.72
	ALL	845287.31	159759301.00	100.00
91	SIZE			
	L	2213552.48	119531834.00	24.55
	S	1231534.39	204434708.00	75.45
	ALL	1472575.19	323966542.00	100.00

Table 10. Bering Sea Snow Crab Fishery 1986-1991. Average Vessel Harvest, by Vessel Size Class.

		CPUE
		MEAN
YEAR	SIZE	
86	L	181.40
	S	173.70
	ALL	174.68
87	SIZE	
	L	151.31
	S	158.09
	ALL	157.03
88	SIZE	
	L	168.28
	S	164.36
	ALL	165.35
89	SIZE	
	L	213.92
	S	215.93
	ALL	215.39
90	SIZE	
	L	199.88
	S	154.02
	ALL	164.70
91	SIZE	
	L	256.98
	S	223.00
	ALL	231.34

Table 11. Bering Sea Snow Crab Fishery 1986-1991. Average Catch Per Unit Effort, by Vessel Size Class (in pounds).

Year	Vessels	Harvest (nos.)	Harvest (lbs.)	Potlifts	No. Pots Registered	Season Length (days)
79/80	134	25286777	39572668	255022	35503	307
81	153	34415322	52750034	435742	39789	229
82	122	24089562	29355379	469091	35522	167
83	109	23838149	26128410	287127	15396	120
84	52	21009935	26813074	173591	12493	320
85	75	52903246	65998875	372045	15325	333
86	88	76499123	97984539	543744	13750	252
87	103	81307659	101903388	616113	19386	158
88	171	105716337	134060185	766907	38765	120
89	168	112618881	149455848	663442	43607	112
90	189	128977638	161821350	911613	46440	148
91	220	265123960	328647269	1391583	76056	159
92	250	227376582	315302034	1281796	77858	97

Source: Westward Region Report to the Alaska Board of Fisheries

Table 7: Bering Sea Snow Crab Fishery: Total Number of Vessels in the Fleet; Fleet Harvest by Number of Crab; Fleet Harvest by Weight; Total Fleet Potlifts; Total Number of Pots Registered; and Season Length.

Introduction

The S... of Alaska, through its Board of Fisheries (Board) and Department of Fish and Game (ADFG), and the North Pacific Fishery Management Council (Council) manage the commercial king, snow, and Tanner crab fisheries of the Bering Sea and Aleutian Islands (BSAI) under the terms of a cooperative fishery management plan (FMP) approved by the U.S. Secretary of Commerce in June 1989. The FMP incorporates management measures in three different categories. Category one measures are fixed in the FMP and require a plan amendment to change. These include legal gear definitions, permit requirements, federal observer requirements, limited access, individual fishery quotas (IFQs), and individual fishery pot quotas (ITPQs). Category two measures are framework measures in the FMP and can be changed by the state following criteria set out in the FMP. Category three measures may be changed at the discretion of the state and include reporting requirements, gear placement and removal, gear storage, vessel live tank inspections, gear modifications, bycatch limits in crab fisheries, state observer requirements, and other measures.

At its January meeting, the Council requested that a variety of measures for managing the groundfish and crab fisheries be studied for consideration at its planned April meeting. Management measures to be considered included ITPQs, and various other forms of limited entry. Subsequently, the Council staff asked fishery economists at the University of Alaska Fairbanks (UAF) to provide a discussion paper addressing economic aspects of ITPQ programs for the Bering Sea snow crab (*Chinoecetes opilio*) and Bristol Bay red king crab (*Paralithodes camtschaticus*) fisheries.

In the Comprehensive Rationalization Planning for Groundfish and Crab Fisheries off Alaska, the Council stated that their overriding concern regarding management changes is:

> ".... to maintain the health of the marine ecosystem to ensure the long-term conservation and abundance of the groundfish and crab resources. In addition, the Council must address the competing and oftentimes conflicting needs of the domestic fisheries that have developed rapidly under open access, fisheries which have become overcapitalized and mismatched to the finite fisheries resources available."

The Council staff identified a variety of problems as being symptomatic of the intense pressures within the overcapitalized crab fisheries. These problems include:

- Harvesting and processing capacity in excess of that required to utilize the available resource;
- Gear conflict within fisheries where there is overcrowding of fishing gear due to excessive participation and surplus fishing effort on limited grounds;
- Wastage of fishery resources through bycatch, discards, and dead-loss such as with ghost fishing by lost or discarded gear;
- Concerns regarding vessel and crew safety which are often compromised in the race for fish;
- Economic instability within various sectors of the fishing industry, and in fishing communities caused by short and unpredictable fishing seasons or preemption which denies access to nearby fishery resources;
- Inability to provide for long-term, stable fisheries based economies in small economically disadvantaged adjacent coastal communities;
- Inability to achieve long-term sustainable economic benefits to the nation.

ADFG managers have also cited that, in certain crab fisheries, season length must be extended or maintained at levels that permit sufficient time for inseason analysis of fishery performance and setting closure dates.

There are three types of crab fisheries in the Bering Sea which could benefit from various types of effort limitations.

1) Type 1 Fisheries: Fisheries with a Guideline Harvest Level (GHL) so small that without some means to predetermine fishing effort and make estimates of daily catch rates, ADFG has in the past been reluctant to open the fisheries at all. Fisheries of this type include: Norton Sound red king crab, Pribilof Islands blue king crab, and Alaska Peninsula king and Tanner crab.

2) Type 2 Fisheries: High-value, high effort fisheries in which past increases in the number of vessels and pots, combined with moderate GHLs, led to derby-style fishing, short seasons, and difficult inseason management. Fisheries in this category include Bristol Bay red king crab and St. Matthew Island blue king crab. These fisheries face a situation similar to the halibut and blackcod fisheries, where there is so much gear on the ground that remaining within the GHL becomes more and more a matter of chance.

3) Type 3 Fisheries: Fisheries where fast moving ice conditions can result in considerable pot loss, especially when vessels fish more than one load of pots. The Bering Sea snow crab fishery is an example of a type 3 fishery.

These and other concerns led the Board to amend the FMP at its March 1993 meeting, imposing pot limits in the Bering Sea Aleutian Island king, snow, and Tanner crab fisheries. The pot limits varied by fishery, according to specific fisheries characteristics.

This document provides a qualitative discussion of economic considerations regarding implementation of ITPQ programs with respect to the Council's stated goals of: (1) assure the long-term health and productivity of fish stocks and other living marine resources of the North Pacific and Bering Sea ecosystem; (2) support the stability, economic well-being, and the diversity of the seafood industry, and provide for the economic and social needs of the communities dependent on that industry; and (3) efficiently manage the resources within its jurisdiction to reduce bycatch, minimize waste, and improve the utilization of fish resources in order to provide the maximum benefit to present and future generations of fishermen, associated fishing industry sectors, communities, consumers, and the nation as a whole.

Individual Fishery Pot Quota

A variety of gear limitations are currently in effect in Alaska crab fisheries. Attachment one provides ADFG designation of crab fisheries districts and current management measures. Current pot limits in the Bering Sea snow crab and Bristol Bay red king crab fisheries are based on vessel size. Vessels under 125 feet may fish a maximum of 200 pots; vessels equal to or exceeding 125 feet may fish a maximum of 250 pots. For the purposes of this report the fisheries under these pot limits will be considered the status quo.

The researchers were asked to consider the following ITPQ program design. Fishery specific licenses would be allocated to current owners of vessels which recorded at least one landing in the Bristol Bay red king crab fishery, or at least three landings in the Bering Sea snow crab fishery, between June 28, 1989 and June 27, 1992. Each qualified licensee will receive pot quotas (PQs), which represent the initial number of pots they are entitled to fish. The initial number of PQs allocated to vessel owners will equal the maximum number of pots that the vessel qualifies for under the existing status quo pot limit: 200 pots for vessels under 125 feet, and 250 pots for vessels greater than or equal to 125 feet. The PQs will be transferable through market sales.

Two transfer scenarios are to be considered: (1) no transfers between vessel size classes; and (2) unrestricted transfers between vessel classes. Although vessel licenses would be designated as catcher vessels (CV) and catcher-processor vessels (CPs), the PQs will be transferable between CVs and CPs. Finally, gear reduction measures are considered. Gear reduction could be achieved by reducing the pot allowance associated with each PQ. For example, a 10% reduction in total fishery pots could be achieved by announcing that each PQ would give the owner the right to fish 0.90 pots. A 50% reduction could be achieved over a 5-year period through 10% reductions per annum, e.g., a PQ would give the owner the right to fish 0.90 pots in year 1, 0.80 pots in year 2, and so on, continuing through year five, when each PQ would give the owner the right to fish 0.50 pots.

The Florida Spiny Lobster Fishery is the only domestic fishery, of which we aware, currently managed under a ITPQ. Attachments 2 and 3 provide a description and legislation of this ITPQ program. Applicability of the Florida experience to the Alaska crab fisheries is limited due to substantial differences in fishery characteristics and management objectives. For example, the Florida fishery is comprised primarily of numerous small scale operators fishing relatively low cost pots close to their home port. Many of the current participants are part-time fishers, including recreational harvesters who obtain commercial licenses to increase their allowable harvests. Management's objective was to reduce pot crowding, ghost pots, and debris and pollution from the numerous vessels in the fishery. Stock protection is not a concern since stock recruitment has been stable in the past irrespective of the fleet fishing power.

Fishery Characteristics

The fishing power of both the Bristol Bay red king crab and the Bering Sea snow crab fleets dramatically increased in recent years, prior to pot limit implementation. The expanded fleet capacity has interfered with the effectiveness of fishery management in both fisheries. This section documents the changes which have occurred in the fisheries in recent years, beginning with a discussion of the Bristol Bay red king crab fishery, followed by a discussion of Bering Sea snow crab fishery. It was our intention to include more recent data in the description of the fisheries and in the following discussion of ITPQs. Unfortunately, expected fish ticket data did not arrive in time for inclusion.

In the following discussion, crab vessels are divided into two size categories: small vessels (S), classified as vessels under 125 feet; and large vessels (L), classified as vessels equal to, or greater than, 125 feet.

Bristol Bay Red King Crab
Fishery Characteristics

The Bristol Bay red king crab fishery has been the dominant domestic red king crab fishery since the collapse of the Kodiak king crab fishery in the late 1960s. Bristol Bay harvests increased rapidly throughout the 1970s, and peaked at 130 million pounds in 1980. The record statewide catch of 180 million pounds was also harvested that same year. High harvest levels resulted in high revenues for participants. High revenues, in turn, attracted additional participation. Unfortunately, the boom was short lived. Bristol Bay stocks began a precipitous collapse in 1981, and by 1983 the Bristol Bay fishery was closed. Although the Bristol Bay fishery reopened in 1984, harvests have remained comparatively low.

Despite continued low harvests, the Bristol Bay fishery has remained economically lucrative because of high exvessel prices. Consequently, fleet size and pot numbers continued to increase. More fishing power applied to the depressed stock has necessitated shortened seasons.

Table 1 provides aggregate 1980-1992 seasonal data for the Bristol Bay red king crab fishery. The increased fishing intensity documented in Table 1 can be attributed to three factors: fleet expansion; increased vessel size; and an increase in the number of pots per vessel for all vessel sizes. The trend toward fishing additional gear was halted in 1992 by a flat 250 per vessel pot limit. This limit was revoked following the 1992 season, and subsequently replaced with the current pot limit (200 pots for vessels under 125 feet, and 250 pots for vessels 125 feet or more).

Table 2 reports fleet composition for 1986 through 1991. Fleet composition changed, as increasing numbers of large vessels entered the fishery. Between 1986 and 1991 the number of vessels with reported length equal to, or exceeding, 125 feet increased from 15 to 63.

Table 3 documents the pre-pot limit trend of increased pot usage. Large vessels have, on average, fished substantially more pots than small vessels. However, both large and small vessels increased the number of pots fished, from 272 and 189 in 1986, to 394 and 267 in 1991, respectively.

There are several advantages to increasing the number of pots fished. Higher pot numbers permit longer soak times for each pot. In general, optimal soak time in the Bristol Bay king crab fishery prior to pot limit implementation was reported to range from two to three days, varying according to stock conditions. A longer soak time can compensate for low population densities because the pot is able to attract crabs from a broader area. Moreover, additional gear allows pots to be placed at several locations on the fishing grounds. This allows operators to begin fishing in one area, and if fishing becomes unproductive, move to another location where soaked pots are already in place. Thus, an increase in the number of pots improves search efficiency by increasing the probability of locating concentrations of crab. In addition, fishing a large number of pots decreases the necessity of moving pots inseason, which decreases vessel downtime. These benefits of additional pots are particularly advantageous in derby style fisheries, such as the Bristol Bay red king crab fishery.

Table 4 reports average harvests for large and small vessels for the 1986 through 1991 seasons. Large vessels' harvests were significantly higher in all time periods than their small vessel counterparts.

Harvest per vessel is an inadequate measure of the effectiveness of vessel effort, because harvest can be increased by applying additional effort to the fishery. One measure of the actual effectiveness of each unit of effort is the harvest per potlift, referred to as catch per unit effort (CPUE, measured in pounds). The 1986-1991 seasonal average CPUE, by vessel size class, is reported in Table 5. Large vessel CPUEs were higher than those reported for small vessels for all time periods, although, the CPUEs of the two vessel classes were similar in 1988 and 1989.

A final statistic of interest to fishery managers is the number of times individual pots are lifted. Each potlift provides information on current stock abundance. ADFG has determined that sufficient catch information for inseason stock assessment requires that each pot be picked five times, on average (Nippes 1989).[1] Examination of Table 6 reveals that the fishery has not achieved this goal since 1986.

Bering Sea Snow Crab
Fishery Characteristics

The Bering Sea snow crab fishery has recently undergone unprecedented growth to become the largest Alaska crab fishery, in terms of harvest. As recently as 1977-78, the harvest of snow crab was limited to incidental catch in the harvest of the target species, Tanner crab (*C. bairdi*). Declines in the Tanner crab stocks led to a transfer of effort to the snow crab fishery. Increasing snow crab stocks in recent years have resulted in harvests of over 100 million pounds since 1987. In 1991 and 1992, harvests exceeded 300 million pounds.

[1]Source: Nippes, William E. "Gear Limitations for Better Management". ADFG Westward Region, 211 Mission Road, Kodiak, AK 99615. March, 1989.

Harvests, although still high in relationship to historical levels, have declined over the past two seasons to 220 million pounds in 1993 and an expected 125 million pounds in the current 1994 season.

In contrast to the Bristol Bay red king crab fishery, the Bering Sea snow crab fishery has been characterized by extended seasons. Since 1986, the fishery has opened on January 15th, and the earliest seasonal closure date, April 22, occurred in 1992.

A common practice in the Bering Sea snow crab fishery is to crab near the ice edge. This practice had contributed to high pot losses in the past, because rapid movements of the ice pack can entrap pots. The lost pots may become self-baiting and continue to catch crab for an extended period of time. This is commonly referred to as ghost fishing. The occurrence of ghost fishing was a primary justification for the imposition of pot limits in 1993.

The trends in this fishery toward increased fleet size and increased gear on the fishing grounds parallel those of the Bristol Bay king crab fishery. Most of the vessels which participate in this fishery also participate in the Bristol Bay red king crab fishery.

Recent increases in effort in the Bering Sea snow crab fishery are documented in Table 7. The number of vessels participating in the fishery nearly tripled between 1986 and 1992, increasing from 88 to 250 vessels. Potlifts and harvest also display increases of similar magnitudes. Examination of Table 8 reveals the changes that have occurred in fleet composition. The number of large vessels in the fleet increased from eleven in 1986 to 54 in 1991.

Table 9 documents the pre-pot limit trend of vessels fishing increasing amounts of gear. The average pot numbers per vessel increased from 237 in 1986, to 275 in 1990.[2] Prior to pot limit implementation, large vessels, on average, fished considerably more pots than small vessels. Large vessels have also reported greater harvests than small vessels. Furthermore, the difference between average harvests by large and small vessels has increased since 1987.

Table 10 reports average harvest by vessel size class for the 1986-1991 period. As with the Bristol Bay red king crab fishery, large vessels averaged significantly higher harvests than small vessels. Average 1986-1991 CPUEs by vessel size class are reported in Table 11. Large vessels' average CPUE exceeded that of small vessels for 4 of the 6 time periods.

Discussion

Under an ITPQ program, pot quotas would be expected to gravitate toward those vessels for which an additional pot has the highest expected net benefit. Net benefits are a function of expected gross revenue (the product of harvest and exvessel price), and costs. ITPQ programs would introduce an additional cost to fishers, the market value of PQs. To current fishers who would receive PQs, the market price of PQs would represent an opportunity cost, i.e., a cost of holding a PQ is the foregone capital; gains which could have been realized had the PQ been sold. To new entrants or vessels which plan to increase pot numbers, the PQ market price would represent an additional capital expenditure. The introduction of this new cost in the crab fisheries should be expected to change individual operators' business strategies. For some current fishery participants the added windfall gains from PQs may provide sufficient inducement to exit the fishery. In making this determination, vessel owners will internalize the value of fixed asset liquidation--the resale value of crab vessels may be substantially below their original purchase price.

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[2] The reported 1988 and 1986 figures may not reflect true fleet and vessel class averages. Observations on 1988 vessel pot numbers were only available for 90 of the 171 vessels that participated in the fishery. In addition, pot observations were only available for 57 of the 87 vessels participating in the 1986 fishery.

We consider four areas to be central to consideration of crab fisheries rationalization through ITPQs: (1) economic efficiency; (2) fleet composition and compensation to fishery participants; (3) management objectives; and (4) other considerations. The discussion of ITPQs will focus on these areas.

Efficiency

From an economic perspective, efficient vessel configurations are those that maximize profit per crab landed. Efficient operations minimize the cost per crab landed. Economic efficiency should not be confused with effectiveness. Fishing effectiveness relates to a vessel's (or fleet's) catching power, e.g., the quantity harvested within a specified period of time. Effectiveness of fishing effort can be improved by investment in gear and equipment, even though such an investment may reduce total fishery profitability.

The status quo management regimes in the Bristol Bay red king crab and Bering Sea snow crab fisheries are inconsistent with economic efficiency. As a consequence of the race for fish, each individual fisher is compelled to increase their effort through additional investment in harvest capacity simply to maintain their current harvest share. This has led in the past to overcapitalized fisheries and a derby style Bristol Bay red king crab fishery. Additionally, past fleet expansion has increased crowding externalities, driving up fishing costs. Finally, the current pot limits force many vessels to fish with fewer pots than they can effectively handle.

Changing to ITPQs will not eliminate overcapitalization. Operators would continue to lack exclusive rights to a portion of fishery harvest. Therefore, fishers would continue to have an incentive to race each other in an attempt to secure harvest share. In fact, an ITPQ program may exasperate the race for fish. Under an ITPQ program, vessels could only fish additional pots if they were successful in bidding for PQs. The amount operators would be willing to bid for a PQ is going to be a function, in part, of returns to each pot. Thus, vessels owners would have an added incentive to maximize the returns to each pot, which may be accomplished through additional investment in gear, equipment, and/or vessels. This additional capitalization may increase the fishing power of the fleet which, in turn, may shorten fishing seasons.

An ITPQ crab fishery could be expected to be similar to the salmon or herring limited entry fisheries. These fisheries continue to be plagued by the race for fish which drives up operating costs without increasing the total catch. In other words, the race for fish results in ever increasing costs, and no overall increase in benefits. In the race for fish, those who do not expand their effort will lose out to those who do, but if everyone expands effort, catches are unchanged while costs are increased.

An additional feature of an ITPQ program that may further compress season lengths is that it may lead to more effective utilization of allowable gear. Vessel owners who receive PQs in excess of the number of pots they currently fish will either utilize the additional pot rights or sell them to other operators. Additionally, vessel owners may reduce current fishing practices of utilizing pots for prospecting, because higher benefits may be obtainable through selling the PQ to operators who will fish the pot intensively during the fishing season rather than letting it sit idle for extended periods of time.

An ITPQ program does place a cap on the total number of pots in a fishery. Total gear in the fishery could not be increased in the future by fishery participants if market/fishery conditions were to make the fishery more attractive to potential entrants, except by government mandate. New entrants could only enter the fishery if they purchase PQs from current vessel owners. This feature could mitigate potential reductions in fishery season lengths from overcapitalization. Additionally, season lengths could be increased through a planned reduction in fishery pot caps.

The ITPQ program could be effective in reducing fleet size. Some consolidation of the crab fleet should occur under ITPQs. We would expect that currently marginal operations may take advantage of revenues gained from selling PQs to exit the fishery. Industry representative have indicated that there may be numerous fishery participants who have delayed exiting the fishery in anticipation of an economic windfall from the final Council crab management plan. Also, fishing operations which have become financially stressed by having to fish fewer pots (than that fished prior to pot limits) would have a strong incentive to buy additional pot rights. The pot limits have been particularly constraining on the larger vessels in the crab fleet. Consolidation may be expected to occur fairly rapidly as economically marginal boats exit the fishery and vessels buy additionally PQs to stem losses introduced by current pot limits. However, because the market for used fishery vessels is soft, the opportunity cost of remaining in the fishery is reduced for potential sellers of PQs, while PQ buyers must expect to fully recover capital investments. Consequently, some fishers who are not earning enough to recover their capital investment in vessels and equipment may remain in the fishery as long as they can to at least recoup their annual operating costs.

Despite a potentially reduced fleet size, an ITPQ program may increase crowding externalities in the crab fisheries. Under an ITPQ program that did not include a planned pot reduction, the total number of pots in the fishery would stay the same or increase. Since the race for fish may be intensified by an ITPQ program, there is added pressure on operators to increase the fishing effectiveness of pots. This could lead to increased concentrations of pots in favored fishing grounds and, thereby, increase both the difficulty of gear retrieval and the likelihood of gear conflicts. These events would increase fishing costs.

Intuitively, it might be expected that an ITPQ program would enhance economic efficiency of the crab fleets by giving vessel owners the flexibility to choose that number of pots which maximizes net returns. Current pot limits have led to under utilization of many vessels' fishing capacity, particularly larger vessels in the crab fleets. However, while a pot limit may increase the profitability of many operators (in comparison to the status quo), it is not clear whether this represents long-run improvements in economic efficiency of the entire harvesting sector. Under the status quo management, the crab fisheries are being prosecuted inefficiently. Given this characteristic, the relevant issue is whether introduced gear flexibility under ITPQ programs compounds the current inefficiencies or offsets them. Permitting operators to more fully utilize vessel capacity should enhance economic efficiency, everything else remaining equal. But, everything else will not remain equal, as an ITPQ program introduces incentives which should exasperate the current race for fish. We cannot state a priori which of these characteristics of an ITPQ program will dominate, and therefore, cannot predict efficiency effects of an ITPQ program.

An ITPQ program may have the beneficial characteristic of reducing uncertainty to operators in the crab fisheries, unless the pot cap is frequently changed. Operators could formulate business strategies (regarding investment in equipment, gear, and vessels) with complete knowledge of how many pots will be on the fishing grounds. Effects to uncertainty are an important consideration in crab fisheries where volatile stock populations and market prices, and past changes in management measures have led to a risky business setting.

It is not possible to identify pot caps which would be consistent with economic efficiency, given currently available information. The optimal number of pots will change according to a fisheries GHL. Thus, determination of an optimal long-run pot cap would require accurate stock projections, which are unavailable. It would also require currently unavailable operating cost information, and price forecasts.

Furthermore, changing the number of PQs would engender massive rent-seeking outlays. Current participants would lobby to prevent dissipation of the value of their existing PQs, while would be participants seek to avoid the costs of open-market purchases of PQs.

Fleet Composition and Participant Compensation

Fleet Compensation

Of particular interest to fishery participants, is potential impacts of management plans to current fleet composition and fishery participants' earnings. Relevant issues regarding an ITPQ program include: (1) the extensiveness of fleet consolidation; (2) the effects to current fleet composition, i.e., "will the management plan lead to increased dominance in the fisheries of large or small vessels, and similarly, will it impact the competitiveness of CVs versus CPs?"; and (3) the effects of the management plan to the earnings of vessel owners, skippers and crews.

One important constraint on fleet consolidation would be imposition of an anti-monopoly cap within the ITPQ framework. This type of cap would prevent any legal entity from extracting monopoly rents by acquiring a controlling share of PQs. Currently the Florida spiny lobster fishery has a 1.5% anti-monopoly cap. Setting anti-monopoly caps in the crab fisheries requires determination of what constitutes a controlling share of PQs. This determination is probably best set in close consultation with current fishery participants. It also requires definition of a legal entity. The legislation for the Florida Spiny Lobster program may provide a useful guideline in this matter.

The ability to more effectively fish additional pots has been reported to be a primary advantage of larger vessels (other advantages include a more stable work platform, greater live tank capacity, and their potential for being equipped for processing). In the 1991 Bristol red king crab fishery (the last pre-pot limit year), large vessels averaged 394 pots and small vessels averaged 267 pots. Similar differences existed in the Bering Sea snow crab fishery. Given historical practices, it seems reasonable that larger vessels would have been hit hardest financially by the pot limits (although, this has not been confirmed). This would be expected to apply particularly to many of the more recent large vessel entrants in the crab fisheries. These vessels were not initially constructed as dedicated crab vessels, but rather, retrofitted and modified for crabbing.

In the short-run, we would expect ITPQ induced fleet consolidations to result in the crab fleet being increasingly dominated by larger vessels because these vessels are more effective. However, we would not expect large vessels to obtain PQs consistent with fishing their pre-pot limit number of pots. Purchases of PQs represent an added cost of acquiring and maintaining a given number of pots. Expected returns from pots used in the pre-pot limit practices of prospecting and fishing ground preemption may be insufficient to cover this additional operating cost.

There is an additional reason that an ITPQ program may lead to a change in fleet composition toward large vessels. Catcher-processors, which are primarily larger vessels, may be better able to compete for PQs than their CV counterparts. CPs accrue rents from both harvesting and processing activities. CPs ability to extract rents from two sources increases returns per pot. The extent of this advantage will depend on how efficient CPs are at catching and processing, and the willingness of shore-based processors to share processing rents with CVs through exvessel prices adjustments.

As an additional point, we note that when seasons were less compressed the fishery was dominated by smaller vessels. Larger vessels have only become prominent in recent years as the race for fish has intensified. One explanation for this event, is that smaller vessels may be more efficient while large vessels are more effective.

We want to be cautious not to overstate advantages large vessels would have in acquiring PQs. Design features of some of the smaller large vessels and small vessels (e.g., greater maneuverability) may lead to their having a significant advantage in fishing effectiveness per pot. This could lead to owners of smaller vessels being effective bidders for PQs. In fact, if their design was sufficiently advantageous, then in the long run, where all costs are variable, operators may determine that smaller vessels are preferred to larger vessels.

Long-run changes in fleet composition will also be affected by the cost of leaving the fishery. Vessel owners will have to consider the selling price of potentially idled vessels and gear. Given currently depressed financial conditions, vessel owners may find that the selling prices are substantially below initial acquisition costs. Financial shortfalls may be particularly acute to large vessel owners, given their substantially higher initial investments, and soft markets for used vessels.

Finally, changes to fleet composition may also be affected by the risk and uncertainty from stock fluctuations and market conditions associated with the crab fisheries. A PQ will be a risky asset. Returns to the PQ are going to be dependent on highly volatile crab stocks, and fluctuating wholesale and exvessel prices. Fishing operations which are better able to accommodate this risk within their current portfolio of business operations and debt-to-asset ratios will be in an advantageous position to purchase PQs. For example, the contribution of a PQ to overall risk of an operation would be lower for larger diversified firms. Large firms with greater access to capital would also be better able to withstand losses which might be incurred in periods of low GHLs.

The ITPQ program could be directly designed to limit changes in fleet composition. A current consideration is to restrict PQ transfers, allowing PQs to be sold only to vessels in the same vessels class designation (either small < 125 feet, or large ≥ 125 feet).

Compensation to Fishery Participants

Vessel owners who qualify for initial PQs will receive an economic windfall. They will be given rights to a scarce capital asset. This economic windfall would only be received by the first generation of PQ holders. Expected economic rents accruing from pot rights will become capitalized into the market price paid by subsequent generations of PQ holders. The size of the initial windfall will depend on the number of qualifying vessels, and the associated number of PQs allotted, as well as any planned future PQ reduction program.

Transferability restrictions on PQs would affect their value. Such restrictions limit the supply of available PQs. If, as expected in at least the short run, there is greater demand for PQs from larger vessel operators, then any restriction on transferability across vessel classes should drive up the price of large vessel PQs. In contrast, a supply transferability restrictions would reduce demand for small vessel PQs, depressing their market price.

The market price of PQs will also depend on the number initially created. Several factors may drive up the initial PQ supply. Under the proposed plan, the current owner of any vessel would qualify for PQs in Bristol Bay red king crab fishery if the vessel recorded one landing between 1989 and 1991. Similarly, the owner of any vessel that has recorded at least three landings in the Bering Sea snow crab fishery for the vessel owner would be a qualified recipient. The number of qualifying vessels will, therefore, include all vessels which have recently participated in the crab fisheries. This should exceed the number of vessels which have participated in any recent single fishing season. Additionally, the design feature of allotting PQs on the basis of current pot limits rather than historical usage, will lead to some vessels receiving PQs in excess of the number of pots currently fished. Therefore, the initially allotted pot rights should exceed the total amount of gear that would have been on the fishing grounds under the status quo.

An ITPQ program would be expected to preserve skill rents currently earned by skippers and crews. Skilled skippers and crews would still be highly sought since the race for fish would remain an ongoing characteristic of the crab fisheries. In fact, since an ITPQ program may increase competitiveness within the fisheries, vessel owners may place an additional premium on skill, and increase compensation to the most skilled skippers and crews.

Management Objectives

Past management concerns in the crab fisheries regarding abbreviated season lengths and ghost fishing led to the imposition of pot limits. As previously noted, the increased incentive for full utilization of a pot's catching power under an ITPQ program would be expected to reduce season lengths from the status quo. Additional downward pressure will also result from the number of pots associated with the initial allocation of PQs exceeding current pot numbers in the fisheries. However, the status quo is a moving target and can also be expected to result in further season compression.

Season lengths could be extended through a planned pot reduction program, such as that presented earlier. Determination of a final target pot cap that is consistent with management's objectives is problematic. Crab populations are highly variable. What may be viewed as an acceptable number of pots by mangers in periods of high crab stock populations, will be viewed as excessive in periods of low stock populations. Ideally, from a management perspective the pot cap would be adjusted yearly, depending on forecasted stock populations. However, this would be inconsistent with development of a stable well operating market for PQs. Market stability requires that potential buyers and sellers have full information as to the commodity being traded. Thus, a pot cap should not be viewed as a flexible management tool, and adjustments to any announced planned pot reduction program should be minimized.

Since a fundamental responsibility of fishery managers is to ensure stock viability, pot caps may need to be set conservatively in order to protect crab stocks during potential depressed conditions. Conservatively set pot caps would result in the crab fleet requiring somewhat extended seasons in periods of high stock populations. From a management perspective this would not seem to present any particular problem, and may be advantageous in making it easier to monitor catch and avoid exceeding GHL. Many crab seasons could be extended well beyond recent season lengths. The stocks only need to be protected during vulnerable soft shell periods, and during mating seasons. Processors, would also probably resist, or discount, crab harvested soon after molting when there is poor infill.

It should be noted that conservative initial allocations of PQs would be more disruptive to the industry than liberal allocations. Large vessels may not profitably operate with very limited number of pots. Some smaller vessels may remain profitable with small number of pots. The price of PQs could be bid up rapidly, and many firms exit the industry. Conservatively set pot caps would lead to a highly inefficient harvesting sector in periods of high stock populations and high GHLs.

Ghost fishing has been a major problem in several crab fisheries, particularly, the Bering sea snow crab fishery. Pot limits, by reducing the amount of gear a vessel has to retrieve, were viewed as an effective way of limiting lost pots. This restriction on total vessel gear would be lost under an ITPQ program, and the program might increase ghost fishing in comparison to the status quo. This could be controlled by including in the ITPQ program a separate cap on the number of pots an individual vessel could fish.

Safety of fishery participants may also be affected by the amount of onboard gear storage. Increased pots on a vessel may affect vessel stability, a concern in the rough waters of the Bering Sea, particularly in the fall/winter seasons when severe onboard icing occurs. Again, potential stability problems could be addressed through an individual vessel pot cap. Additional safety concerns revolve around the derby style nature of many crab fisheries. The race for fish leads to dangerous working conditions, which are not alleviated by ITPQ programs.

A final management issue to be addressed is that of bycatch. It is commonly believed that there is high mortality to non-targeted sublegal and female bycatch. Some industry participants have contended that bycatch is inversely related to soak time. There have been unconfirmed reports that bycatch was increased under pot limits because fishers reduced soak time in response to fishing less gear. This contention should be examined and industry should be consulted regarding the potential effects of an ITPQ program to soak time and bycatch. Effects of any rationalization measure to bycatch should be a critical concern in policy formulation.

Additional Considerations

An ITPQ program will create new markets for PQs. From inception, these markets are expected to be very active. As previously noted, the volatility of GHLs, as well as changing market conditions, should contribute to PQs being viewed as risky assets. Accordingly, individuals or corporations with better ability to withstand the market risks may be more active participants in PQ markets.

The risk associated with highly unpredictable GHLs and market conditions cannot be alleviated. However, added risk from uncertainty regarding the ITPQ program can be alleviated through the program design and implementation. One important way for this to be accomplished is to announce at the onset the policy regarding restrictions on PQ ownership and transfers, such as size class restrictions and monopoly caps, and planned pot cap reductions. This will allow industry participants to more accurately assess the value of a PQ and better plan future operations. More complete market information should enhance PQ market liquidity, and thereby facilitate PQ sales and purchases, and keep the market price of PQs closer to their actual value.

It may also be advisable to delay implementing any planned pot reduction program for a transitory period. This would allow for operators to adjust to the new management setting, and allow the PQ market to develop and settle.

It is also important for market stability that fishery participants believe there is stability in the ITPQ program. Uncertainty associated with fluctuating polices will lead to industry hesitation in the market for PQs. This will limit the ability of ITPQ programs to achieve their desired objectives. In some respects, the implementation of a ITPQ program represents a commitment on the part of the managers to manage the crab fisheries within the designated parameters.

An important consideration in rationalization of the fisheries is potential effects of a management plan to the economies of coastal communities. An ITPQ program could negatively impact coastal communities dependent on on-shore processing if they led to increased harvest shares by CPs. As previously noted, CPs may be in a better financial position to acquire PQs than CVs. Thus, an ITPQ program may lead to expansion of the CP fleet, reducing the availability of crab to shore-based processors. Potential concentration of PQs among CPs would be mitigated by restriction of PQs according to vessel class. Another option, that was not included in the ITPQ program we were asked to consider, would be a restriction on PQ transfers between CPs and CVs.

An additional concern in some coastal communities that are home to primarily smaller vessel fleets, is that these vessels will be displaced under the adopted management plan. This would have secondary impacts to the general economies of the communities. We have previously discussed expected changes in fleet composition. A restriction on PQ transfers across size classes may address this concern.

Concluding Comments

It is difficult to predict how an ITPQ program will affect the current practices of the Alaska crab fisheries fleet. This would represent a fundamental change in the institutional setting under which the crab fisheries are prosecuted, and past behavior may not be a good indicator of future behavior under this changed setting. However, there are certain effects that are likely to take place.

We would expect some fleet consolidation to occur under an ITPQ program. However, the race for fish will continue under ITPQ programs, and may be exasperated as PQs gravitate toward fishers who fish pots most effectively. Some efficiency gains may be achieved through owners being able to make investment decisions with full knowledge of how many pots will be on the fishing grounds.

Fishing effectiveness would be enhanced by allowing vessels to determine the optimal number of pots that they fish. Participants in the fishery may prefer the ability to make their own decisions and to use their skill to determine their financial success. Skill rents will still be available to the most successful skippers and crew. Vessels which wish to exit the fishery or to downsize would receive compensation from those wishing to enter the fishery or expand harvest, in other words, from those able to fish pots more effectively.

The fishing season may be shortened due to pots being fished more effectively, and increased fishery capitalization. Desired minimum season lengths could be achieved through a planned pot reduction program that would, over time, lower the total pot caps in the crab fisheries. A pot cap reduction could protect stock viability in periods of depressed stock conditions. In periods of stock abundance, extensive season lengths may be necessary to harvest the GHL.

Allowing vessels to increase the number of pots they fish could allow for the occurrence of increased ghost fishing, and decreased crew safety. If this is deemed a potentially significant problem it could be addressed through an individual vessel pot cap.

Given the uncertainties that already exist in the crab fisheries, every effort should be taken to minimize any additional uncertainties introduced with an ITPQ program. Because the PQs are a risky asset, vessel owners which can best absorb risk will be in an advantageous position to acquire PQs. The program needs to be well defined at the onset to reduce these risks, including any information regarding future planned pot reductions. In addition, it is important that fishery participants are confident that there is stability in the ITPQ program.

An ITPQ program may result in an increased CP fleet, which could negatively affect on-shore processors and coastal communities. Potential displacement may be mitigated by eliminating PQ transfers across vessel size classes. However, restrictions on transfers could reduce returns to PQ holders in the vessel size class that has the lowest demand for PQs. We would expect this to be the small size class.

The ITPQ program should be viewed as an alternative to license limitations. Both policies restrict the amount of effort in the fishery. Therefore, enacting both management programs would be redundant, and unnecessarily increase the programs' complexity and costs to both fishery managers and participants. Additionally, a license limitation program would needlessly interfere with the liquidity of PQ markets, reducing the value of PQs, and limit the markets' ability to allocate PQs to their highest and best use.

A more complete analysis of potential effects of an ITPQ program could be accomplished through consideration of recent fishery performance data. Unfortunately, there was not time for this to be completed prior to the April Council meeting. However, it is the intention of the authors to carry forth this task in the near future. This will provide better information for policy setting.

Finally, we note that there should be additional analysis comparing the benefits and costs of an ITPQ program to those associated with alternative rationalization programs. It is likely that the benefits of an ITPQ program could also be obtained under an IFQ program, and that some of the problems that continue under an ITPQ program would be eliminated under an IFQ program.

Year	Vessels	Harvest (nos.)	Harvest (lbs.)	Potlifts	No. Pots Registered	Season Length (days)
80	236	20845350	129948463	567292	78352	40
81	177	5307947	33703903	542425	75756	91
82	90	541006	3001210	141656	36166	30
83	0	0	0	0	0	0
84	89	794040	4182406	112556	21762	15
85	128	796181	4174953	85003	30117	8
86	159	2099576	11393934	178370	32468	13
87	236	2112202	12289067	220871	63000	12
88	200	1236131	7387795	153004	50099	8
89	211	1684706	10264971	208684	55000	12
90	240	3120326	20362342	262131	69906	12
91	302	2630446	17177894	227565	89068	7
92	281	1196958	8043018	205940	68189	7

Source: Westward Region Report to the Alaska Board of Fisheries

Table 1: Bristol Bay Red King Crab Fishery: Total Number of Vessels in the Fleet; Fleet Harvest by Number of Crab; Fleet Harvest by Weight; Total Fleet Potlifts; Total Number of Registered Pots; and Season Length.

		VESSELS		
		LENGTH	NUMBER	PCTN
YEAR	SIZE			
86	LARGE	151.13	15.00	9.62
	SMALL	91.35	141.00	90.38
	ALL	97.10	156.00	100.00
87	SIZE			
	LARGE	150.73	44.00	19.47
	SMALL	90.28	182.00	80.53
	ALL	102.05	226.00	100.00
88	SIZE			
	LARGE	153.18	44.00	22.22
	SMALL	93.12	154.00	77.78
	ALL	106.46	198.00	100.00
89	SIZE			
	LARGE	153.51	43.00	20.87
	SMALL	92.52	163.00	79.13
	ALL	105.25	206.00	100.00
90	SIZE			
	LARGE	153.96	47.00	19.58
	SMALL	94.54	193.00	80.42
	ALL	106.17	240.00	100.00
91	SIZE			
	LARGE	153.70	63.00	21.14
	SMALL	96.20	235.00	78.86
	ALL	108.36	298.00	100.00

Table 2. Bristol Bay Red King Crab Fishery 1986-1991. Average Vessel Length by Vessel Size Class; Number of Vessels Within Each Size Class; and Percentage of Fleet Within Vessel Size Class (PCTN).

		POTS
		MEAN
YEAR	SIZE	
86	LARGE	271.87
	SMALL	189.30
	ALL	197.24
87	SIZE	
	LARGE	277.68
	SMALL	172.63
	ALL	193.08
88	SIZE	
	LARGE	328.39
	SMALL	216.62
	ALL	241.46
89	SIZE	
	LARGE	350.65
	SMALL	232.17
	ALL	256.90
90	SIZE	
	LARGE	393.94
	SMALL	262.33
	ALL	288.10
91	SIZE	
	LARGE	394.10
	SMALL	266.97
	ALL	293.51

Table 3. Bristol Bay Red King Crab Fishery 1986-1991. Average Number of Pots Registered Per Vessel, by Vessel Size Class.

		HARVEST		
		MEAN	SUM	PCTN
YEAR	SIZE			
86	LARGE	100415.80	1506237.00	9.55
	SMALL	67012.12	9515721.00	90.45
	ALL	70203.55	11021958.00	100.00
87	SIZE			
	LARGE	78292.73	3444880.00	19.21
	SMALL	47122.58	8717677.00	80.79
	ALL	53111.60	12162557.00	100.00
88	SIZE			
	LARGE	45516.39	2002721.00	22.00
	SMALL	34587.55	5395658.00	78.00
	ALL	36991.89	7398379.00	100.00
89	SIZE			
	LARGE	62013.98	2666601.00	20.77
	SMALL	45176.30	7408914.00	79.23
	ALL	48673.99	10075515.00	100.00
90	SIZE			
	LARGE	123022.96	5782079.00	19.50
	SMALL	74844.83	14519897.00	80.50
	ALL	84240.56	20301976.00	100.00
91	SIZE			
	LARGE	78645.89	4954691.00	21.07
	SMALL	51131.17	12066955.00	78.93
	ALL	56928.58	17021646.00	100.00

Table 4. Bristol Bay Red King Crab Fishery 1986-1991. Average Vessel Harvest, by Vessel Size Class.

		CPUE
		MEAN
YEAR	SIZE	
86	LARGE	78.37
	SMALL	61.61
	ALL	63.22
87	SIZE	
	LARGE	64.22
	SMALL	52.28
	ALL	54.57
88	SIZE	
	LARGE	51.85
	SMALL	49.05
	ALL	49.67
89	SIZE	
	LARGE	50.95
	SMALL	49.34
	ALL	49.68
90	SIZE	
	LARGE	91.53
	SMALL	73.93
	ALL	77.37
91	SIZE	
	LARGE	86.63
	SMALL	71.78
	ALL	74.91

Table 5. Bristol Bay Red King Crab Fishery 1986-1991. Average Catch Per Unit Effort, by Vessel Size Class (in pounds).

		POTPICKS
		MEAN
YEAR	SIZE	
86	LARGE	4.56
	SMALL	6.11
	ALL	5.96
87	SIZE	
	LARGE	3.81
	SMALL	4.73
	ALL	4.54
88	SIZE	
	LARGE	2.82
	SMALL	3.22
	ALL	3.14
89	SIZE	
	LARGE	3.61
	SMALL	4.08
	ALL	3.98
90	SIZE	
	LARGE	3.66
	SMALL	3.91
	ALL	3.86
91	SIZE	
	LARGE	2.41
	SMALL	2.90
	ALL	2.80

Table 6. Bristol Bay Red King Crab Fishery 1986-1991. Average Number of Times Each Pot is Lifted, by Vessel Size Class.

		VESSELS		
		LENGTH	NUMBER	PCTN
YEAR	SIZE			
86	LARGE	147.09	11.00	13.25
	SMALL	96.56	72.00	86.75
	ALL	103.25	83.00	100.00
87	SIZE			
	LARGE	147.81	16.00	15.84
	SMALL	94.88	85.00	84.16
	ALL	103.27	101.00	100.00
88	SIZE			
	LARGE	154.53	43.00	25.44
	SMALL	94.47	126.00	74.56
	ALL	109.75	169.00	100.00
89	SIZE			
	LARGE	153.00	45.00	27.11
	SMALL	97.12	121.00	72.89
	ALL	112.27	166.00	100.00
90	SIZE			
	LARGE	153.43	44.00	24.58
	SMALL	95.67	135.00	75.42
	ALL	109.87	179.00	100.00
91	SIZE			
	LARGE	208.24	54.00	24.88
	SMALL	98.04	163.00	75.12
	ALL	125.47	217.00	100.00

Table 8. Bering Sea Snow Crab Fishery 1986-1991. Average Vessel Length by Vessel Size Class; Number of Vessels Within Each Vessel Size Class; and Percentage of Fleet Within Vessel Size Class (PCTN).

		POTS
		MEAN
YEAR	SIZE	
86	LARGE	233.25
	SMALL	238.06
	ALL	237.39
87	SIZE	
	LARGE	287.13
	SMALL	220.68
	ALL	231.76
88	SIZE	
	LARGE	367.00
	SMALL	289.49
	ALL	313.97
89	SIZE	
	LARGE	319.40
	SMALL	259.89
	ALL	276.95
90	SIZE	
	LARGE	341.57
	SMALL	251.33
	ALL	274.32

Table 9. Bering Sea Snow Crab 1986-1990. Average Number of Pots Registered Per Vessel, by Vessel Size Class.

		HARVEST		
		MEAN	SUM	PCTN
YEAR	SIZE			
86	L	1576811.73	17344929.00	12.64
	S	1034320.03	78608322.00	87.36
	ALL	1102910.93	95953251.00	100.00
87	SIZE			
	L	1207572.81	19321165.00	15.53
	S	937974.41	81603774.00	84.47
	ALL	979853.78	100924939.00	100.00
88	SIZE			
	L	969717.12	41697836.00	25.15
	S	696248.99	89119871.00	74.85
	ALL	765015.83	130817707.00	100.00
89	SIZE			
	L	1258554.51	56634953.00	26.63
	S	733921.88	91006313.00	73.37
	ALL	873616.96	147641266.00	100.00
90	SIZE			
	L	1440789.66	63394745.00	23.28
	S	664583.14	96364556.00	76.72
	ALL	845287.31	159759301.00	100.00
91	SIZE			
	L	2213552.48	119531834.00	24.55
	S	1231534.39	204434708.00	75.45
	ALL	1472575.19	323966542.00	100.00

Table 10. Bering Sea Snow Crab Fishery 1986-1991. Average Vessel Harvest, by Vessel Size Class.

		CPUE
		MEAN
YEAR	SIZE	
86	L	181.40
	S	173.70
	ALL	174.68
87	SIZE	
	L	151.31
	S	158.09
	ALL	157.03
88	SIZE	
	L	168.28
	S	164.36
	ALL	165.35
89	SIZE	
	L	213.92
	S	215.93
	ALL	215.39
90	SIZE	
	L	199.88
	S	154.02
	ALL	164.70
91	SIZE	
	L	256.98
	S	223.00
	ALL	231.34

Table 11. Bering Sea Snow Crab Fishery 1986-1991. Average Catch Per Unit Effort, by Vessel Size Class (in pounds).

Year	Vessels	Harvest (nos.)	Harvest (lbs.)	Potlifts	No. Pots Registered	Season Length (days)
79/80	134	25286777	39572668	255022	35503	307
81	153	34415322	52750034	435742	39789	229
82	122	24089562	29355379	469091	35522	167
83	109	23838149	26128410	287127	15396	120
84	52	21009935	26813074	173591	12493	320
85	75	52903246	65998875	372045	15325	333
86	88	76499123	97984539	543744	13750	252
87	103	81307659	101903388	616113	19386	158
88	171	105716337	134060185	766907	38765	120
89	168	112618881	149455848	663442	43607	112
90	189	128977638	161821350	911613	46440	148
91	220	265123960	328647269	1391583	76056	159
92	250	227376582	315302034	1281796	77858	97

Source: Westward Region Report to the Alaska Board of Fisheries

Table 7: Bering Sea Snow Crab Fishery: Total Number of Vessels in the Fleet; Fleet Harvest by Number of Crab; Fleet Harvest by Weight; Total Fleet Potlifts; Total Number of Pots Registered; and Season Length.

APPENDIX VI

Analysis of Proposed Exclusion of Area Species Licenses For

Gulf of Alaska Rockfish

Exclusion of *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder in the GOA

This appendix has been prepared to provide information to the Council regarding the proposed exclusion of area species licenses for GOA *Sebastes*[1] rockfish, flathead sole, and Arrowtooth flounder. It summarizes the distribution of target fisheries, bycatch, and ex-vessel revenue for those vessels which reported catch of *Sebastes* rockfish, flathead sole, and Arrowtooth flounder in the GOA in 1993. The data used were provided by industry to the Alaska Department of Fish and Game, the Commercial Fisheries Entry Commission (CFEC), and National Marine Fisheries Service. Although the information includes arrowtooth flounder and flathead sole, the primary focus will be on rockfish, which is a primary, high valued target species in the GOA for a relatively small sector of the industry.

Overview of EAR/RIR/IRFA for Amendment 26 to GOA Groundfish Fishery Management Plan

At the September 1991 meeting, the Council identified several amendment proposals. One such proposal was to prohibit trawlers from fishing east of 140 degrees West longitude in the Eastern Gulf of Alaska. In response to the proposed amendment, an EA/RIR/IRFA was written to provide background information on the groundfish fleet in the Eastern Gulf of Alaska. This document is relevant because in the EG, the major trawl species are rockfish. The proposal to prohibit trawling in the EG would have had some of the same impacts as would the elimination of rockfish species as a target fishery in the GOA. The economic portion of the EA/RIR/IRFA document will provide some initial background information on the groundfish fleet in the Gulf.

The Eastern Gulf (EG) groundfish fleet during 1990 and 1991 characterizes, in most cases, the entire Gulf groundfish fleet in 1993. Vessels which harvest groundfish are either catcher/processors or shore-based catcher vessels. Catcher/processors are few whereas shore-based vessels number in the hundreds. Average catch for groundfish is higher for catcher/processors. Trawlers tend to concentrate on pollock, Pacific cod, and *Sebastes* rockfish, while longliners favor sablefish, Pacific cod, and demersal shelf rockfish.

The catcher/processor fleet operating in the EG during the 1990 and 1991 period were either trawlers or longliners. The number of trawlers in 1990 was 11 with average retained landings of 595.1 mt, and in 1991 there were 10 vessels with an average retained landing of 711.3 mt. The other slope rockfish group was the primary species for trawlers in 1990 accounting for 77% of their total retained groundfish (this was when POP was included in the other slope category). The following year, pollock was the primary species accounting for 48% of total retained groundfish.[2] Six catcher/processor longliners were operating the EG during 1990 and 9 vessels in 1991. Average retained landings for longliners were 36 mt in 1990 and 74.7 in 1991. Sablefish was the primary species for longliners in 1990 and 1991 at over 90% of their total retained groundfish.

The shore-based catcher fleet is composed of longliners, trawlers, jig, troll, and other salmon gear vessels. For the purposes of this analysis, this discussion will center only around longliners and trawlers. For trawlers, the primary fishery during the 1990 period was rockfish and in 1991 pollock and Pacific cod. However, actual catch data and vessel numbers for shore-based trawlers were not presented in the EA/RIR/IRFA due to the confidential nature of the data. The number of longline vessels operating the EG during 1990 and 1991 were 774 and 835, respectively. Average retained landings for longliners was 13.8 mt in 1990 and 11.9 mt

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[1]Specifically, the GOA *Sebastes* rockfish are Pacific Ocean perch, shortraker and rougheye rockfish, other slope rockfish, northern rockfish, and pelagic shelf rockfish. Thornyheads, genius *Sebastoslobus*, will be included in this category.

[2]In 1991, Pacific Ocean perch and shortraker/rougheye rockfish were separated out from other slope rockfish species group.

1991. The primary fishery for longliners, sablefish, accounted for 91% of their total retained catch in 1990 and 87% in 1991.

Number of Vessels Targeting *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder in 1993 for the GOA

Table 3.21 summarizes the number of vessels targeting[3] *Sebastes* rockfish, flathead sole, and Arrowtooth flounder in the GOA for 1993 by vessel type, gear, and species. The target species with the largest number of participants was *Sebastes* rockfish with 21 catcher/processors and 219 shore-based catcher vessels, respectively.[4] Of the 22 catcher/processors which participated in the rockfish fishery, 15 were trawlers and 7 were longline vessels. With the exception of other slope rockfish, nearly all the catcher/processor trawlers which participated in the *Sebastes* rockfish fishery targeted on each of the *Sebastes* rockfish categories. The distribution of the shore-based catcher vessels targeting on *Sebastes* rockfish was 164 longliners, 5 trawlers, and 43 vessels using other gear. Shortraker/rougheye had the largest number of possible participants at 115 followed closely by thornyheads at 107. **(Use of the term 'target' may be misleading here. It is reported as target due to nature of fish ticket records for these vessels. In actuality, most of these vessels merely landed, as opposed to targeted, these species.)**

Table 3.21 Number of Vessels Targeting *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder by Vessel Type and Gear

	Catcher/Processors		Shore-Based Vessels		
	Number of Vessels		Number of Vessels		
Fishery	Longline	Trawl	Longline	Trawl	Other
Arrowtooth Flounder	1	9	0	23	1
Flathead Sole	0	0	0	18	0
Sebastes Rockfish	7	15	164	5	43
Northern Rockfish	0	14	0	4	0
Pelagic Rockfish	1	15	44	3	39
Pacific Ocean Perch	0	14	3	2	0
Slope Rockfish-93	0	12	34	1	20
Other Slope Rockfish	3	6	45	2	18
Shortraker/Rougheye	4	14	90	3	4
Thornyheads	3	15	82	4	3

Quantity and Value of *Sebastes* Rockfish, Flathead Sole, and Arrowtooth

One way to estimate industry-wide producer surplus for *Sebastes* rockfish, flathead sole, and Arrowtooth flounder is to estimate the wholesale revenue at the point where processors sell to wholesalers and subtract ex-vessel value and the cost associated with production of processing the raw product. This amount, called

[3]In order to determine the target fishery for ADF&G fish ticket data, the current NMFS PSC accounting definitions were utilized, with the exception of trawl harvested midwater pollock which was aggregated with trawl bottom pollock. The target fisheries were already established for the NMFS weekly production reports.

[4]The total number of vessels reported in Table 3.25 sums to more than totals reported in the text because some vessels targeted species with more than one gear type.

net first wholesale revenue, includes only the value added portion of the wholesale price. The value associated with ex-vessel production, often the largest cost for processors, is readily available. However, the cost associated with processing the raw product is not known. As a result, to estimate net first wholesale value, processing costs are assumed zero and the estimate of net first wholesale revenue would fall between the ex-vessel value and first wholesale revenue absent ex-vessel value. This estimated first wholesale revenue will be referred to as net first wholesale revenue for this analysis.

Ex-Vessel Value

To estimate ex-vessel revenue for *Sebastes* rockfish, flathead sole, and Arrowtooth flounder, ex-vessel prices for both catcher/processors and shore-based catcher vessels were supplied by Pacific Coast Fisheries Information Network (PACFIN). "Ex-vessel price" is the price paid to fishermen for their catch. Since catcher/processors process their own catch, there is no reported ex-vessel price. To make up for the absence of an ex-vessel price, PACFIN, using best available shore based ex-vessel prices, estimated the ex-vessel price for catcher/processors. Table 3.22 summarizes the ex-vessel prices supplied by PACFIN which were used in the analysis. Prices were for all gears and combined fish tickets and weekly processor reports in the GOA.

Table 3.22 Pacific Coast Fisheries Information Network Ex-Vessel Prices by Species for all Gears and Combined State Fish Tickets and Weekly Processor Reports in the Gulf of Alaska.

Species	Ex-Vessel Price
Arrowtooth Flounder	.060
Flathead Sole	.134
Deep Water Flatfish	.186
Shallow Water Flatfish	.165
Northern Rockfish	.209
Pacific Ocean Perch	.227
Thornyheads	.439
Shortraker/Rougheye	.341
Demersal Shelf Rockfish	.420
Pelagic Shelf Rockfish	.379
Slope Rockfish-93	.136
Pacific Cod	.173
Sablefish	.918
Pollock	.080

A summary of the estimated ex-vessel value and pounds harvested by target species for both catcher/processors and shore-based catcher vessels is represented in Table 3.23. Catch will refer to the harvest of target fishery and does not include bycatch which will be addressed later in the analysis. The most obvious difference between catcher/processors and shore-based vessels is the distribution of catch by target species. Over 88% of the total *Sebastes* rockfish, with the exception of demersal shelf rockfish, is caught by catcher/processors. Nearly one hundred percent of the slope rockfish-93 group was harvested by catcher/processors. Shore-based catcher vessels caught the majority of those species remaining. One hundred percent of the flathead sole and over 80% of Pacific cod, pollock, and shallow water flatfish were harvested by shore-based catcher vessels. Sablefish and demersal shelf rockfish were slightly lower at 79% and 76%, respectively.

Catch and ex-vessel value distribution by vessel type, summarized in Table 3.24, demonstrates the relative importance the *Sebastes* rockfish fishery to the catcher/processor fleet. *Sebastes* rockfish was second to pollock in total pounds harvested, at 36% or 29.3 million pounds, and second to sablefish in total ex-vessel value at 36% or $5.2 million. Of the individual rockfish species, northern and slope-93 were the primary fisheries. Other species which contributed more than 10% of the total estimated ex-vessel value for catcher/processors were pollock at $2.5 million and Pacific cod at $2.2 million. For shore-based catcher vessels, sablefish was the largest revenue source at $23.5 million or 43% of total ex-vessel revenue followed by pollock and Pacific cod at 29% and 23%, respectively. Only 1% of the estimated ex-vessel value was from the *Sebastes* rockfish group.

Tables 3.25 and 3.26 summarize the catch and estimated ex-vessel value by species for the individual gears within each of the vessel classes. For the catcher/processors, trawlers contributed the largest portion of the harvest at 87% and ex-vessel revenue at 58%. Of the 87% trawl catch, pollock and *Sebastes* rockfish were the primary species at 30% and 26%, respectively. The largest fisheries in terms of pounds for the catcher/processor longliners were Pacific cod and sablefish at 7% and 6%, respectively, of the total catch by catcher/processors. However, sablefish contributed 34% of the total ex-vessel value. The longline *Sebastes* rockfish fishery amounted to less than 1% of the total harvest or ex-vessel revenue.

Table 3.23 Target Catch, Estimated Ex-vessel Value, and Percentages of Totals by species for those Catcher/Processors and Shore-Based Catcher Vessels Who Targeted *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder in the Gulf of Alaska for the 1993 Period.

	Catcher/Processors			Shore-Based Catcher Vessels			Total by Species	
Species	Pounds	Ex-Vessel Value	% of Total Ex-Vessel Value by Species	Pounds	Ex-Vessel Value	% of Total Ex-Vessel Value by Species	Total Pounds	Total Ex-Vessel Value
Arrowtooth	3505971	781831	47%	4018702	896171	53%	7524673	1678002
Demersal Shelf Rockfish	482808	127461	24%	1542185	407137	76%	2024993	534598
Deep Water Flatfish	8776996	860146	66%	4556228	446510	34%	13333224	1306656
Flathead Sole			0%	1787865	230635	100%	1787865	230635
Northern Rockfish	10082281	2107197	85%	1742840	364254	15%	11825121	2471451
Other Slope Rockfish	27711	7316	34%	53166	14036	66%	80877	21352
Pacific Cod	13300652	2247810	15%	75002813	12675475	85%	88303465	14923285
Pelagic Shelf Rockfish	5538013	559339	86%	939075	94847	14%	6477088	654186
Pollock	33692520	2526939	13%	216133612	16210021	87%	249826132	18736960
Pacific Ocean Perch	2418094	207956	85%	438830	37739	15%	2856924	245695
Sablefish	6712835	6316778	21%	25023846	23547439	79%	31736681	29864217
Shallow Water Flats	1241178	184935	7%	15520365	2312534	93%	16761543	2497469
Slope Rockfish-93	8903601	1771817	100%	42986	8554	0%	8946587	1780371
Shortraker/Rougheye	1675508	271432	86%	274085	44402	14%	1949593	315834
Thornyheads	631170	239845	82%	139443	52988	18%	770613	292833
Other Species	14836924	—	—	9122642	—	—	23959566	—
Totals	84223563	14326851	21%	347216041	54983999	79%	431439604	69310850

Table 3.24 Target Catch and Estimated Ex-vessel Value by Vessel Type for those Catcher/Processors and Shore-Based Catcher Vessels Who Targeted *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder in the Gulf of Alaska for the 1993 Period.

	Catcher/Processors				Shore-Based Catcher Vessels			
Species	Pounds	% of Total Pounds Value for C/P	Ex-Vessel Value	% of Total Ex-Vessel Value for C/P	Pounds	% of Total Pounds Value for C/V	Ex-Vessel Value	% of Total Ex-Vessel Value for C/V
Arrowtooth	3505971	4%	781831	5%	4018702	1%	896171	2%
Demersal Shelf Rockfish	482808	1%	127461	1%	1542185	0%	407137	1%
Deep Water Flatfish	8776996	10%	860146	6%	4556228	1%	446510	1%
Flathead Sole	0	0%	0	0%	1787865	1%	230635	0%
Northern Rockfish	10082281	12%	2107197	15%	1742840	1%	364254	1%
Other Slope Rockfish	27711	0%	7316	0%	53166	0%	14036	0%
Pacific Cod	13300652	16%	2247810	16%	75002813	22%	12675475	23%
Pelagic Shelf Rockfish	5538013	7%	559339	4%	939075	0%	94847	0%
Pollock	33692520	40%	2526939	18%	216133612	62%	16210021	29%
Pacific Ocean Perch	2418094	3%	207956	1%	438830	0%	37739	0%
Sablefish	6712835	8%	6316778	44%	25023846	7%	23547439	43%
Shallow Water Flats	1241178	1%	184935	1%	15520365	4%	2312534	4%
Slope Rockfish-93	8903601	11%	1771817	12%	42986	0%	8554	0%
Shortraker/Rougheye	1675508	2%	271432	2%	274085	0%	44402	0%
Thornyheads	631170	1%	239845	2%	139443	0%	52988	0%
Other Species	14836924	—	—	—	9122642	3%	—	—
Totals	84223563	100%	14326851	100%	347216041	100%	54983999	100%

Table 3.25 Target Catch and Estimated Ex-vessel Value for Catcher/Processors Gear Classes by Groundfish Species Who Targeted *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder in the Gulf of Alaska for the 1993 Period.

Catcher/Processors					
Gear	**Species**	**Pounds**	**% of Total Pounds**	**Ex-vessel value**	**% of Total Value**
Longline	Arrowtooth	1,874	0.00%	$418	0.00%
Longline	Demersal Shelf Rockfish	37,278	0.03%	$9,841	0.05%
Longline	Deep Water Flatfish	29,166	0.03%	$2,858	0.02%
Longline	Other Slope Rockfish	2,006	0.00%	$530	0.00%
Longline	Pacific Cod	8,101,119	7.24%	$1,369,089	7.52%
Longline	Pelagic Shelf Rockfish	1,014	0.00%	$102	0.00%
Longline	Sablefish	6,682,942	5.98%	$6,288,648	34.53%
Longline	Shortraker/Rougheye	73,520	0.07%	$11,910	0.07%
Longline	Thornyheads	4,255	0.00%	$1,617	0.01%
Misc	Pacific Cod	7,275	0.01%	$1,229	0.01%
Pot	Pacific Cod	27,644	0.02%	$4,672	0.03%
Trawl	Arrowtooth	3,504,097	3.13%	$781,414	4.29%
Trawl	Demersal Shelf Rockfish	445,529	0.40%	$117,620	0.65%
Trawl	Deep Water Flatfish	8,747,831	7.82%	$857,287	4.71%
Trawl	Northern Rockfish	10,082,281	9.02%	$2,107,197	11.57%
Trawl	Other Slope Rockfish	25,704	0.02%	$6,786	0.04%
Trawl	Other Species	14,836,924	13.27%	—	—
Trawl	Pacific Cod	5,164,614	4.62%	$872,820	4.79%
Trawl	Pelagic Shelf Rockfish	5,536,999	4.95%	$559,237	3.07%
Trawl	Pollock	33,692,520	30.13%	$2,526,939	13.88%
Trawl	Pacific Ocean Perch	2,418,094	2.16%	$207,956	1.14%
Trawl	Sablefish	29,893	0.03%	$28,129	0.15%
Trawl	Shallow Water Flatfish	1,241,178	1.11%	$184,935	1.02%
Trawl	Slope Rockfish-93	8,903,601	7.96%	$1,771,817	9.73%
Trawl	Shortraker/Rougheye	1,601,988	1.43%	$259,522	1.43%
Trawl	Thornyheads	626,916	0.56%	$238,228	1.31%
Total		111,826,262	100.00%	$18,210,801	100.00%

Table 3.26 Target Catch and Estimated Ex-vessel Value for Gear Classes of Shore-Based Vessels by Groundfish Species Who Targeted *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder in The Gulf of Alaska for the 1993 Period.

Shore-Based Catcher Vessels					
Gear	**Species**	**Pounds**	**% of Total Pounds**	**Ex-vessel value**	**% of Total Value**
Longline	Demersal Shelf Rockfish	1,501,546	0.42%	$396,408	0.69%
Longline	Deep Water Flatfish	124,746	0.04%	$12,225	0.02%
Longline	Other Slope Rockfish	39,766	0.01%	$10,498	0.02%
Longline	Other	302,451	0.08%	—	—
Longline	Pacific Cod	6,151,243	1.73%	$1,039,560	1.81%
Longline	Pelagic Shelf Rockfish	77,797	0.02%	$7,857	0.01%
Longline	Pacific Ocean Perch	1,375	0.00%	$118	0.00%
Longline	Sablefish	24,843,185	6.97%	$23,377,437	40.77%
Longline	Shallow Water Flatfish	20,606	0.01%	$3,070	0.01%
Longline	Slope Rockfish-93	25,347	0.01%	$5,044	0.01%
Longline	Shortraker/Rougheye	87,353	0.02%	$14,151	0.02%
Longline	Thornyheads	59,808	0.02%	$22,727	0.04%
Trawl	Arrowtooth	3,994,702	1.12%	$890,819	1.55%
Trawl	Demersal Shelf Rockfish	5,644	0.00%	$1,490	0.00%
Trawl	Deep Water Flatfish	4,431,482	1.24%	$434,285	0.76%
Trawl	Flathead Sole	1,787,865	0.50%	$230,635	0.40%
Trawl	Northern Rockfish	1,742,840	0.49%	$364,254	0.64%
Trawl	Other Slope Rockfish	1,516	0.00%	$400	0.00%
Trawl	Other	8,425,926	2.36%	—	—
Trawl	Pacific Cod	61,313,503	17.21%	$10,361,982	18.07%
Trawl	Pelagic Shelf Rockfish	594,552	0.17%	$60,050	0.10%
Trawl	Pollock	215,934,136	60.60%	$16,195,060	28.24%
Trawl	Pacific Ocean Perch	437,455	0.12%	$37,621	0.07%
Trawl	Sablefish	176,498	0.05%	$166,085	0.29%
Trawl	Shallow Water Flatfish	15,412,709	4.33%	$2,296,494	4.01%
Trawl	Slope Rockfish-93	8,510	0.00%	$1,693	0.00%
Trawl	Shortraker/Rougheye	183,896	0.05%	$29,791	0.05%
Trawl	Thornyheads	78,736	0.02%	$29,920	0.05%
Other	Arrowtooth	24,000	0.01%	$5,352	0.01%
Other	Demersal Shelf Rockfish	34,995	0.01%	$9,239	0.02%
Other	Other Slope Rockfish	11,884	0.00%	$3,137	0.01%
Other	Other	394,265	0.11%	—	—
Other	Pacific Cod	7,538,067	2.12%	$1,273,933	2.22%
Other	Pelagic Shelf Rockfish	266,726	0.07%	$26,939	0.05%
Other	Pollock	199,476	0.06%	$14,961	0.03%
Other	Shallow Water Flatfish	80,450	0.02%	$11,987	0.02%
Other	Slope Rockfish-93	9,129	0.00%	$1,817	0.00%
Other	Shortraker/Rougheye	2,836	0.00%	$459	0.00%
Other	Thornyheads	899	0.00%	$342	0.00%
Total		356,327,920	100.00%	$57,337,840	100.00%

For the shore-based fleet, trawlers were also the largest contributor to both total catch and ex-vessel revenue at 88% and 54%, respectively. Pollock and Pacific cod were the primary targets at 61% and 17% of the total shore-based pounds harvested, respectively. Trawl-caught pollock and Pacific cod capture 46% of the total ex-vessel revenue. Shore-based longliners harvested only 9% of the total catch, but managed to captured 42% of the total ex-vessel revenue. The success of the shore-based longliners can be attributed to the sablefish fishery. Sablefish accounted for 75% of the total shore-based longline harvest and 7% of the total shore-based harvest. The success of the longline sablefish fishery is even more evident when comparing estimated ex-vessel value with other shore-based fisheries. The fishery accounted for 41% of the total estimated ex-vessel value for all shore-based vessels. The next closest fishery was trawl-caught pollock at 28%. *Sebastes* rockfish and the flathead sole had minimal impact on the harvest and ex-vessel revenue for shore-based longliners.

Examination of the distribution of *Sebastes* rockfish by individual vessels and companies, shows that nearly all of the TAC is harvested by 15 vessels and 9 companies. For 1993, 237 vessels participated in the *Sebastes* rockfish fishery. Of those 237 vessels, 15 accounted for 99% of the total catch. The top four vessels captured 51% of the total catch. Looking at individual companies that participated in the *Sebastes* rockfish fishery is even more startling. Nine companies accounted for 98% of the total catch, and the top four companies garnered 80% of the total catch. If *Sebastes* rockfish had been excluded from area, species licenses for the GOA during the 1993 period, 15 vessels or 9 companies would have had to drastically curtail their directed fishing of *Sebastes* rockfish.

In order to more accurately evaluate the economic impacts of this activity, or the prohibition of this activity, on the catcher/processor fleet targeting rockfish in the GOA, we need to move away from ex-vessel value as reported by PACFIN, and look at a more realistic value estimate for these species. The discussion below utilizes first wholesale value to determine these potential economic impacts.

Wholesale Market and Wholesale Value

The following information on rockfish markets are cited from the EA/RIR/IRFA for Amendment 26 dated May 7, 1992. After the rockfish is harvested, it is processed and is primarily sold to wholesale markets in either Japan or the U.S. Catcher/processors in most instances head, gut, and freeze the rockfish before exporting the majority of the product to Japan. Alaska rockfish commands a high price on the Japanese wholesale market due to its size, color and high oil content. Shore plants also tend to head, gut, and freeze rockfish before it is exported to Japan. Pelagic shelf rockfish is an exception, being filleted and sold in the domestic market fresh or frozen. Individual prices for rockfish species depend a great deal on the quality of the product and the species itself. Consumers tend to judge the quality of the rockfish by uniform red color, size of the fish, oil content, and consistency of the flesh. The Japanese favor a uniform red colored fish with a high oil content. Thornyhead is the preferred species in Japan followed by shortraker and rougheye rockfish. Domestic consumers favor a light flaky nonfishy tasting fish. An example would be demersal shelf rockfish.

During the heading and gutting or filleting of the rockfish, portions of the product are removed and are discarded. The remaining product is then frozen and shipped to the market. To accurately estimate wholesale revenue, the ratio of discards to final product, also known as product recovery rate, is required. Product recovery rates differ for individual processor, product type, and species. The product recovery rate used in this analysis, supplied by NMFS, is .50 which is associated with heading and gutting eastern style.[5]

In order to estimate first wholesale value for *Sebastes* rockfish, rockfish first wholesale prices reported in

[5]Heading and gutting eastern cut is removing the head just in front of the collar bone, and viscera removed.

North Pacific Fisheries Research Plan paper Establishing the Fee Percentage and Standard Ex-Vessel Prices for 1995 were used. The price reported was a 1993 price of $1.23 per pound product weight.

Assuming all harvested rockfish is processed and sold in the wholesale market, the estimated rockfish first wholesale value was $20 million. Taking into account ex-vessel value summarized in Table 3.24, net first wholesale value was $14 million for 1993. The catcher/processor sector was the largest contributor to net first wholesale value at $12 million. Shore-based vessels accounted for $1.6 million net first wholesale revenue for 1993. The estimated $14 million for total net first wholesale revenue represents a loss to the nation if *Sebastes* rockfish had been excluded from area species licenses for the 1993 period. If stock levels of these species rise in the future, then the foregone value from these fisheries would be larger. This estimate of potential foregone revenue does not take into account the catch resulting from bycatch. Implications to rockfish and halibut bycatch will be discussed further following the section on Bering Sea/Aleutian Island catch.

Bering Sea/Aleutian Islands Catch

Many of the vessels which targeted *Sebastes* rockfish, flathead sole, and arrowtooth flounder in the GOA for the 1993 period, also fished in the Bering Sea/Aleutian Islands. Table 3.27 summarizes landings by target species for the Bering Sea/Aleutian Islands for 1993. The primary target species for the catcher/processors was pollock at 1.84 billion pounds or 76% of the total harvest for catcher/processors. Other target species were yellowfin sole, Pacific cod, Atka mackerel, and rock sole. In the *Sebastes* rockfish fishery, catcher/processors that were the primary participants in the GOA fishery were also major players in the Bering Sea/Aleutians fishery. Catcher/processors harvested 34.1 million pounds of *Sebastes* rockfish which Pacific Ocean perch was the primary species at 33.6 million pounds or 89% of the Domestic Annual Processing Apportionments.

As shown in Table 3.27, rockfish accounted for about 2% of the total BSAI catch for those catcher/processors who also targeted rockfish in the GOA. However, the BSAI rockfish fishery is fully subscribed and there may be little opportu[illegible]y to make up.

The primary target species for shore-based catcher vessels was also pollock at 1.22 billion pounds or 86% of the total shore-based harvest. The remaining species which were greater than 1% of the total harvest were Pacific cod, flatfish,[6] and Atka mackerel. *Sebastes* rockfish harvest for shore-based catcher vessels was less than 1% with Pacific Ocean perch again the primary *Sebastes* species.

Table 3.27 Target Catch for those Catcher/Processors and Shore-Based Catcher Vessels by Groundfish Species in the Bering Sea/Alation Island That Targeted *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder in the Gulf of Alaska for the 1993 Period.

[6]For shore-based catcher vessels flatfish includes yellowfin sole, rock sole, and other flatfish.

Catcher/Processors		
Species	Pounds	% of Total in BS/AI for Catcher/Processors
Atka Mackerel	119,880,159	5%
Arrowtooth	18,804	0%
Other Species	87,938	0%
Pacific Cod	176,283,570	7%
Pollock	1,840,026,311	76%
Rockfish	36,722,319	2%
Rock Sole	80,741,951	3%
Sablefish	3,421,164	0%
Yellowfin Sole	178,344,689	7%
Total	2,435,526,905	100%

Shore-Based Catcher Vessels		
Species	Pounds	% of Total in BS/AI for Shore-Based Vessels
Atka Mackerel	10,418,119	2%
Arrowtooth	345,119	0%
Flatfish	28,988,111	7%
Greenland Turbot	2,335,733	1%
Other Species	73,772	0%
Pacific Cod	54,068,633	12%
Pollock	339,626,516	77%
Rockfish	2,875,956	1%
Sablefish	1,341,545	0%
Squid	223	0%
Total	440,073,727	100%

Bycatch Considerations

Up to this point, bycatch has not been considered in estimating the ex-vessel value and net first wholesale value for the nation if *Sebastes* rockfish, flathead sole, and Arrowtooth flounder are excluded from area species licensing in the GOA. The analysis has only concentrated on the harvest associated with the target fisheries. However, to more accurately estimate potential economic impacts, bycatch of *Sebastes* rockfish, flathead sole, and Arrowtooth flounder should be taken into account. In addition, the exclusion of *Sebastes* rockfish and Arrowtooth flounder from area species license might also impact the halibut PSC. These issues are explored in more detail in the sections that follow.

Bycatch of *Sebastes* Rockfish, Flathead Sole and Arrowtooth Flounder for 1993 period

Table 3.28 summarizes the catch of *Sebastes* rockfish, flathead sole, and Arrowtooth flounder by target species for the GOA in 1993. The total bycatch of *Sebastes* rockfish (i.e., catch of rockfish in all target species except rockfish) was 6.5 million pounds and flathead sole was 5.2 million pounds. Arrowtooth flounder had the highest bycatch at 25 million pounds. For catcher/processors the total bycatch of *Sebastes* rockfish, flathead sole, and Arrowtooth flounder was 4.2, 2.8, and 22 million pounds, respectively. Of the target fisheries for catcher/processors, deep water flatfish and other groundfish species had the largest bycatch of all three topic species.

Total bycatch for shore-based catcher vessels was 2.3 million pounds for *Sebastes* rockfish, 2.5 million pounds for flathead sole, and 3.3 million pounds for arrowtooth flounder. The sablefish target fishery had the largest bycatch of rockfish while shallow water flatfish target fishery had the highest bycatch for flathead sole and Arrowtooth flounder.

Assuming all of the bycatch for *Sebastes* rockfish, flathead sole, and Arrowtooth flounder is processed, and utilizing PACFIN supplied ex-vessel prices, ex-vessel value can be estimated for the bycatch fisheries. Please refer to Table 3.22 for ex-vessel prices for flathead sole and Arrowtooth flounder. An ex-vessel price for all rockfish and all gears reported by State fish tickets and weekly production reports for the GOA was used. The price, $.213, was supplied by PACFIN. Total ex-vessel value for the topic species was $7.6 million. The bycatch ex-vessel revenue for Arrowtooth flounder contributed the largest portion at $5.5 million. However, the ex-vessel price for Arrowtooth flounder, $.223, supplied by PACFIN is questionable. From 1990 to 1992 prices reported by PACFIN for Arrowtooth flounder have never been over $.10 a pound. For *Sebastes* rockfish in the GOA, the estimated ex-vessel bycatch value was $1.4 million. Flathead sole ex-vessel bycatch value was $671 thousand. Total ex-vessel value for *Sebastes* rockfish target and bycatch fisheries was $6.6 million.

First wholesale value for the bycatch of *Sebastes* rockfish was $4 million using in 1993. Subtracting ex-vessel value, the net first wholesale value for *Sebastes* rockfish was $2.6 million. Combining both total net first wholesale values associated with *Sebastes* target and bycatch fishery amounts to $17 for 1993.

Table 3.28 Bycatch of *Sebastes* Rockfish, Flathead Sole, and Arrowtooth Flounder by Target Species for Gulf of Alaska during the 1993 period.

Catcher/Processors			
	Topic Species		
	Arrowtooth (lbs)	Flathead Sole (lbs)	Rockfish (lbs)
Target Species			
Arrowtooth	3,505,971	33,641	393,217
Deep Water Flatfish	13,723,850	1,101,941	1,371,971
Flathead Sole	0	0	0
Pacific Cod	1,356,164	140,427	15,520
Pollock	61,550	9,479	5,666
Rockfish	2,280,026	14,594	29,276,377
Sablefish	413,763	242	675,415
Shallow Water Flatfish	1,408,499	158,151	57,824
Other Species	2,363,092	1,292,961	1,701,080
Total	**25,112,915**	**2,751,436**	**33,497,070**

Shore-Based Catcher Vessels			
	Topic Species		
	Arrowtooth (lbs)	Flathead Sole (lbs)	Rockfish (lbs)
Target Species			
Arrowtooth	4,018,702	679,649	236,881
Deep Water Flatfish	464,205	371,727	297,774
Demersal Shelf Rockfish	0	0	41,988
Flathead Sole	285,007	1,787,865	45,368
Pacific Cod	428,513	208,476	163,281
Pollock	521,787	213,130	222,065
Rockfish	241,204	15,201	3,630,425
Sablefish	185,173	0	853,995
Shallow Water Flatfish	1,124,725	960,222	93,216
Other Species	27,662	5,937	352,621
Total	**7,296,978**	**4,242,207**	**5,937,614**

Maximum *Sebastes* Rockfish Bycatch using Directed Fishing and PSC Standards

If rockfish were excluded as a future target fishery in the GOA, we want to examine what the potential catch would be under allowable directed fishing standards (in other words, as bycatch while prosecuting allowed target fisheries). Using 1994 TACs for groundfish species (excluding arrowtooth flounder, flathead sole, and sablefish), while assuming a 15% retention rate when 'closed', as much as 30,000 mt of rockfish could be taken as bycatch, far exceeding the actual TACs for rockfish. This simplistic treatment assumes, of course, that all fishermen targeting groundfish would reach the allowable retention standards for rockfish. If, for example, we only look at deepwater flatfish, the other species primarily targeted by the fleet of vessels who also target rockfish, the potential amount of rockfish which could be retained as bycatch would be closer to 3,000 mt total.

In order to effectively eliminate the rockfish fishery in the GOA, the allowable retention rate would likely need to be reduced below the current 15%. Because rockfish is such a highly valued species, it is possible that a significant number of <u>all</u> vessels operating in the GOA would 'top off' with rockfish while prosecuting other directed groundfish fisheries. Using the same simplistic model as above, the potential bycatch of rockfish could be reduced to 2,000 mt if the allowable retention rate is reduced to 1%.

However, regardless of the allowable retention rate, the total mortality of rockfish could still meet or exceed the TACs if all bycaught rockfish are dead when returned to the water. Whether these amounts of fish, in excess of the allowable retention rates, are discarded or retained is irrelevant to the total mortality in this scenario. A full retention mandate, combined with a restrictive bycatch retention rate, may provide the necessary incentive for vessels to avoid rockfish bycatch in the first place. A full retention mandate would also allow for more accurate total accounting of rockfish bycatch and mortality.

Other Considerations

An alternative to deleting subject species from licenses would be to issue licenses for them, but make them bycatch only at the appropriate allowable retention rate. The rationale for this approach would be to avoid contentious allocational decisions in the future, <u>if</u> it is determined that directed fishing could resume on these species. For example, if problems are overcome with arrowtooth flounder flesh consistency, or if it becomes a viable surimi base, there may be incentive for fishermen and fisheries managers to begin directed fishing on these species. If licenses are issued up front, as part of the current CRP process, the field of players in these fisheries will already be determined, thereby simplifying the transition. This is simply an alternative approach if the Council determines that directed fishing on these species is not a desirable practice at this time.

An additional factor, when considering deletion of these species from directed fishing, is the potential impact on halibut bycatch in the GOA. Directed rockfish fisheries have, in the past, accounted for a significant portion of the overall 2,000 mt halibut PSC cap in the GOA. From 1990 through 1993, the amount of halibut bycatch mortality has been 768 mt, 789 mt, 486 mt, and 266 mt respectively. The lower rates in 1993 may be a result of a combination of factors including the delay of the directed rockfish fisheries until July 1, lower amounts of effort on these species, and lower overall TACs for these species. In any event, there are potential halibut bycatch mortality savings associated with the elimination of directed fisheries for rockfish. These savings may impact the extent to which other fisheries are fully prosecuted, depending upon the extent to which the halibut PSC cap is a constraining factor for the other fisheries. It should be noted however that the next best opportunity for the displaced vessels may be deepwater flatfish, which also has a high bycatch of halibut. If more effort is put into these or other flatfish fisheries then any savings of halibut bycatch may be lost.

If it is assumed that species not specified in the license program will no longer have directed fishing then we can conclude that this element will be less likely to lead to increased overall utilization of the fishery resources. For the species included in the program, the increased specificity of the fishery definitions will make it the most restrictive of the elements examined. The precision which makes this a restrictive program also leads to a very complex system for fishers, administrators, and enforcement officers.

A final issue worth mentioning, when considering the Nature of Licenses, is the proposal under one of the license limitation alternatives to make squid fisheries in the BSAI a fixed gear only fishery. Currently, the TAC for squid is 3,110 mt, with only 224 mt taken through mid-August of this year. All 224 mt was taken by trawl gear and virtually all of it was discarded. In 1993, 683 mt was taken from an available DAP apportionment of 1,700 mt. Again, this was all taken by trawl gear and most (approximately 85%) was discarded. Although designation of this fishery to fixed gear only would not appear to impose hardships or significant costs on the trawl fleet, such designation has no apparent benefits either, unless fixed gear fisheries are developed which target on, and retain, these squid.

GROUNDFISH

TABLE APPENDIX

This Table Appendix contains a list of the six numbered components and associated options for developing a license system for groundfish. This list is followed by three series of tables, one series for each of the three reference configurations: CURRENT, UNIVERSAL, and EXPLICIT.

CURRENT Reference Configuration - #115X11. This is a baseline configuration that most closely reflects the composition of the fleet in 1993. It is not an alternative per se but does provide a benchmark for comparison of the other alternatives. In the table that corresponds to that unique number will be found fleet composition in numbers of vessels by residence, size, and mode of operation as a catcher or catcher processor in 1993. In the computer runs that were made to produce these tables, the options within each main component (Nature of Licenses, License Recipients, License Designations, Qualifying Periods, Landings Requirements for General License Qualification, and Landings Requirements for Endorsement Qualifications) are changed to assess theirs effect on the composition of the fleet. The variants of #115X11 are shown in sequential tables. For example, there are four different options under License Recipient, identified by the second number from the left in the configuration number. The corresponding configuration numbers are 1<u>1</u>5X11, 1<u>2</u>5X11, 1<u>3</u>5X11, 1<u>4</u>5X11. In the analysis proper, these tables are used to draw inferences about changes that will result from choosing a particular element within a component. The CURRENT Reference Configuration number will show under each of the six main components, but its corresponding table will only be presented once, at the beginning of the series. At the very end of the tables showing the variants, is a table showing more detailed regional distributions of the fleet in 1993.

UNIVERSAL Reference Configuration - #115211. The second set of tables in the series has all the variants of the UNIVERSAL Reference Configuration. This configuration is the simplest of the license alternatives and would issue a single license to all current owners that made a landing in the period June 28, 1989 to June 27, 1992. The license would allow the vessel to fish for all groundfish species and in all areas managed by the Council. The licenses will be designated for use on catcher vessels or catcher processors within three distinct vessel length classes. Again the unique reference configuration #115211 table is at the first of the series, followed by the variants produced by scrolling down through the options under each of the six components. At the end of the tables depicting the variants of the UNIVERSAL Reference Configuration is a table with more detailed information on regional distributions.

EXPLICIT Reference Configuration - #715711. The third and last set of tables has all the variants of the EXPLICIT Reference Configuration. This configuration is the most detailed and complex of the configurations. It is based on the State of Alaska's GLS proposal and has explicit fishery/area licenses based on several different discrete qualifying periods. The table for the unique reference configuration #715711 is included only once. The last table has more detailed regional distribution data.

GROUNDFISH LICENSES
COMPONENTS AND ALTERNATIVE ELEMENTS AFFECTING INITIAL ASSIGNMENT
ANALYSIS FORMAT

Nature of Licenses	Numbering Scheme
Single license for all species and areas	100000
Licenses for FMP areas (i.e., GOA and BSAI)	200000
Licenses for FMP sub-areas (i.e., EG, CG, WG, BS, AI)	300000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries	400000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries by FMP areas	500000
Licenses for Pollock, P.Cod, Flatfish, Rockfish, and Other fisheries by FMP sub-areas	600000
Licenses for fisheries (see box) by FMP sub-areas	700000
Licenses for fisheries (see box) by the following areas: EG, CG, WG, BSAI	800000

Fisheries Specified Under Options 700,000 and 800,000

BSAI Fishery Licenses:	GOA Fishery Licenses:
Pollock, Pacific Cod, Atka Mackerel, Yellowfin Sole, Other Flatfish, Rockfish, Squid (Fixed Gear), Rocksole, Turbots	Pollock, Pacific Cod, Deep Water Flats, Shallow Water Flatfish Atka Mackerel

License Recipients	
Current owners	10000
Current owner, then owner at the time of landing, then permit holders (no duplicate)	20000
Current owners, then permit holders (no duplicates)	30000
Current owners, owners at the time of landing, and permit holders (duplicates allowed)	40000

License Designations	
No restrictions	1000
Catcher vessels & Catcher/processors	2000
Vessel length	3000
Inshore & Offshore	4000
Catcher vessels & Catcher/processors and vessel length	5000
Catcher vessels & Catcher/processors and Inshore & Offshore	6000
Inshore & Offshore and vessel length	7000
Catcher vessels & Catcher/processors, Inshore & Offshore, and vessel length	8000

Qualifying Periods	
Jan. 1, 1978 - Dec. 31, 1993	100
Jun. 28, 1989 - Jun. 27, 1992	200
Jun. 28, 1989 - date of final action	300
Jan. 1, 1990 - Dec. 31, 1993	400
The three years prior to the date of final action	500
Jun. 28, 1989 - Jun. 27, 1992 & the three years prior to the date of final action	600
Each of the three calendar years from 1/1/90 - 6/27/92 & the 365 days prior to final action, except for fixed gear P. cod use 6/23/91 - 6/27/92 rather than 1/1/90 - 6/27/92	700

Landings Requirements For General License Qualification	
One Landing	10
Two landings	20
5,000 pounds	30
10,000 pounds	40
20,000 pounds	50

Landings Requirements for Endorsement Qualification	
One landing in qualifying period	1
Two landings in qualifying period	2
Three landings in qualifying period	3
Four landings in qualifying period	4
One landing in year prior to council action	5
Two landings in year prior to council action	6
Three landings in year prior to council action	7
Four landings in year prior to council action	8

CURRENT 1993 CONFIGURATIONS

* 115X11, the "core" configuration, can be found on page 7 only. It is not duplicated even though it appears in several components

3.2.2.1 The Nature of Licenses

Configuration 115X11						Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.												
Current Owner's State of Residence																		
Alaska						Other						Total						Current
CV						CV						CV						
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP		Licenses
1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161		1,679

* In 1993, 28 unregistered vessels reported landings.

3.2.2.1 The Nature of Licenses

Current

Configuration 215X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History. Vessels must have made a landing in each area.																	
	Current Owner's State of Residence																	
	Alaska						Other						Total					
	CV						CV						CV					
Area	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
BSAI	40	23	1	64	22	86	20	106	29	155	103	258	60	129	30	219	125	344
GOA	1,030	108	3	1,141	50	1,191	187	103	13	303	78	381	1,217	211	16	1,444	128	1,572
Total Licenses	1,070	131	4	1,205	72	1,277	207	209	42	458	181	639	1,277	340	46	1,663	253	1,916
Total Vessels	1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

3.2.2.1 The Nature of Licenses

Current

Configuration 315X11	Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History Vessels must have made a landing in an area each calendar year.																	
	Current Owner's State of Residence																	
	Alaska						Other						Total					
	CV						CV						CV					
Area	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
AI	4	1	1	6	11	17	8	37	17	62	77	139	12	38	18	68	88	156
BS	38	23	1	62	22	84	15	97	29	141	103	244	53	120	30	203	125	328
CG	399	86	0	485	30	515	80	83	8	171	53	224	479	169	8	656	83	739
EG	594	34	1	629	19	648	109	23	2	134	24	158	703	57	3	763	43	806
WG	61	19	1	81	17	98	23	33	7	63	39	102	84	52	8	144	56	200
Total Licenses	1,096	163	4	1,263	99	1,362	235	273	63	571	296	867	1,331	436	67	1,834	395	2,229
Total Vessels	1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

3.2.2.1 The Nature of Licenses | Current

Configuration 415X11

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History
Vessel must have made a landing in an area each calendar year0

	Current Owner's State of Residence																
	Alaska						Other						Total				
	CV						CV						CV				
Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
FLAT	162	51	2	215	29	244	45	118	25	188	102	290	207	169	27	403	131	534
OTHR	190	52	1	243	30	273	38	105	23	164	104	268	226	157	24	407	134	541
PCOD	701	82	3	786	39	825	79	125	29	233	102	335	780	207	32	1019	141	1160
PLCK	116	37	1	154	21	175	17	93	24	134	93	227	133	130	25	288	114	402
ROCK	696	85	1	782	48	830	163	118	20	301	103	404	859	203	21	1083	151	1234
Total Licenses	1,865	307	8	2,180	167	2,347	340	559	121	1,020	504	1,524	2,205	866	129	3,200	671	3,871
Total Vessels	1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

3.2.2.1 The Nature of Licenses | Current

Configuration 515X11

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History
Vessels must have made a landing in an area each calendar year

		Current Owner's State of Residence																
		Alaska						Other						Total				
		CV						CV						CV				
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
BSAI	FLAT	22	17	1	40	20	60	19	88	25	132	101	233	41	105	26	172	121	293
	OTHR	10	16	1	27	19	46	6	71	23	100	102	202	16	87	24	127	121	248
	PCOD	26	19	1	46	20	66	7	94	29	130	101	231	33	113	30	176	121	297
	PLCK	15	14	1	30	15	45	5	72	24	101	91	192	20	86	25	131	106	237
	ROCK	20	11	1	32	17	49	16	71	17	104	91	195	36	82	18	136	108	244
Species Endorsements		93	77	5	175	91	266	53	396	118	567	486	1,053	146	473	123	742	577	1,319
GOA	FLAT	146	44	2	192	26	218	32	65	10	107	65	172	178	109	12	299	91	390
	OTHR	180	47	1	228	29	257	33	60	8	101	68	169	213	107	9	329	97	426
	PCOD	681	79	3	763	37	800	76	69	8	153	55	208	757	148	11	916	92	1,008
	PLCK	103	33	1	137	14	151	13	58	9	80	35	115	116	91	10	217	49	266
	ROCK	687	83	1	771	47	818	160	77	7	244	69	313	847	160	8	1,015	116	1,131
Species Endorsements		1,797	286	8	2,091	153	2,244	314	329	42	685	292	977	2,111	615	50	2,776	445	3,221
Total Licenses		1,890	363	13	2,266	244	2,510	367	725	160	1,252	778	2,030	2,257	1,088	173	3,518	1,022	4,540
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

3.2.2.1 The Nature of Licenses

Current

Configuration 615X11

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History
Vessels must have made a landing in an area each calendar year.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
AI	FLAT	2	1	1	4	11	15	7	23	13	43	69	112	9	24	14	47	80	127
	OGRN	1	0	1	2	11	13	2	12	8	22	75	97	3	12	9	24	86	110
	PCOD	2	0	1	3	8	11	1	18	11	30	65	95	3	18	12	33	73	106
	PLCK	0	0	0	0	8	8	0	17	15	32	46	78	0	17	15	32	54	86
	ROCK	3	1	1	5	11	16	8	22	7	37	67	104	11	23	8	42	78	120
Species Endorsements		8	2	4	14	49	63	18	92	54	164	322	486	26	94	58	178	371	549
BS	FLAT	21	17	1	39	20	59	15	81	25	121	100	221	36	98	26	160	120	280
	OGRN	10	16	1	27	19	46	5	66	23	94	101	195	15	82	24	121	120	241
	PCOD	24	19	1	44	20	64	6	91	29	126	98	224	30	110	30	170	118	288
	PLCK	15	14	1	30	15	45	5	72	24	101	90	191	20	86	25	131	105	236
	ROCK	19	11	1	31	17	48	11	63	17	91	85	176	30	74	18	122	102	224
Species Endorsements		89	77	5	171	91	262	42	373	118	533	474	1,007	131	450	123	704	565	1,269
CG	FLAT	122	41	0	163	22	185	26	53	6	85	46	131	148	94	6	248	68	316
	OGRN	133	41	0	174	23	197	28	50	6	84	51	135	161	91	6	258	74	332
	PCOD	302	65	0	367	26	393	37	57	6	100	38	138	339	122	6	467	64	531
	PLCK	81	29	0	110	9	119	8	48	7	63	18	81	89	77	7	173	27	200
	ROCK	257	67	0	324	27	351	65	62	3	130	49	179	322	129	3	454	76	530
Species Endorsements		895	243	0	1,138	107	1,245	164	270	28	462	202	664	1,059	513	28	1,600	309	1,909
EG	FLAT	11	2	0	13	4	17	4	3	0	7	18	25	15	5	0	20	22	42
	OGRN	18	2	0	20	4	24	3	5	0	8	21	29	21	7	0	28	25	53
	PCOD	366	15	1	382	10	392	40	5	0	45	16	61	406	20	1	427	26	453
	PLCK	9	3	0	12	1	13	0	3	1	4	4	8	9	6	1	16	5	21
	ROCK	411	25	0	436	18	454	96	18	1	115	22	137	507	43	1	551	40	591
Species Endorsements		815	47	1	863	37	900	143	34	2	179	81	260	958	81	3	1,042	118	1,160
WG	FLAT	25	6	1	32	13	45	9	24	6	39	31	70	34	30	7	71	44	115
	OGRN	31	8	1	40	15	55	10	17	5	32	36	68	41	25	6	72	51	123
	PCOD	56	17	1	74	15	89	15	26	6	47	30	77	71	43	7	121	45	166
	PLCK	21	7	1	29	6	35	9	19	6	34	20	54	30	26	7	63	26	89
	ROCK	14	6	1	21	14	35	16	15	2	33	27	60	30	21	3	54	41	95
Species Endorsements		147	44	5	196	63	259	59	101	25	185	144	329	206	145	30	381	207	588
Total Licenses		1,954	413	15	2,382	347	2,729	426	870	227	1,523	1,223	2,746	2,380	1,283	242	3,905	1,570	5,475
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

Configuration 715X11

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History. Vessel must have made a landing in an area each calendar year.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	1	1	7	8	0	3	0	3	34	37	0	3	1	4	41	45
	GTRB	2	1	0	3	10	13	7	15	8	30	46	76	9	16	8	33	56	89
	OFLT	0	0	0	0	7	7	0	8	6	14	26	40	0	8	6	14	33	47
	PCOD	2	0	1	3	8	11	1	18	11	30	65	95	3	18	12	33	73	106
	PLCK	0	0	0	0	8	8	0	17	15	32	46	78	0	17	15	32	54	86
	ROCK	3	1	1	5	11	16	8	22	7	37	67	104	11	23	8	42	78	120
	RSOL	0	0	0	0	6	6	0	3	2	5	30	35	0	3	2	5	36	41
	SQID	0	0	0	0	2	2	0	0	0	0	19	19	0	0	0	0	21	21
	YSOL	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
Species Endorsements		7	2	3	12	59	71	16	86	49	151	336	487	23	88	52	163	395	558
BS	AMCK	2	3	1	6	5	11	0	24	6	30	23	53	2	27	7	36	28	64
	GTRB	13	6	0	19	15	34	12	42	17	71	77	148	25	48	17	90	92	182
	OFLT	7	12	1	20	16	36	5	66	23	94	83	177	12	78	24	114	99	213
	PCOD	24	19	1	44	20	64	6	91	29	126	98	224	30	110	30	170	118	288
	PLCK	15	14	1	30	15	45	5	72	24	101	90	191	20	86	25	131	105	236
	ROCK	19	11	1	31	17	48	11	63	17	91	85	176	30	74	18	122	102	224
	RSOL	4	10	1	15	11	26	1	58	18	76	74	149	5	68	17	90	85	176
	SQID	0	0	0	0	2	2	0	0	0	0	28	28	0	0	0	0	30	30
	YSOL	3	8	1	12	11	23	2	51	13	66	63	129	5	59	14	78	74	152
Species Endorsements		87	83	7	177	112	289	42	467	145	654	621	1,275	129	550	152	831	733	1,564
CG	AMCK	1	2	0	3	0	3	0	1	0	1	3	4	1	3	0	4	3	7
	DFLT	17	26	0	43	12	55	3	26	1	30	27	57	20	52	1	73	39	112
	PCOD	302	65	0	367	26	393	37	57	6	100	38	138	339	122	6	467	64	531
	PLCK	81	29	0	110	9	119	8	48	7	63	18	81	89	77	7	173	27	200
	SFLT	27	29	0	56	8	64	10	34	3	47	17	64	37	63	3	103	25	128
Species Endorsements		428	151	0	579	55	634	58	166	17	241	103	344	486	317	17	820	158	978
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	2	0	5	0	5	1	0	0	1	10	11	4	2	0	6	10	16
	PCOD	366	15	1	382	10	392	40	5	0	45	16	61	406	20	1	427	26	453
	PLCK	9	3	0	12	1	13	0	3	1	4	4	8	9	6	1	16	5	21
	SFLT	3	1	0	4	0	4	0	0	0	0	1	1	3	1	0	4	1	5
Species Endorsements		381	21	1	403	11	414	41	8	1	50	31	81	422	29	2	453	42	495
WG	AMCK	6	2	1	9	0	9	1	8	2	11	6	17	7	10	3	20	6	26
	DFLT	10	4	0	14	6	20	3	6	1	10	14	24	13	10	1	24	20	44
	PCOD	56	17	1	74	15	89	15	26	6	47	30	77	71	43	7	121	45	166
	PLCK	21	7	1	29	6	35	9	19	6	34	20	54	30	26	7	63	26	89
	SFLT	20	5	1	26	6	32	9	20	4	33	16	49	29	25	5	59	22	81
Species Endorsements		113	35	4	152	33	185	37	79	19	135	86	221	150	114	23	287	119	406
Total Licenses		1,016	292	15	1,323	270	1,593	194	806	231	1,231	1,177	2,408	1,210	1,098	246	2,554	1,447	4,001
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

3.2.2.1 The Nature of Licenses

Current

Configuration 815X11	Licenses issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History. Vessels must have made a landing in an area each calendar year.																		
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Vessels
BSAI	AMCK	2	3	1	6	8	14	0	25	6	31	44	75	2	28	7	37	52	89
	GTRB	14	6	0	20	17	37	16	49	19	84	81	165	30	55	19	104	98	202
	OFLT	7	12	1	20	17	37	5	66	23	94	84	178	12	78	24	114	101	215
	PCOD	26	19	1	46	20	66	7	94	29	130	101	231	33	113	30	176	121	297
	PLCK	15	14	1	30	15	45	5	72	24	101	91	192	20	86	25	131	106	237
	ROCK	20	11	1	32	17	49	16	71	17	104	91	195	36	82	18	136	108	244
	RSOL	4	10	1	15	11	26	1	58	16	75	78	153	5	68	17	90	89	179
	SQID	0	0	0	0	4	4	0	0	0	0	30	30	0	0	0	0	34	34
	YSOL	3	8	1	12	11	23	2	51	13	66	63	129	5	59	14	78	74	152
Species Endorsements		91	83	7	181	120	301	52	486	147	685	663	1348	143	569	154	866	783	1649
CG	AMCK	1	2	0	3	0	3	0	1	0	1	3	4	1	3	0	4	3	7
	DFLT	17	26	0	43	12	55	3	26	1	30	27	57	20	52	1	73	39	112
	PCOD	302	65	0	367	26	393	37	57	6	100	38	138	339	122	6	467	64	531
	PLCK	81	29	0	110	9	119	8	48	7	63	18	81	89	77	7	173	27	200
	SFLT	27	29	0	56	8	64	10	34	3	47	17	64	37	63	3	103	25	128
Species Endorsements		428	151	0	579	55	634	58	166	17	241	103	344	486	317	17	820	158	978
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	2	0	5	0	5	1	0	0	1	10	11	4	2	0	6	10	16
	PCOD	366	15	1	382	10	392	40	5	0	45	16	61	406	20	1	427	26	453
	PLCK	9	3	0	12	1	13	0	3	1	4	4	8	9	6	1	16	5	21
	SFLT	3	1	0	4	0	4	0	0	0	0	1	1	3	1	0	4	1	5
Species Endorsements		381	21	1	403	11	414	41	8	1	50	31	81	422	29	2	453	42	495
WG	AMCK	6	2	1	9	0	9	1	8	2	11	6	17	7	10	3	20	6	26
	DFLT	10	4	0	14	6	20	3	6	1	10	14	24	13	10	1	24	20	44
	PCOD	56	17	1	74	15	89	15	26	6	47	30	77	71	43	7	121	45	166
	PLCK	21	7	1	29	6	35	9	19	6	34	20	54	30	26	7	63	26	89
	SFLT	20	5	1	26	6	32	9	20	4	33	16	49	29	25	5	59	22	81
Species Endorsements		113	35	4	152	33	185	37	79	19	135	86	221	150	114	23	287	119	406
Total Licenses		1,013	290	12	1,315	219	1,534	188	739	184	1,111	883	1,994	1,201	1,029	196	2,426	1,102	3,528
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

3.2.2.2 License Recipients | Current

Configuration 125X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.																		
	Current Owner's State of Residence																		
	Alaska						Other						Total						
	CV						CV						CV						
	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
Current Owners/ Total																		
Vessels	1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679
Landing's Owners**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Permit Holders	236	103	5	344	28	372	63	134	36	233	107	340	299	237	41	577	135	712
Option A Total: Issue to C.O. & L.O who are not also C.O. **	1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679
Option B Total: Issue to C.O. & L.O who are not also C.O., and to P.H. who are neither C.O. or L.O.	1,288	213	6	1,507	80	1,587	254	274	60	588	216	804	1,542	487	66	2,095	296	2,391

* In 1993, 28 unregistered vessels reported landings.
**In 1993 all current owners are landing's owners, and therefore no additional licenses would be issued under this option.

3.2.2.2 License Recipients | Current

Configuration 135X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.																		
	Current Owner's State of Residence																		
	Alaska						Other						Total						
	CV						CV						CV						
	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
Current Owners/ Total																		
Vessels	1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679
Permit Holders	236	103	5	344	28	372	63	134	36	233	107	340	299	237	41	577	135	712
Landing's Owners**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Option A Total: Issue to C.O. & P.H. who are not also C.O.	1,288	213	6	1,507	80	1,587	254	274	60	588	218	804	1,542	487	66	2,095	296	2,391
Option B Total: Issue to C.O. & P.H who are not also C.O., and to L.O. who are neither C.O. or P.H. **	1,288	213	6	1,507	80	1,587	254	274	60	588	218	804	1,542	487	66	2,095	296	2,391

* In 1993, 28 unregistered vessels reported landings.
**In 1993 all current owners are landing's owners, and therefore no additional licenses would be issued under this option.

3.2.2.2 License Recipients | Current

Configuration 145X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1992 - December 31, 1993, Catch History.																		
	Current Owner's State of Residence																		
	Alaska						Other						Total						
	CV						CV						CV						
	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
Current Owners/ Total																		
Vessels	1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679
Landing's Owners**	1,004	102	1	1,107	52	1,159	187	123	22	332	87	419	1,191	225	23	1,439	139	1,578
Permit Holders	1,036	157	5	1,198	55	1,253	188	164	38	390	115	505	1,224	321	43	1,588	170	1,758
Option A: C.O.+ L.O	2,056	212	2	2,270	104	2,374	378	263	46	687	196	883	2,434	475	48	2,957	300	3,257
Option B: C.O.+ P.H	2,088	267	6	2,361	107	2,468	379	304	62	745	224	969	2,467	571	68	3,106	331	3,437
Option C: C.O.+ L.O.+ P.H.	3,092	369	7	3,468	159	3,627	566	427	84	1,077	311	1,388	3,658	796	91	4,545	470	5,015

* In 1993, 28 unregistered vessels reported landings.
**In 1993 all current owners are landing's owners.

3.2.2.3 License Designations

Current

Configuration 111X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.		
	Current Owner's State of Residence		
	Alaska	Other	Total
	1,215	464	1,679

*In 1993, 28 unregistered vessels reported landings.

3.2.2.3 License Designations

Current

Configuration 112X11 — Licenses Issued to Current Vessel Owners Based on the Vessel's, Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.

Current Owner's State of Residence								
Alaska			Other			Total		
CV	CP	Total	CV	CP	Total	CV	CP	Licenses
1,167	48	1,215	371	93	464	1,538	141	1,679

* In 1993, 28 unregistered vessels reported landings.

3.2.2.3 License Designations

Current

Configuration 113X11 — Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.

Current Owner's State of Residence											
Alaska				Other				Total			
<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Licenses
1,083	118	14	1,215	203	174	87	464	1,286	292	101	1,679

* In 1993, 28 unregistered vessels reported landings.

3.2.2.3 License Designations

Current

Configuration 114X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.							
Current Owner's State of Residence								
Alaska			Other			Total		
In-Shore	Off-Shore	Total	In-Shore	Off-Shore	Total	In-Shore	Off-Shore	Licenses
1,140	75	1,215	267	197	464	1,407	272	1,679

*In 1993, 28 unregistered vessels reported landings.

3.2.2.3 License Designations

Current

Configuration 116X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History										
Current Owner's State of Residence											
Alaska				Other				Total			
CV				CV				CV			
In-Shore	Off-Shore	CP	Total	In-Shore	Off-Shore	CP	Total	In-Shore	Off-Shore	CP	Licenses
1,140	27	48	1,215	267	104	93	464	1,407	131	141	1,679

* In 1993, 28 unregistered vessels reported landings.

3.2.2.3 License Designations

Current

Configuration 117X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.																	
Current Owner's State of Residence																		
Alaska							Other							Total				
In-Shore			Off-Shore				In-Shore			Off-Shore				In-Shore			Off-Shore		
<60'	60-125'	>=125'	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	Licenses
1,050	89	1	33	29	13	1,215	188	69	10	15	105	77	464	1,238	158	11	48	134	90	1,679

* In 1993, 28 unregistered vessels reported landings.

3.2.2.3 License Designations

Current

Configuration 118X11	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.																					
Current Owner's State of Residence																						
Alaska								Other								Total						
CV								CV								CV						
In-Shore			Off-Shore					In-Shore			Off-Shore					In-Shore			Off-Shore				
<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	licenses
1,050	89	1	2	21	0	52	1,215	188	69	10	3	71	14	109	464	1,238	158	11	5	92	14	161	1,679

* In 1993, 28 unregistered vessels reported landings.

3.2.2.6 Qualifying Periods | Current

Configuration 715X11

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History. Vessel must have made a landing in an area each calendar year.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	1	1	7	8	0	3	0	3	34	37	0	3	1	4	41	45
	GTRB	2	1	0	3	10	13	7	15	8	30	46	76	9	18	8	33	56	89
	OFLT	0	0	0	0	7	7	0	8	6	14	26	40	0	8	6	14	33	47
	PCOD	2	0	1	3	8	11	1	18	11	30	65	95	3	18	12	33	73	106
	PLCK	0	0	0	0	8	8	0	17	15	32	46	78	0	17	15	32	54	86
	ROCK	3	1	1	5	11	16	8	22	7	37	67	104	11	23	8	42	78	120
	RSOL	0	0	0	0	6	6	0	3	2	5	30	35	0	3	2	5	36	41
	SQID	0	0	0	0	2	2	0	0	0	0	19	19	0	0	0	0	21	21
	YSOL	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
Species Endorsements		7	2	3	12	59	71	16	86	49	151	336	487	23	88	52	163	395	558
BS	AMCK	2	3	1	6	5	11	0	24	6	30	23	53	2	27	7	36	28	64
	GTRB	13	6	0	19	15	34	12	42	17	71	77	148	25	48	17	90	92	182
	OFLT	7	12	1	20	16	36	5	66	23	94	83	177	12	78	119	209	99	308
	PCOD	24	19	1	44	20	64	6	91	29	126	98	224	30	110	30	170	118	288
	PLCK	15	14	1	30	15	45	5	72	24	101	90	191	20	86	25	131	105	236
	ROCK	19	11	1	31	17	48	11	63	17	91	85	176	30	74	18	122	102	224
	RSOL	4	10	1	15	11	26	1	58	16	75	74	149	5	68	17	90	85	175
	SQID	0	0	0	0	2	2	0	0	0	0	28	28	0	0	0	0	30	30
	YSOL	3	8	1	12	11	23	2	51	13	66	63	129	5	59	14	78	74	152
Species Endorsements		87	83	7	177	112	289	42	467	145	654	621	1,275	129	550	247	926	733	1,859
CG	AMCK	1	2	0	3	0	3	0	1	0	1	3	4	1	3	0	4	3	7
	DFLT	17	26	0	43	12	55	3	26	1	30	27	57	20	52	1	73	39	112
	PCOD	302	65	0	367	26	393	37	57	6	100	38	138	339	122	6	467	64	531
	PLCK	81	29	0	110	9	119	8	48	7	63	18	81	89	77	7	173	27	200
	SFLT	27	29	0	56	8	64	10	34	3	47	17	64	37	63	3	103	25	128
Species Endorsements		428	151	0	579	55	634	58	166	17	241	103	344	486	317	17	820	158	978
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	2	0	5	0	5	1	0	0	1	10	11	4	2	0	6	10	16
	PCOD	366	15	1	382	10	392	40	5	0	45	16	61	406	20	1	427	26	453
	PLCK	9	3	0	12	1	13	0	3	1	4	4	8	9	6	1	16	5	21
	SFLT	3	1	0	4	0	4	0	0	0	0	1	1	3	1	0	4	1	5
Species Endorsements		381	21	1	403	11	414	41	8	1	50	31	81	422	29	2	453	42	495
WG	AMCK	6	2	1	9	0	9	1	8	2	11	6	17	7	10	3	20	6	26
	DFLT	10	4	0	14	6	20	3	6	1	10	14	24	13	10	1	24	20	44
	PCOD	56	17	1	74	15	89	15	26	6	47	30	77	71	43	7	121	45	166
	PLCK	21	7	1	29	6	35	9	19	6	34	20	54	30	26	7	63	26	89
	SFLT	20	5	1	26	6	32	9	20	4	33	16	49	29	25	5	59	22	81
Species Endorsements		113	35	4	152	33	185	37	79	19	135	86	221	150	114	23	287	119	406
Total Licenses		1,018	292	15	1,323	270	1,593	194	806	231	1,231	1,177	2,408	1,210	1,098	341	2,649	1,447	4,096
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

3.2.2.5 Distribution of Licenses

Current

Configuration 115X21	Licenses Issued to Current Vessel Owners. Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
820	99	3	922	52	974	162	145	28	335	108	443	982	244	31	1,257	160	1,417

3.2.2.5 Distribution of Licenses

Current

Configuration 115X31	Licenses Issued to Current Vessel Owners. Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
369	72	2	443	34	477	72	135	28	235	104	339	441	207	30	678	138	816

3.2.2.5 Distribution of Licenses

Current

Configuration 115X41	Licenses Issued to Current Vessel Owners. Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
307	66	2	375	30	405	62	129	28	219	103	322	369	195	30	594	133	727

3.2.2.5 Distribution of Licenses

Current

Configuration 115X51	Licenses Issued to Current Vessel Owners. Based on the Vessel's, January 1, 1993 - December 31, 1993, Catch History.																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
239	61	2	302	29	331	50	119	28	197	103	300	289	180	30	499	132	631

3.2.2.8 Landings Requirements for Endorsement Qualification

Current

Configuration 715X11

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History. Vessel must have made a landing in an area each calendar year.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	1	1	7	8	0	3	0	3	34	37	0	3	1	4	41	45
	GTRB	2	1	0	3	10	13	7	15	8	30	46	76	9	16	8	33	56	89
	DFLT	0	0	0	0	7	7	0	8	6	14	26	40	0	8	6	14	33	47
	PCOD	2	0	1	3	8	11	1	18	11	30	65	95	3	18	12	33	73	106
	PLCK	0	0	0	0	8	8	0	17	15	32	46	78	0	17	15	32	54	86
	ROCK	3	1	1	5	11	16	8	22	7	37	67	104	11	23	8	42	78	120
	RSOL	0	0	0	0	6	6	0	3	2	5	30	35	0	3	2	5	36	41
	SQID	0	0	0	0	2	2	0	0	0	0	19	19	0	0	0	0	21	21
	YSOL	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
Species Endorsements		7	2	3	12	59	71	16	86	49	151	336	487	23	88	52	163	395	558
BS	AMCK	2	3	1	6	5	11	0	24	6	30	23	53	2	27	7	36	28	64
	GTRB	13	6	0	19	15	34	12	42	17	71	77	148	25	48	17	90	92	182
	DFLT	7	12	1	20	16	36	5	66	23	94	83	177	12	78	119	209	99	308
	PCOD	24	19	1	44	20	64	6	91	29	126	98	224	30	110	30	170	118	288
	PLCK	15	14	1	30	15	45	5	72	24	101	90	191	20	86	25	131	105	236
	ROCK	19	11	1	31	17	48	11	63	17	91	85	176	30	74	18	122	102	224
	RSOL	4	10	1	15	11	26	1	58	16	75	74	149	5	68	17	90	85	175
	SQID	0	0	0	0	2	2	0	0	0	0	28	28	0	0	0	0	30	30
	YSOL	3	8	1	12	11	23	2	51	13	66	63	129	5	59	14	78	74	152
Species Endorsements		87	63	7	177	112	289	42	467	145	654	621	1,275	129	550	247	926	733	1,659
CG	AMCK	1	2	0	3	0	3	0	1	0	1	3	4	1	3	0	4	3	7
	DFLT	17	26	0	43	12	55	3	26	1	30	27	57	20	52	1	73	39	112
	PCOD	302	65	0	367	26	393	37	57	6	100	38	138	339	122	6	467	64	531
	PLCK	81	29	0	110	9	119	8	48	7	63	18	81	89	77	7	173	27	200
	SFLT	27	29	0	56	8	64	10	34	3	47	17	64	37	63	3	103	25	128
Species Endorsements		428	151	0	579	55	634	58	166	17	241	103	344	486	317	17	820	158	978
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	2	0	5	0	5	1	0	0	1	10	11	4	2	0	6	10	16
	PCOD	366	16	1	382	10	392	40	5	0	45	16	61	406	20	1	427	26	453
	PLCK	9	3	0	12	1	13	0	3	1	4	4	8	9	6	1	16	5	21
	SFLT	3	1	0	4	0	4	0	0	0	0	1	1	3	1	0	4	1	5
Species Endorsements		381	21	1	403	11	414	41	8	1	50	31	81	422	29	2	453	42	495
WG	AMCK	6	2	1	9	0	9	1	8	2	11	6	17	7	10	3	20	6	26
	DFLT	10	4	0	14	6	20	3	6	1	10	14	24	13	10	1	24	20	44
	PCOD	56	17	1	74	15	89	15	26	6	47	30	77	71	43	7	121	45	166
	PLCK	21	7	1	29	6	35	9	19	6	34	20	54	30	26	7	63	26	89
	SFLT	20	5	1	26	6	32	9	20	4	33	16	49	29	25	5	59	22	81
Species Endorsements		113	35	4	152	33	185	37	79	19	135	86	221	150	114	23	287	119	406
Total Licenses		1,018	292	16	1,323	270	1,593	194	606	231	1,231	1,177	2,408	1,210	1,098	341	2,649	1,447	4,096
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

3.2.2.6 Landings Requirements for Endorsement Qualification

Current

Configuration 715X12		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History. Vessel must have made a landing in an area each calendar year.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	1	1	7	8	0	1	0	1	29	30	0	1	1	2	36	38
	GTRB	2	0	0	2	9	11	4	11	1	16	33	49	6	11	1	18	42	60
	OFLT	0	0	0	0	6	6	0	6	2	8	18	26	0	6	2	8	24	32
	PCOD	1	0	1	2	7	9	1	6	6	12	60	72	2	6	6	14	67	81
	PLCK	0	0	0	0	6	6	0	11	12	23	42	65	0	11	12	23	48	71
	ROCK	3	1	1	5	11	16	6	18	3	27	63	90	9	19	4	32	74	106
	RSOL	0	0	0	0	5	5	0	1	0	1	26	27	0	1	0	1	31	32
	SQID	0	0	0	0	1	1	0	0	0	0	16	16	0	0	0	0	17	17
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Species Endorsements		6	1	3	10	52	62	11	54	23	88	287	375	17	55	26	98	339	437
BS	AMCK	0	1	1	2	1	3	0	17	3	20	14	34	0	18	4	22	15	37
	GTRB	9	3	0	12	13	25	9	31	14	54	67	121	18	34	14	66	80	146
	OFLT	4	10	1	15	15	30	4	65	22	91	79	170	8	75	23	106	94	200
	PCOD	9	17	1	27	19	46	4	87	28	119	95	214	13	104	29	146	114	260
	PLCK	9	14	1	24	15	39	4	69	24	97	89	186	13	83	25	121	104	225
	ROCK	15	5	1	21	16	37	9	59	17	85	74	159	24	64	18	106	90	196
	RSOL	4	6	1	11	11	22	1	57	15	73	70	143	5	63	16	84	81	165
	SQID	0	0	0	0	1	1	0	0	0	0	25	25	0	0	0	0	26	26
	YSOL	2	3	1	6	8	14	1	40	11	52	57	109	3	43	12	58	65	123
Species Endorsements		52	59	7	118	99	217	32	425	134	591	570	1161	84	484	141	709	669	1378
CG	AMCK	1	0	0	1	0	1	0	1	0	1	3	4	1	1	0	2	3	5
	DFLT	10	23	0	33	9	42	1	25	1	27	23	50	11	48	1	60	32	92
	PCOD	251	55	0	306	22	328	28	45	4	77	32	109	279	100	4	383	54	437
	PLCK	45	27	0	72	5	77	4	42	5	51	15	66	49	69	5	123	20	143
	SFLT	17	27	0	44	5	49	9	29	1	39	16	55	26	56	1	83	21	104
Species Endorsements		324	132	0	456	41	497	42	142	11	195	89	284	366	274	11	651	130	781
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	1	2	0	3	0	3	0	0	0	0	7	7	1	2	0	3	7	10
	PCOD	178	6	1	185	3	188	24	1	0	25	10	35	202	7	1	210	13	223
	PLCK	5	2	0	7	0	7	0	3	1	4	4	8	5	5	1	11	4	15
	SFLT	1	1	0	2	0	2	0	0	0	0	1	1	1	1	0	2	1	3
Species Endorsements		185	11	1	197	3	200	24	4	1	29	22	51	209	15	2	226	25	251
WG	AMCK	2	1	1	4	0	4	1	6	2	9	4	13	3	7	3	13	4	17
	DFLT	4	2	0	6	3	9	2	2	1	5	9	14	6	4	1	11	12	23
	PCOD	51	14	1	66	13	79	14	19	4	37	25	62	65	33	5	103	38	141
	PLCK	20	6	1	27	2	29	9	15	5	29	14	43	29	21	6	56	16	72
	SFLT	17	4	1	22	2	24	9	11	3	23	11	34	26	15	4	45	13	58
Species Endorsements		94	27	4	125	20	145	35	53	15	103	63	166	129	80	19	228	83	311
Total Licenses		681	230	15	906	215	1,121	144	678	184	1,006	1,031	2,037	805	908	199	1,912	1,246	3,158
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

2.2.2.6 Landings Requirements for Endorsement Qualification

Current

Configuration 715X13		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History. Vessel must have made a landing in an area each calendar year.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	1	1	7	8	0	0	0	0	23	23	0	0	1	1	30	31
	QTRB	1	0	0	1	6	7	2	6	0	8	29	37	3	6	0	9	35	44
	OFLT	0	0	0	0	2	2	0	1	0	1	14	15	0	1	0	1	16	17
	PCOD	1	0	1	2	7	9	0	5	1	6	55	61	1	5	2	8	62	70
	PLCK	0	0	0	0	5	5	0	8	11	19	36	55	0	8	11	19	41	60
	ROCK	2	1	1	4	11	15	4	13	3	20	61	81	6	14	4	24	72	96
	RSOL	0	0	0	0	4	4	0	0	0	0	21	21	0	0	0	0	25	25
	SQID	0	0	0	0	0	0	0	0	0	0	13	13	0	0	0	0	13	13
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Species Endorsements		4	1	3	8	42	50	6	33	15	54	252	306	10	34	18	62	294	356
BS	AMCK	0	1	0	1	1	2	0	9	3	12	9	21	0	10	3	13	10	23
	QTRB	6	2	0	8	10	18	7	20	13	40	55	95	13	22	13	48	65	113
	OFLT	2	10	1	13	14	27	3	62	22	87	78	165	5	72	23	100	92	192
	PCOD	8	16	1	25	18	43	3	85	27	115	94	209	11	101	28	140	112	252
	PLCK	7	12	1	20	15	35	3	68	23	94	84	178	10	80	24	114	99	213
	ROCK	12	4	1	17	16	33	8	56	16	80	62	142	20	60	17	97	78	176
	RSOL	1	5	1	7	10	17	1	54	13	68	66	134	2	59	14	75	76	151
	SQID	0	0	0	0	0	0	0	0	0	0	19	19	0	0	0	0	19	19
	YSOL	1	3	1	5	8	13	1	33	8	42	55	97	2	36	9	47	63	110
Species Endorsements		37	53	6	96	92	188	26	387	126	538	522	1060	63	440	131	634	614	1248
CG	AMCK	0	0	0	0	0	0	0	1	0	1	3	4	0	1	0	1	3	4
	DFLT	7	20	0	27	8	35	0	21	1	22	21	43	7	41	1	49	29	78
	PCOD	208	48	0	256	18	274	23	37	2	62	28	90	231	85	2	318	46	364
	PLCK	33	26	0	59	4	63	4	36	4	43	10	53	37	61	4	102	14	116
	SFLT	17	26	0	43	4	47	7	28	1	36	11	47	24	54	1	79	15	94
Species Endorsements		265	120	0	385	34	419	34	122	8	164	73	237	299	242	8	549	107	656
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	2	0	2	0	2	0	0	0	0	4	4	0	2	0	2	4	6
	PCOD	100	3	0	103	2	105	17	1	0	18	7	25	117	4	0	121	9	130
	PLCK	3	0	0	3	0	3	0	2	1	3	3	6	3	2	1	6	3	9
	SFLT	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
Species Endorsements		103	6	0	109	2	111	17	3	1	21	14	35	120	9	1	130	16	146
WG	AMCK	0	0	0	0	0	0	1	4	2	7	3	10	1	4	2	7	3	10
	DFLT	0	1	0	1	2	3	0	1	1	2	5	7	0	2	1	3	7	10
	PCOD	50	9	1	60	9	69	14	15	2	31	18	49	64	24	3	91	27	118
	PLCK	19	4	1	24	2	26	9	12	2	23	11	34	28	16	3	47	13	60
	SFLT	13	3	1	17	1	18	7	9	3	19	8	27	20	12	4	36	9	45
Species Endorsements		82	17	3	102	14	116	31	41	10	82	45	127	113	58	13	184	59	243
Total Licenses		491	197	12	700	184	884	114	586	169	859	906	1,765	605	783	171	1,559	1,090	2,649
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	181	1,679

3.2.2.6 Landings Requirements for Endorsement Qualification

Configuration 715X14

Current

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1993 - December 31, 1993, Catch History. Vessel must have made a landing in an area each calendar year.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	1	1	7	8	0	0	0	0	20	20	0	0	1	1	27	28
	GTRB	1	0	0	1	4	5	1	5	0	6	27	33	2	5	0	7	31	38
	OFLT	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0	0	10	10
	PCOD	1	0	1	2	7	9	0	5	1	6	47	53	1	5	2	8	54	62
	PLCK	0	0	0	0	3	3	0	4	8	12	31	43	0	4	8	12	34	46
	ROCK	2	1	1	4	11	15	3	10	2	15	58	73	5	11	3	19	69	88
	RSOL	0	0	0	0	4	4	0	0	0	0	18	18	0	0	0	0	22	22
	SQID	0	0	0	0	0	0	0	0	0	0	8	8	0	0	0	0	8	8
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Species Endorsements		4	1	3	8	36	44	4	24	11	39	219	258	8	25	14	47	255	302
BS	AMCK	0	0	0	0	1	1	0	8	2	10	8	18	0	8	2	10	9	19
	GTRB	6	0	0	6	7	13	4	15	12	31	48	79	10	15	12	37	55	92
	OFLT	1	10	1	12	14	26	3	61	21	85	73	158	4	71	22	97	87	184
	PCOD	8	16	1	25	18	43	3	82	27	112	92	204	11	98	28	137	110	247
	PLCK	6	12	1	19	15	34	3	68	23	94	83	177	9	80	24	113	98	211
	ROCK	9	3	1	13	16	29	8	50	16	74	57	131	17	53	17	87	73	160
	RSOL	1	4	1	6	10	16	1	50	13	64	64	128	2	54	14	70	74	144
	SQID	0	0	0	0	0	0	0	0	0	0	17	17	0	0	0	0	17	17
	YSOL	1	1	1	3	8	11	1	31	7	39	51	90	2	32	8	42	59	101
Species Endorsements		32	46	6	84	89	173	23	365	121	509	493	1002	55	411	127	593	582	1175
CG	AMCK	0	0	0	0	0	0	0	1	0	1	3	4	0	1	0	1	3	4
	DFLT	6	19	0	25	7	32	0	18	0	18	18	36	6	37	0	43	25	68
	PCOD	175	47	0	222	15	237	20	32	2	54	26	80	195	79	2	276	41	317
	PLCK	22	26	0	48	4	52	4	32	4	40	9	49	26	58	4	88	13	101
	SFLT	14	25	0	39	4	43	7	27	1	35	10	45	21	52	1	74	14	88
Species Endorsements		217	117	0	334	30	364	31	110	7	148	66	214	248	227	7	482	96	578
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	1	0	1	0	1	0	0	0	0	4	4	0	1	0	1	4	5
	PCOD	71	2	0	73	2	75	16	1	0	17	5	22	87	3	0	90	7	97
	PLCK	3	0	0	3	0	3	0	2	1	3	2	5	3	2	1	6	2	8
	SFLT	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
Species Endorsements		74	4	0	78	2	80	16	3	1	20	11	31	90	7	1	98	13	111
WG	AMCK	0	0	0	0	0	0	1	3	2	6	2	8	1	3	2	6	2	8
	DFLT	0	1	0	1	1	2	0	1	0	1	5	6	0	2	0	2	6	8
	PCOD	50	9	1	60	6	66	14	11	2	27	17	44	64	20	3	87	23	110
	PLCK	18	4	1	23	1	24	9	11	2	22	7	29	27	15	3	45	8	53
	SFLT	13	3	1	17	0	17	7	7	2	16	6	22	20	10	3	33	6	39
Species Endorsements		81	17	3	101	8	109	31	33	8	72	37	109	112	50	11	173	45	218
Total Licenses		408	185	12	605	165	770	105	535	148	788	826	1,614	513	720	160	1,393	991	2,384
Total Vessels		1,052	110	1	1,163	52	1,215	191	140	24	355	109	464	1,243	250	25	1,518	161	1,679

Configuration 716X11
Part 1 of 2

Licenses Issued to Current Vessel Owners Based on the Vessels, January 1, 1993 - December 31, 1994, Catch History.

		Current Owner's Region of Residence																							
		Central Alaska						Eastern Alaska						Western Alaska						Kodiak Alaska					
		CV						CV						CV						CV					
		<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total
AI	AMCK	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	GTRB	0	0	0	0	9	9	1	1	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0
	OFLT	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	PCOD	0	0	0	0	7	7	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1
	PLCK	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	ROCK	0	0	0	0	9	9	2	1	0	3	1	4	0	0	0	0	0	0	0	0	0	0	1	1
	RSOL	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SQID	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Area Endorsements		0	0	0	0	52	52	5	2	0	7	2	9	0	0	0	0	0	0	0	0	0	0	6	6
Total Area Vessels		0	0	0	0	9	9	3	1	0	4	1	5	0	0	0	0	0	0	0	0	0	0	1	1
BS	AMCK	1	1	0	2	4	6	0	0	0	0	0	0	1	1	0	2	0	2	0	1	0	1	1	2
	GTRB	6	1	0	7	9	16	5	1	0	6	3	9	1	2	0	3	0	3	1	2	0	3	3	6
	OFLT	2	2	0	4	10	14	4	1	0	5	2	7	1	2	0	3	1	4	0	7	0	7	3	10
	PCOD	7	2	0	9	13	22	8	1	0	9	2	11	8	3	0	11	1	12	1	13	0	14	4	18
	PLCK	4	2	0	6	10	16	9	1	0	10	2	12	2	2	0	4	0	4	0	9	0	9	3	12
	ROCK	11	1	0	12	11	23	5	1	0	6	3	9	2	1	0	3	0	3	1	8	0	9	3	12
	RSOL	1	2	0	3	9	12	2	1	0	3	0	3	1	2	0	3	0	3	0	5	0	5	2	7
	SQID	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	YSOL	1	2	0	3	8	11	2	0	0	2	1	3	0	1	0	1	0	1	0	5	0	5	2	7
Total Area Endorsements		33	13	0	46	76	121	35	6	0	41	13	54	16	14	0	30	2	32	3	50	0	53	22	75
Total Area Vessels		15	3	0	18	14	32	12	2	0	14	3	17	9	3	0	4	1	5	2	15	0	17	4	21
CG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	2	0	2	0	2
	DFLT	7	2	0	9	7	16	0	2	0	2	3	5	2	0	0	2	0	2	7	22	0	29	3	32
	PCOD	158	10	0	168	19	187	29	11	0	40	2	42	34	2	0	36	1	37	81	42	0	123	4	127
	PLCK	60	3	0	63	5	68	3	1	0	4	1	5	5	0	0	5	0	5	13	25	0	38	3	41
	SFLT	5	2	0	7	5	12	5	2	0	7	0	7	7	0	0	7	0	7	10	25	0	35	3	38
Total Area Endorsements		230	17	0	247	36	283	37	16	0	53	6	59	49	2	0	51	1	52	111	116	0	227	13	240
Total Area Vessels		220	22	0	242	21	263	43	15	0	58	4	62	35	2	0	1	1	2	100	47	0	147	4	151
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	1	1	0	2	0	2	2	0	0	2	0	2	0	0	0	0	0	0	0	1	0	1	0	1
	PCOD	16	2	0	18	3	21	347	10	1	358	7	365	3	0	0	3	0	3	0	3	0	3	0	3
	PLCK	2	0	0	2	0	2	7	1	0	8	1	9	0	0	0	0	0	0	0	2	0	2	0	2
	SFLT	0	0	0	0	0	0	3	0	0	3	0	3	0	0	0	0	0	0	0	1	0	1	0	1
Total Area Endorsements		19	3	0	22	3	25	359	11	1	371	8	379	3	0	0	3	0	3	0	7	0	7	0	7
Total Area Vessels		40	6	0	46	3	49	645	21	1	667	15	682	6	0	0	6	0	6	3	7	0	10	1	11
WG	AMCK	1	0	0	1	0	1	1	0	0	1	0	1	3	2	0	5	0	5	1	0	0	1	1	2
	DFLT	5	1	0	6	5	11	2	2	0	4	1	5	2	1	0	3	0	3	1	0	0	1	0	1
	PCOD	7	0	0	7	12	19	4	4	0	8	1	9	44	4	0	48	1	49	1	8	0	9	1	10
	PLCK	3	0	0	3	5	8	5	3	0	8	0	8	12	2	0	14	1	15	1	2	0	3	1	4
	SFLT	3	0	0	3	5	8	4	3	0	7	0	7	12	2	0	14	0	14	1	0	0	1	1	2
Total Area Endorsements		19	1	0	20	27	47	16	12	0	28	2	30	73	11	0	84	2	86	5	10	0	15	4	19
Total Area Vessels		9	2	0	11	14	25	6	4	0	10	1	11	45	4	0	49	1	50	1	8	0	9	1	10
Total Vessels/All Areas		245	26	0	271	25	296	628	30	1	659	19	678	67	5	0	72	2	74	112	49	0	161	6	167

3.2.2.8 Regional Distribution of the Current Alternative

Current

Configuration 715X11 Part 2 of 2		Licenses Issued to Current Vessel Owners Based on the Vessels, January 1, 1993 - December 31, 1993, Catch History.																							
		Current Owner's State of Residence																							
		Alaska Total						Oregon/Other						Washington						Total For All States					
		CV						CV						CV						CV					
		<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total
AI	AMCK	0	0	0	0	7	7	0	0	0	0	2	2	0	3	0	3	32	35	0	3	0	3	41	44
	GTRB	1	1	0	2	10	12	1	1	0	2	2	4	6	10	6	22	45	67	8	12	6	26	57	83
	OFLT	0	0	0	0	7	7	0	3	0	3	0	3	0	5	5	10	26	36	0	8	5	13	33	46
	PCOD	2	0	0	2	8	10	1	3	1	5	3	8	0	12	9	21	63	84	3	15	10	28	74	102
	PLCK	0	0	0	0	8	8	0	4	1	5	1	6	0	13	12	25	46	71	0	17	13	30	55	85
	ROCK	2	1	0	3	11	14	1	1	0	2	3	5	7	16	4	27	65	92	10	18	4	32	79	111
	RSOL	0	0	0	0	6	6	0	0	0	0	1	1	0	3	1	4	29	33	0	3	1	4	36	40
	SQID	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	19	19	0	0	0	0	21	21
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
Total Area Endorsements		5	2	0	7	59	66	3	12	2	17	12	29	13	62	37	112	328	440	21	76	39	136	399	535
Total Area Vessels		3	1	0	4	11	15	1	5	1	7	3	10	7	27	12	46	75	121	11	33	13	57	89	146
BS	AMCK	2	3	0	5	5	10	0	8	1	9	2	11	0	16	6	21	21	42	2	27	6	36	28	63
	GTRB	13	6	0	19	15	34	2	7	1	10	3	13	10	30	11	51	74	125	25	43	12	80	92	172
	OFLT	7	12	0	19	16	35	0	17	2	19	5	24	5	48	18	71	78	149	12	77	20	109	99	208
	PCOD	24	19	0	43	20	63	0	19	2	21	7	28	6	63	21	90	92	182	30	101	23	154	119	273
	PLCK	15	14	0	29	15	44	0	18	2	20	5	25	5	52	18	75	85	160	20	84	20	124	105	229
	ROCK	19	11	0	30	17	47	2	8	1	11	5	16	9	49	12	70	80	150	30	68	13	111	102	213
	RSOL	4	10	0	14	11	25	0	14	1	15	5	20	1	43	12	56	69	125	5	67	13	85	85	170
	SQID	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	0	27	27	0	0	0	0	30	30
	YSOL	3	8	0	11	11	22	0	14	1	15	4	19	2	36	10	48	60	108	5	58	11	74	75	149
Total Area Endorsements		87	83	0	170	112	282	4	106	11	120	37	157	38	337	107	482	588	1068	129	526	118	772	736	1,607
Total Area Vessels		38	23	0	61	22	83	2	19	2	23	7	30	13	69	21	103	96	199	53	111	23	187	126	312
CG	AMCK	1	2	0	3	0	3	0	0	0	0	0	0	0	0	0	0	4	4	1	2	0	3	4	7
	DFLT	16	26	0	42	13	55	1	11	0	12	3	15	2	13	0	15	25	40	19	50	0	69	41	110
	PCOD	302	65	0	367	26	393	8	23	1	32	7	39	29	32	5	66	31	97	339	120	6	485	64	529
	PLCK	81	29	0	110	9	119	1	20	1	22	3	25	7	27	6	40	15	55	89	76	7	172	27	199
	SFLT	27	29	0	56	8	64	0	17	0	17	4	21	10	16	3	29	13	42	37	62	3	102	26	127
Total Area Endorsements		427	151	0	578	56	634	10	71	2	83	17	100	48	88	14	150	88	238	485	310	16	811	161	972
Total Area Vessels		836	128	3	967	51	1,018	25	24	1	50	7	57	55	64	8	115	46	161	916	206	10	1,132	104	1,236
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	2	0	5	0	5	0	0	0	0	0	0	1	0	0	1	10	11	4	2	0	6	10	16
	PCOD	366	15	1	382	10	392	7	3	0	10	1	11	33	2	0	35	15	50	406	20	1	427	26	453
	PLCK	9	3	0	12	0	12	0	3	1	4	0	4	0	0	0	0	4	4	9	6	1	16	4	20
	SFLT	3	1	0	4	0	4	0	0	0	0	0	0	0	0	0	0	1	1	3	1	0	4	1	5
Total Area Endorsements		381	21	1	403	11	414	7	6	1	14	1	15	34	2	0	36	30	66	422	29	2	453	42	495
Total Area Vessels		1,061	25	1	1,087	38	1,125	27	10	1	38	1	39	82	12	1	95	23	118	1,170	47	3	1,220	62	1,282
WG	AMCK	6	2	0	8	1	9	0	0	0	0	1	1	1	7	2	10	6	16	7	9	2	18	8	26
	DFLT	10	4	0	14	6	20	0	0	0	0	1	1	3	5	0	8	15	23	13	9	0	22	22	44
	PCOD	56	16	0	72	15	87	0	8	0	8	5	13	15	17	6	38	25	63	71	41	6	118	45	163
	PLCK	21	7	0	28	7	35	0	5	0	5	4	9	9	13	6	28	17	45	30	25	6	61	28	89
	SFLT	20	5	0	25	6	31	0	5	0	5	1	6	9	14	4	27	16	43	29	24	4	57	23	80
Total Area Endorsements		113	34	0	147	35	182	0	18	0	18	12	30	37	56	18	111	79	190	150	108	18	276	126	402
Total Area Vessels		182	44	3	229	23	252	1	8	0	9	5	14	22	23	6	51	35	86	244	149	31	424	107	352
Total Vessels/All Areas		1,052	110	1	1,163	52	1,215	48	36	2	86	7	93	143	104	22	269	102	371	1,243	250	25	1,518	161	1,679

UNIVERSAL CONFIGURATIONS

* 115211, the "core" configuration, can be found on page 27 only. It is not duplicated even though it appears in several components

3.2.2.1 The Nature of Licenses

Universal

Configuration 115211	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954

3.2.2.1 The Nature of Licenses — Universal

Configuration 215211	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.																	
	Current Owner's State of Residence																	
	Alaska						Other						Total					
	CV						CV						CV					
Area	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
BSAI	231	88	3	322	29	351	102	182	41	325	101	426	333	270	44	647	130	777
GOA	1,875	148	5	2,028	76	2,104	335	176	30	541	96	637	2,210	324	35	2,569	172	2,741
Total Licenses	2,106	236	8	2,350	105	2,455	437	358	71	866	197	1,063	2,543	594	79	3,216	302	3,518
Total Vessels	1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954

3.2.2.1 The Nature of Licenses — Universal

Configuration 315211	Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - June 27, 1992, Catch History																	
	Current Owner's State of Residence																	
	Alaska						Other						Total					
	CV						CV						CV					
Area	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
AI	23	18	2	43	16	59	31	60	18	109	84	193	54	78	20	152	100	252
BS	223	88	3	314	29	343	94	179	40	313	99	412	317	267	43	627	128	755
CG	861	128	3	992	52	1,044	175	142	15	332	67	399	1,036	270	18	1,324	119	1,443
EG	1,030	25	1	1,056	38	1,094	203	41	3	247	32	279	1,233	66	4	1,303	70	1,373
WG	183	44	3	230	22	252	61	105	28	194	83	277	244	149	31	424	105	529
Total Licenses	2,320	303	12	2,635	157	2,792	564	527	104	1,195	365	1,560	2,884	830	116	3,830	522	4,352
Total Vessels	1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954

3.2.2.1 The Nature of Licenses — Universal

Configuration 415211	Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - June 27, 1992, Catch History																	
	Current Owner's State of Residence																	
	Alaska						Other						Total					
	CV						CV						CV					
Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
FLAT	281	78	2	361	34	395	93	147	34	274	97	371	374	225	36	635	131	766
OTHR	445	96	2	543	33	576	101	141	35	277	99	376	546	237	37	820	132	952
PCOD	1,541	146	6	1,693	67	1,760	256	199	44	499	104	603	1,797	345	50	2,192	171	2,363
PLCK	238	61	2	301	25	326	55	125	31	211	89	300	293	186	33	512	114	626
ROCK	1,178	110	2	1,290	68	1,358	268	158	31	457	95	552	1,446	268	33	1,747	163	1,910
Total Licenses	3,683	491	14	4,188	227	4,415	773	770	175	1,718	484	2,202	4,456	1,261	189	5,906	711	6,617
Total Vessels	1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954

Configuration 618211

Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - June 27, 1992, Catch History

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
BSAI	FLAT	55	53	2	110	20	130	47	134	33	214	94	308	102	187	35	324	114	438
	OTHR	52	48	2	102	19	121	38	114	34	186	95	281	90	162	36	288	114	402
	PCOD	211	82	3	296	28	324	84	176	40	300	100	400	295	258	43	596	128	724
	PLCK	42	43	2	87	17	104	31	109	31	171	88	259	73	152	33	258	105	363
	ROCK	59	44	2	105	22	127	37	114	28	179	85	264	96	158	30	284	107	391
Species Endorsements		419	270	11	700	106	806	237	647	166	1,050	462	1,512	656	917	177	1,750	568	2,318
GOA	FLAT	250	70	2	322	30	352	66	116	24	206	83	288	316	186	26	527	113	640
	OTHR	408	87	2	497	29	526	65	105	17	187	84	271	473	192	19	684	113	797
	PCOD	1,470	134	5	1,609	62	1,671	203	148	29	380	86	466	1,673	282	34	1,989	148	2,137
	PLCK	213	51	1	265	21	286	28	103	20	151	69	220	241	154	21	416	90	506
	ROCK	1,168	105	2	1,275	64	1,339	248	136	19	403	84	487	1,416	241	21	1,678	148	1,826
Species Endorsements		3,509	447	12	3,968	206	4,174	610	607	109	1,326	406	1,732	4,119	1,054	121	5,294	612	5,906
Total Licenses		3,928	717	23	4,668	312	4,980	847	1,254	275	2,376	868	3,244	4,775	1,971	298	7,044	1,180	8,224
Total Vessels		1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954

Configuration 618211

Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - June 27, 1992, Catch History

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
AI	FLAT	8	11	2	21	15	36	18	37	7	62	75	137	26	48	9	83	90	173
	OTHR	5	5	2	12	16	28	10	31	12	53	74	127	15	36	14	65	90	155
	PCOD	19	13	2	34	16	50	23	46	13	82	78	160	42	59	15	116	94	210
	PLCK	0	0	1	1	10	11	3	33	13	49	60	109	3	33	14	50	70	120
	ROCK	9	14	2	25	15	40	16	47	7	70	75	145	25	61	9	95	90	185
Species Endorsements		41	43	9	93	72	165	70	194	52	316	362	678	111	237	61	409	434	843
BS	FLAT	50	51	2	103	19	122	40	132	33	205	93	298	90	183	35	308	112	420
	OTHR	50	47	2	99	18	117	36	111	33	180	94	274	86	158	35	279	112	391
	PCOD	204	82	3	289	27	316	80	172	39	291	98	389	284	254	42	580	125	705
	PLCK	42	43	2	87	17	104	31	109	31	171	88	259	73	152	33	258	105	363
	ROCK	54	41	2	97	20	117	32	110	26	168	81	249	86	151	28	265	101	366
Species Endorsements		400	264	11	675	101	776	219	634	162	1,015	454	1,469	619	898	173	1,690	555	2,245
CG	FLAT	212	59	1	272	25	297	45	74	10	129	58	187	257	133	11	401	83	484
	OTHR	304	74	1	379	22	401	45	64	4	113	54	167	349	138	5	492	76	568
	PCOD	675	117	3	795	43	838	102	103	13	218	56	274	777	220	16	1,013	99	1,112
	PLCK	187	46	1	234	16	250	19	67	10	96	46	142	206	113	11	330	62	392
	ROCK	573	93	1	667	41	708	140	104	9	253	59	312	713	197	10	920	100	1,020
Species Endorsements		1,951	389	7	2,347	147	2,494	351	412	46	809	273	1,082	2,302	801	53	3,156	420	3,576
EG	FLAT	14	3	0	17	6	23	10	9	1	20	19	39	24	12	1	37	25	62
	OTHR	35	3	0	38	8	46	6	2	0	8	22	30	41	5	0	46	30	76
	PCOD	741	10	1	752	20	772	94	9	1	104	17	121	835	19	2	856	37	893
	PLCK	12	2	0	14	4	18	5	0	0	5	12	17	17	2	0	19	16	35
	ROCK	662	21	0	683	35	718	159	35	1	195	27	222	821	56	1	878	62	940
Species Endorsements		1,464	39	1	1,504	73	1,577	274	65	3	332	97	429	1,738	94	4	1,836	170	2,006
WG	FLAT	35	21	2	58	14	72	19	71	24	114	74	188	54	92	26	172	88	260
	OTHR	58	18	2	78	12	90	15	60	17	92	70	162	73	78	19	170	82	252
	PCOD	153	38	3	194	19	213	32	90	27	149	74	223	185	128	30	343	93	436
	PLCK	22	11	0	33	12	45	7	64	20	91	63	154	29	75	20	124	75	199
	ROCK	59	21	2	82	15	97	41	72	17	130	70	200	100	93	19	212	85	297
Species Endorsements		327	109	9	445	72	517	114	357	105	576	351	927	441	466	114	1,021	423	1,444
Total Licenses		4,183	844	37	5,064	465	5,529	1,028	1,652	368	3,048	1,537	4,585	5,211	2,496	405	8,112	2,002	10,114
Total Vessels		1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954

Configuration 715211		Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - June 27, 1992, Catch History																		
		Current Owner's State of Residence																		
		Alaska						Other						Total						
		CV						CV						CV						
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
AI	AMCK	0	2	1	3	10	13	1	20	6	27	48	75	1	22	7	30	58	88
	GTRB	8	9	1	18	13	31	16	24	3	43	62	105	24	33	4	61	75	136
	OFLT	0	2	0	2	9	11	3	15	5	23	50	73	3	17	5	25	59	84
	PCOD	19	13	2	34	16	50	23	48	13	82	78	160	42	59	15	116	94	210
	PLCK	0	0	1	1	10	11	3	33	13	49	60	109	3	33	14	50	70	120
	ROCK	9	14	2	25	15	40	16	47	7	70	75	145	[illegible]	61	9	95	90	185
	RSOL	0	1	0	1	8	9	3	5	4	12	45	57	3	6	4	13	53	66
	SQID	0	0	0	0	0	0	0	2	0	2	0	2	0	2	0	2	0	2
	YSOL	0	0	0	0	3	3	0	0	0	0	12	12	0	0	0	0	15	15
Species Endorsements		36	41	7	84	84	168	65	192	61	308	430	738	101	233	58	392	514	906
BS	AMCK	1	12	1	14	9	23	2	74	18	94	58	152	3	86	19	108	67	175
	GTRB	25	24	1	50	16	66	20	99	25	144	83	227	45	123	26	194	99	293
	OFLT	24	38	2	64	15	79	22	105	28	155	86	241	46	143	30	219	101	320
	PCOD	204	82	3	289	27	316	80	172	39	291	98	389	284	254	42	580	125	705
	PLCK	42	43	2	87	17	104	31	109	31	171	88	259	73	152	33	258	105	363
	ROCK	54	41	2	97	20	117	32	110	26	168	81	249	86	151	28	265	101	366
	RSOL	14	37	1	52	16	68	17	100	28	145	77	222	31	137	29	197	93	290
	SQID	0	1	0	1	1	2	0	4	2	6	4	10	0	5	2	7	5	12
	YSOL	8	27	1	36	11	47	15	90	25	130	72	202	23	117	26	166	83	249
Species Endorsements		372	305	13	690	132	822	219	863	222	1,304	647	1,951	591	1,168	235	1,994	779	2,773
CG	AMCK	2	0	0	2	2	4	0	1	0	1	10	11	2	1	0	3	12	15
	DFLT	44	33	1	78	9	87	14	42	2	58	42	100	58	75	3	136	51	187
	PCOD	675	117	3	795	43	838	102	103	13	218	56	274	777	220	16	1,013	99	1,112
	PLCK	187	46	1	234	16	250	19	67	10	96	46	142	206	113	11	330	62	392
	SFLT	74	39	0	113	8	121	14	55	7	76	38	114	88	94	7	189	46	235
Species Endorsements		982	235	5	1,222	78	1,300	149	268	32	449	192	641	1,131	503	37	1,671	270	1,941
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	1	0	4	5	9	4	1	0	5	15	20	7	2	0	9	20	29
	PCOD	741	10	1	752	20	772	94	9	1	104	17	121	835	19	2	856	37	893
	PLCK	12	2	0	14	4	18	5	0	0	5	12	17	17	2	0	19	16	35
	SFLT	10	2	0	12	3	15	2	3	0	5	9	14	12	5	0	17	12	29
Species Endorsements		766	15	1	782	32	814	105	13	1	119	53	172	871	28	2	901	85	986
WG	AMCK	0	0	1	1	9	10	0	17	6	23	28	51	0	17	7	24	37	61
	DFLT	15	15	1	31	13	44	12	43	15	70	56	126	27	58	16	101	68	169
	PCOD	153	38	3	194	19	213	32	90	27	149	74	223	185	128	30	343	93	436
	PLCK	22	11	0	33	12	45	7	64	20	91	63	154	29	75	20	124	75	199
	SFLT	13	10	0	23	12	35	6	51	20	77	55	132	19	61	20	100	67	167
Species Endorsements		203	74	5	282	65	347	57	265	88	410	275	685	260	339	93	692	340	1,032
Total Licenses		2,359	670	31	3,060	391	3,451	595	1,601	394	2,590	1,597	4,187	2,954	2,271	425	5,650	1,988	7,638
Total Vessels		1,940	159	6	2,105	80	2,185	401	218	45	662	107	769	2,341	375	51	2,767	187	2,954

Configuration 815211		Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - June 27, 1992, Catch History																		
		Current Owner's State of Residence																		
		Alaska						Other						Total						
		CV						CV						CV						
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
BSAI	AMCK	1	14	1	16	11	27	3	75	20	98	65	163	4	89	21	114	76	190
	GTRB	30	27	1	58	16	74	28	101	26	155	85	240	58	128	27	213	101	314
	OFLT	24	38	2	64	15	79	22	107	28	157	87	244	46	145	30	221	102	323
	PCOD	211	82	3	296	28	324	84	176	40	300	100	400	295	258	43	596	128	724
	PLCK	42	43	2	87	17	104	31	109	31	171	88	259	73	152	33	258	105	363
	ROCK	59	44	2	105	22	127	37	114	28	179	85	264	96	158	30	284	107	391
	RSOL	14	37	1	52	16	68	17	100	28	145	80	225	31	137	29	197	96	293
	SQID	0	1	0	1	1	2	0	6	2	8	4	12	0	7	2	9	5	14
	YSOL	8	27	1	36	11	47	15	90	25	130	72	202	23	117	26	166	83	249
Species Endorsemen		389	313	13	715	137	852	237	878	228	1,343	666	2,009	626	1,191	241	2,058	803	2,861
CG	AMCK	2	0	0	2	2	4	0	1	0	1	10	11	2	1	0	3	12	15
	DFLT	44	33	1	78	9	87	14	42	2	58	42	100	58	75	3	136	51	187
	PCOD	675	117	3	795	43	838	102	103	13	218	56	274	777	220	16	1,013	99	1,112
	PLCK	187	46	1	234	16	250	19	67	10	96	46	142	206	113	11	330	62	392
	SFLT	74	39	0	113	8	121	14	55	7	76	38	114	88	94	7	189	46	235
Species Endorsemen		982	235	5	1,222	78	1,300	149	268	32	449	192	641	1,131	503	37	1,671	270	1,941
EG	AMCK	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
	DFLT	3	1	0	4	5	9	4	1	0	5	15	20	7	2	0	9	20	29
	PCOD	741	10	1	752	20	772	94	9	1	104	17	121	835	19	2	856	37	893
	PLCK	12	2	0	14	4	18	5	0	0	5	12	17	17	2	0	19	16	35
	SFLT	10	2	0	12	3	15	2	3	0	5	9	14	12	5	0	17	12	29
Species Endorsemen		766	15	1	782	32	814	105	13	1	119	53	172	871	28	2	901	85	986
WG	AMCK	0	0	1	1	9	10	0	17	6	23	28	51	0	17	7	24	37	61
	DFLT	15	15	1	31	13	44	12	43	15	70	55	125	27	58	16	101	68	169
	PCOD	153	38	3	194	19	213	32	90	27	149	74	223	185	128	30	343	93	436
	PLCK	22	11	0	33	12	45	7	64	20	91	63	154	29	75	20	124	75	199
	SFLT	13	10	0	23	12	35	6	51	20	77	55	132	19	61	20	100	67	167
Species Endorsemen		203	74	5	282	65	347	57	265	88	410	275	685	260	339	93	692	340	1,032
Total Licenses		2,340	637	24	3,001	312	3,313	548	1,424	349	2,321	1,186	3,507	2,888	2,061	373	5,322	1,498	6,820
Total Vessels		1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954

3.2.2.2 License Recipients | Universal

Configuration 125211	Licenses issued to Current Vessel Owners or Landing's Owners or Permit Holders, Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.																		
	Current Owner's State of Residence																		
	Alaska						Other						Total						
	CV						CV						CV						
	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
Current Owners/ Total																		
Vessels	1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954
Landing's Owners	236	27	2	265	12	277	51	52	5	108	46	154	287	79	7	373	58	431
Permit Holders	440	201	11	652	57	709	100	215	53	368	222	590	540	416	64	1,020	279	1,299
Option A Total: Issue to C.O. & L.O who are not also C.O.	2,176	188	8	2,370	92	2,462	452	268	50	770	153	923	2,628	454	58	3,140	245	3,385
Option B Total: Issue to C.O. & L.O who are not also C.O., and to P.H. who are neither C.O. or L.O.	2,616	387	19	3,022	149	3,171	552	483	103	1,138	375	1,513	3,168	870	122	4,160	524	4,684

3.2.2.2 License Recipients | Universal

Configuration 135211	Licenses issued to Current Vessel Owners or Permit Holders or Landing's, Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.																		
	Current Owner's State of Residence																		
	Alaska						Other						Total						
	CV						CV						CV						
	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
Current Owners/ Total																		
Vessels	1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954
Permit Holders	579	211	12	802	61	863	114	225	53	392	227	619	693	436	65	1,194	288	1,482
Landing's Owners	96	18	1	115	8	123	35	41	5	81	44	125	131	59	6	196	52	248
Option A Total: Issue to C.O. & P.H. who are not also C.O.	2,519	370	18	2,907	141	3,048	515	441	98	1,054	334	1,388	3,034	811	116	3,961	475	4,436
Option B Total: Issue to C.O. & P.H. who are not also C.O., and to L.O. who are neither C.O. or P.H.	2,615	388	19	3,022	149	3,171	550	482	103	1,135	378	1,513	3,165	870	122	4,157	527	4,684

3.2.2.2 License Recipients | Universal

Configuration 145211	Licenses issued to Current Vessel Owners and Landing's Owners and Permit Holders Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.																		
	Current Owner's State of Residence																		
	Alaska						Other						Total						
	CV						CV						CV						
	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
Current Owners/ Total																		
Vessels	1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954
Landing's Owners	1,832	172	7	2,011	86	2,097	321	217	42	580	124	704	2,153	389	49	2,591	210	2,801
Permit Holders	1,961	306	17	2,284	114	2,398	300	266	55	621	239	860	2,261	572	72	2,905	353	3,258
Option A: C.O.+ L.O	3,772	331	13	4,116	166	4,282	722	433	87	1,242	231	1,473	4,494	764	100	5,358	397	5,755
Option B: C.O.+ P.H	3,901	465	23	4,389	194	4,583	701	482	100	1,283	346	1,629	4,602	947	123	5,672	540	6,212
Option C: C.O.+ L.O.+ P.H.	5,733	637	30	6,400	280	6,680	1,022	699	142	1,863	470	2,333	6,755	1,336	172	8,263	750	9,013

3.2.2.3 License Designations — Universal

Configuration 111211	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.		
	Current Owner's State of Residence		
	Alaska	Other	Total
	2,185	769	2,954

3.2.2.3 License Designations — Universal

Configuration 112211		Licenses Issued to Current Vessel Owners Based on the Vessel's, Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.						
Current Owner's State of Residence								
Alaska			Other			Total		
CV	CP	Total	CV	CP	Total	CV	CP	Licenses
2,105	80	2,185	662	107	769	2,767	187	2,954

3.2.2.3 License Designations — Universal

Configuration 113211				Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.							
Current Owner's State of Residence											
Alaska				Other				Total			
<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Licenses
1,993	174	18	2,185	413	241	115	769	2,406	415	133	2,954

3.2.2.3 License Designations | Universal

Configuration 114211	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History								
Current Owner's State of Residence									
Alaska			Other			Total			
In-Shore	Off-Shore	Total	In-Shore	Off-Shore	Total	In-Shore	Off-Shore	Licenses	
2,072	113	2,185	527	242	769	2,599	355	2,954	

3.2.2.3 License Designations | Universal

Configuration 116211	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History											
Current Owner's State of Residence												
Alaska				Other				Total				
CV				CV				CV				
In-Shore	Off-Shore	CP	Total	In-Shore	Off-Shore	CP	Total	In-Shore	Off-Shore	CP	Licenses	
2,067	38	80	2,185	526	136	107	769	2,593	174	187	2,954	

3.2.2.3 License Designations — Universal

Configuration 117211	Licenses Issued to Current Vessel Owners. Based on the Vessel's, June 28,1989 - June 27, 199, Catch History.																									
Current Owner's State of Residence																										
Alaska									Other									Total								
In-Shore				Off-Shore					In-Shore				Off-Shore					In-Shore				Off-shore				
<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Total	Total	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Total	Total	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Total	Licenses
1,936	132	4	2,072	67	42	14	113	2,185	391	118	18	527	22	123	97	242	769	2,327	250	22	2,599	79	165	111	356	2,954

3.2.2.3 License Designations — Universal

Configuration 118211	Licenses Issued to Current Vessel Owners. Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History.																						
Current Owner's State of Residence																							
Alaska								Other								Total							
CV								CV								CV							
In-Shore			Off-Shore					In-Shore			Off-Shore					In-Shore			Off-Shore				Total
<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	licenses
1,934	129	4	6	30	2	80	2,185	390	118	18	11	98	27	107	769	2,324	247	22	17	128	29	187	2,954

3.2.2.4 Qualifying Period — Universal

Configuration 115111	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1978 - December 31, 1993, Catch History.																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
4,376	254	10	4,640	98	4,738	983	301	68	1,352	112	1,464	5,359	555	78	5,992	210	6,202

3.2.2.4 Qualifying Period — Universal

Configuration 115311	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 28, 1989 - date of final action, Catch History.																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
2,257	177	8	2,442	81	2,523	551	236	55	842	109	951	2,808	413	63	3,284	190	3,474

3.2.2.4 Qualifying Period — Universal

Configuration 115411	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1990 - December 31, 1993, Catch History.																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
2,193	175	8	2,376	80	2,456	535	232	52	819	107	926	2,728	407	60	3,195	187	3,382

3.2.2.4 Qualifying Period **Universal**

Configuration 115511

Licenses Issued to Current Vessel Owners

Based on the Vessel's, Catch History three years prior to the date of final action.

Current Owner's State of Residence																
Alaska						Other						Total				
CV						CV						CV				
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
1,559	147	6	1,712	61	1,773	373	199	45	617	102	719	1,932	346	51	2,329	163	2,492

3.2.2.4 Qualifying Period **Universal**

Configuration 115611

Licenses Issued to Current Vessel Owners

Based on the Vessel's, June 28, 1989 - June 27, 1992 Catch History three years prior to final action.

Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
1,559	147	6	1,712	60	1,772	359	195	42	596	100	696	1,918	342	48	2,308	160	2,468

3.2.2.4 Qualifying Period **Universal**

Configuration 115711

Licenses Issued to Current Vessel Owners

Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History.

Vessel must have made a landing in each calendar year.

Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
894	115	4	1,013	45	1,058	138	154	28	320	99	419	1,032	269	32	1,333	144	1,477

3.2.2.5 Landings Requirements for General License Qualification — Universal

Configuration 115221	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History. (This Option Includes a Two Landings Minimum.)																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
1,532	152	4	1,688	74	1,762	318	208	41	567	106	673	1,850	360	45	2,255	180	2,435

3.2.2.5 Landings Requirements for General License Qualification — Universal

Configuration 115231	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History. (This Option Includes a 5,000 Pound Minimum.)																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
777	133	3	913	54	967	184	197	40	421	104	525	961	330	43	1,334	158	1,492

3.2.2.5 Landings Requirements for General License Qualification — Universal

Configuration 115241	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History. (This Option Includes a 10,000 Pound Minimum.)															
Current Owner's State of Residence																
Alaska						Other						Total				
CV						CV						CV				
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
628	129	3	760	42	802	146	190	39	375	103	478	774	319	42	1,135	145	1,280

3.2.2.5 Landings Requirements for General License Qualification — Universal

Configuration 115251	Licenses Issued to Current Vessel Owners Based on the Vessel's, June 28, 1989 - June 27, 1992, Catch History. (This Option Includes a 20,000 Pound Minimum.)																
Current Owner's State of Residence																	
Alaska						Other						Total					
CV						CV						CV					
<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
511	120	3	634	41	675	115	181	39	335	100	435	626	301	42	969	141	1,110

3.2.2.8 Regional Distribution of the Universal Reference Alternative

Universal

Configuration 715211 Part 1 of 2		Licenses Issued to Current Vessel Owners Based on the Vessels, June 28, 1988 - June 27, 1992, Catch History.																							
		Current Owner's Region of Residence																							
		Central Alaska						Eastern Alaska						Western Alaska						Kodiak Alaska					
		CV						CV						CV						CV					
		<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total
AI	AMCK	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	3
	GTRB	1	4	0	5	12	17	4	3	0	7	0	7	2	0	0	2	0	2	1	2	1	4	1	5
	OFLT	0	1	0	1	9	10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
	PCOD	3	5	0	8	14	22	9	2	0	11	1	12	2	0	0	2	0	2	5	6	2	13	1	14
	PLCK	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
	ROCK	2	7	0	9	13	22	5	3	0	8	1	9	1	0	0	1	0	1	1	4	2	7	1	8
	RSOL	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Area Endorsements		6	17	0	23	79	102	18	8	0	26	2	28	5	0	0	5	0	5	7	16	7	30	3	33
Total Area Vessels		5	8	0	13	14	27	11	4	0	15	1	16	2	0	0	2	0	2	5	6	2	13	1	14
BS	AMCK	1	3	0	4	9	13	0	0	0	0	0	0	0	1	0	1	0	1	0	8	1	9	0	9
	GTRB	9	10	0	19	13	32	8	4	0	12	2	14	6	0	0	6	0	6	2	10	1	13	1	14
	OFLT	6	8	0	14	12	26	7	2	0	9	2	11	6	3	0	9	0	9	5	25	2	32	1	33
	PCOD	63	24	0	87	19	106	16	6	0	22	3	25	39	6	0	45	0	45	81	46	3	130	5	135
	PLCK	10	8	0	18	13	31	4	2	0	6	3	9	12	3	0	15	0	15	14	30	2	46	1	47
	ROCK	19	11	0	30	17	47	12	4	0	16	2	18	14	1	0	15	0	15	9	25	2	36		37
	RSOL	4	6	0	10	12	22	1	1	0	2	2	4	5	2	0	7	0	7	4	28	1	33		35
	SQID	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
	YSOL	5	6	0	11	9	20	1	1	0	2	1	3	2	2	0	4	0	4	0	18	1	19	1	20
Total Area Endorsements		117	76	0	193	105	298	49	20	0	69	15	84	84	18	0	102	0	102	115	191	13	319	12	331
Total Area Vessels		68	29	0	97	21	118	20	6	0	26	3	29	43	6	0	49	0	49	87	47	3	137	5	142
CG	AMCK	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2
	DFLT	14	3	0	17	5	22	14	4	0	18	1	19	3	1	0	4	0	4	11	25	1	37	3	40
	PCOD	377	48	1	426	28	454	57	10	0	67	6	73	70	4	0	74	0	74	148	55	2	205	8	213
	PLCK	111	14	0	125	11	136	10	2	0	12	1	13	11	0	0	11	0	11	55	30	1	86	4	90
	SFLT	30	9	0	39	5	44	11	2	0	13	0	13	10	0	0	10	0	10	21	28	0	49	3	52
Total Area Endorsements		532	74	1	607	51	658	92	18	0	110	8	118	94	5	0	99	0	99	237	138	4	379	18	397
Total Area Vessels		458	51	1	510	35	545	121	14	0	135	8	143	79	4	0	83	0	83	178	59	2	239	8	247
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	1	0	0	1	4	5	2	1	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0
	PCOD	70	1	1	72	6	78	623	9	0	632	14	646	5	0	0	5	0	5	4	0	0	4	0	4
	PLCK	6	0	0	6	4	10	6	1	0	7	0	7	0	0	0	0	0	0	0	1	0	1	0	1
	SFLT	4	1	0	5	3	8	6	1	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Total Area Endorsements		81	2	1	84	17	101	637	12	0	649	15	664	5	0	0	5	0	5	4	1	0	5	0	5
Total Area Vessels		118	6	1	125	10	135	654	17	0	671	26	697	10	0	0	10	0	10	8	2	0	10	2	12
WG	AMCK	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
	DFLT	5	9	0	14	10	24	4	2	0	6	1	7	5	1	0	6	0	6	1	3	1	5	1	6
	PCOD	34	14	1	49	14	63	11	4	0	15	2	17	103	8	0	111	1	112	4	12	2	18	2	20
	PLCK	3	4	0	7	11	18	2	0	0	2	0	2	15	2	0	17	0	17	2	5	0	7	1	8
	SFLT	3	3	0	6	10	16	2	1	0	3	1	4	6	2	0	8	0	8	2	4	0	6	1	7
Total Area Endorsements		45	30	1	76	54	130	19	7	0	26	4	30	129	13	0	142	1	143	9	24	4	37	5	42
Total Area Vessels		50	16	1	67	15	82	24	7	0	31	3	34	103	8	0	111	1	112	5	13	2	20	2	22
Total Vessels/All Areas		571	63	3	637	41	678	928	24	0	952	27	979	177	8	0	185	1	186	201	64	3	268	9	277

3.2.2.8 Regional Distribution of the Universal Reference Alternative

Universal

Configuration 715211
Part 2 of 2

Licenses Issued to Current Vessel Owners Based on the Vessels, June 28, 1989 - June 27, 1992, Catch History.

		Current Owner's State of Residence																							
		Alaska Total						Oregon/Other						Washington						Total For All States					
		CV						CV						CV						CV					
		<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total
AI	AMCK	0	2	1	3	10	13	0	2	0	2	3	5	1	18	6	25	45	70	1	22	7	30	58	88
	QTRB	8	9	1	18	13	31	2	4	0	6	2	8	14	20	3	37	60	97	24	33	4	61	76	136
	OFLT	0	2	0	2	9	11	1	2	0	3	3	6	2	13	5	20	47	67	3	17	5	25	59	84
	PCOD	19	13	2	34	16	50	5	3	1	9	3	12	18	43	12	73	75	148	42	59	15	116	94	210
	PLCK	0	0	1	1	10	11	1	2	1	4	3	7	2	31	12	45	57	102	3	33	14	50	70	120
	ROCK	9	14	2	25	15	40	3	5	1	9	3	12	13	42	6	61	72	133	25	61	9	95	90	185
	RSOL	0	1	0	1	8	9	1	1	0	2	3	5	2	4	4	10	42	52	3	6	4	13	53	66
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	0	2	0	2
	YSOL	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	12	12	0	0	0	0	15	15
Total Area Endorsements		36	41	7	84	84	168	13	19	3	35	20	55	52	173	48	273	410	683	101	233	68	392	514	906
Total Area Vessels		23	18	2	43	16	59	6	5	2	13	3	16	25	55	16	96	81	177	54	78	20	152	100	252
BS	AMCK	1	12	1	14	9	23	1	17	1	19	3	22	1	57	17	75	55	130	3	86	19	108	67	175
	QTRB	25	24	1	50	16	66	4	19	2	25	3	28	18	80	23	119	80	199	45	123	26	194	99	293
	OFLT	24	38	2	64	15	79	11	26	2	39	4	43	11	79	26	116	82	198	46	143	30	219	101	320
	PCOD	199	62	3	264	27	311	37	39	4	80	5	85	48	133	35	216	93	309	284	254	42	580	126	705
	PLCK	40	43	2	85	17	102	19	28	3	50	5	55	14	81	28	123	83	206	73	152	33	258	105	363
	ROCK	54	41	2	97	20	117	10	22	1	33	4	37	22	88	25	135	77	212	86	151	28	265	101	366
	RSOL	14	37	1	52	16	68	9	27	2	38	3	41	8	73	26	107	74	181	31	137	29	197	93	290
	SQID	0	1	0	1	1	2	0	1	0	1	0	1	0	3	2	5	4	9	0	5	2	7	5	12
	YSOL	8	27	1	36	11	47	4	25	2	31	3	34	11	65	23	99	69	168	23	117	26	166	83	249
Total Area Endorsements		365	305	13	683	132	815	95	204	17	316	30	346	131	659	205	995	617	1,612	591	1,168	235	1,994	779	2,773
Total Area Vessels		218	88	3	309	29	338	41	39	4	84	5	89	58	140	36	234	94	328	317	267	43	627	128	755
CG	AMCK	2	0	0	2	2	4	0	1	0	1	1	2	0	0	0	0	9	9	2	1	0	3	12	15
	DFLT	42	33	1	76	9	85	8	19	1	28	2	30	8	23	1	32	40	72	58	75	3	136	51	187
	PCOD	652	117	3	772	42	814	65	34	1	100	6	106	60	69	12	141	52	193	777	220	16	1,013	99	1,112
	PLCK	187	46	1	234	16	250	7	27	0	34	3	37	12	40	10	62	43	105	206	113	11	330	62	392
	SFLT	72	39	0	111	8	119	8	20	0	28	3	31	5	35	7	50	35	85	85	94	7	189	46	235
Total Area Endorsements		955	235	5	1,195	77	1,272	88	101	2	191	14	205	88	167	30	285	179	464	1,131	503	37	1,671	270	1,941
Total Area Vessels		836	128	3	967	51	1,018	80	41	2	123	5	128	120	101	13	234	63	297	1,036	270	18	1,324	119	1,443
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	1	0	4	5	9	0	1	0	1	1	2	4	0	0	4	14	18	7	2	0	9	20	29
	PCOD	702	10	1	713	20	733	65	2	0	67	2	69	68	7	1	76	16	92	835	19	2	856	38	894
	PLCK	12	2	0	14	0	14	1	0	0	1	1	2	4	0	0	4	11	15	17	2	0	19	12	31
	SFLT	10	2	0	12	3	15	0	1	0	1	1	2	2	2	0	4	8	12	12	5	0	17	12	29
Total Area Endorsements		727	15	1	743	32	775	66	4	0	70	6	76	78	9	1	88	49	137	871	28	2	901	86	987
Total Area Vessels		1,061	25	1	1,087	38	1,125	91	5	1	97	2	99	152	36	2	190	31	221	1,304	66	4	1,374	71	1,445
WG	AMCK	0	0	1	1	9	10	0	2	0	2	1	3	0	15	6	21	27	48	0	17	7	24	37	61
	DFLT	15	15	1	31	12	43	1	10	1	12	3	15	11	33	14	58	53	111	27	58	16	101	68	169
	PCOD	152	38	3	193	19	212	8	19	3	30	3	33	25	71	24	120	71	191	185	128	30	343	93	436
	PLCK	22	11	0	33	12	45	0	16	1	17	3	20	7	48	19	74	60	134	29	75	20	124	75	199
	SFLT	13	10	0	23	12	35	0	15	1	16	2	18	6	36	19	61	53	114	19	61	20	100	67	167
Total Area Endorsements		202	74	5	281	64	345	9	62	6	77	12	89	49	203	82	334	264	598	260	339	93	692	340	1,032
Total Area Vessels		182	44	3	229	23	252	18	20	3	39	4	43	48	85	25	158	80	238	244	149	31	424	107	531
Total Vessels/All Areas		1,877	159	6	2,042	78	2,120	210	49	4	263	7	270	254	187	41	462	102	564	2,341	376	51	2,767	187	2,954

EXPLICIT CONFIGURATIONS

* 715711, the "core" configuration, can be found on page 45 only. It is not duplicated even though it appears in several components

Landings Requirements for Endorsement Qualification (1 - 8)

* 715711, the "core" configuration, can be found on page 45 only. It is not duplicated even though it appears in several components

3.2.2.1 The Nature of Licenses — Explicit

Configuration 115711 — Licenses Issued to Current Vessel Owners. Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessel must have made a landing in each calendar year.

Current Owner's State of Residence																	
Alaska						Other						Total					
CV				CP	Total	CV				CP	Total	CV				CP	Licenses
<60'	60-125'	>125'	Total			<60'	60-125'	>125'	Total			<60'	60-125'	>125'	Total		
921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.1 The Nature of Licenses — Explicit

Configuration 215711 — Licenses Issued to Current Vessel Owners. Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessels must have made a landing in an area each calendar year.

	Current Owner's State of Residence																	
	Alaska						Other						Total					
	CV				CP	Total	CV				CP	Total	CV				CP	License
Area	<60'	60-125'	>125'	Total			<60'	60-125'	>125'	Total			<60'	60-125'	>125'	Total		
BSAI	64	33	1	98	20	118	35	119	29	183	92	275	99	152	30	281	112	393
GOA	907	107	4	1,018	41	1,059	139	78	15	232	43	275	1,046	185	19	1,250	84	1,334
Total Licenses	971	140	5	1,116	61	1,177	174	197	44	415	135	550	1,145	337	49	1,531	196	1,727
Total Vessels	921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.1 The Nature of Licenses — Explicit

Configuration 315711 — Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessels must have made a landing in an area each calendar year.

	Current Owner's State of Residence																	
	Alaska						Other						Total					
	CV				CP	Total	CV				CP	Total	CV				CP	Licenses
Area	<60'	60-125'	>125'	Total			<60'	60-125'	>125'	Total			<60'	60-125'	>125'	Total		
AI	16	9	1	26	13	39	14	12	6	32	52	84	30	21	7	58	65	123
BS	56	32	1	89	20	109	32	117	27	176	90	266	88	149	28	265	110	375
CG	443	91	2	536	23	559	88	45	3	136	19	155	531	136	5	672	42	714
EG	388	6	1	395	12	407	42	10	1	53	6	59	430	16	2	448	18	466
WG	96	18	2	116	11	127	13	35	13	61	34	95	109	53	15	177	45	222
Total Licenses	999	156	7	1,162	79	1,241	189	219	50	458	201	659	1,188	375	57	1,620	280	1,900
Total Vessels	921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.1 The Nature of Licenses

Explicit

Configuration 415711

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History
Vessel must have made a landing in an area each calendar year0

	Current Owner's State of Residence																	
	Alaska						Other						Total					
	CV						CV						CV					
Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
FLAT	117	61	0	168	18	186	36	101	14	151	86	237	153	162	14	319	104	423
OTHR	170	67	0	227	20	247	30	92	13	135	86	221	200	149	13	362	106	468
PCOD	852	110	4	966	45	1,011	124	151	28	303	98	401	976	261	32	1,269	143	1,412
PLCK	94	36	0	130	17	147	14	84	14	112	83	195	108	120	14	242	100	342
ROCK	327	66	0	393	29	422	68	102	14	184	81	265	395	168	14	577	110	687
Total Licenses	1,560	320	4	1,884	129	2,013	272	530	83	885	434	1,319	1,832	850	87	2,769	563	3,332
Total Vessels	921	115	4	1,040	51	1,091	138	147	30	316	95	410	1,059	262	34	1,355	146	1,501

3.2.2.1 The Nature of Licenses

Explicit

Configuration 515711

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History
Vessels must have made a landing in an area each calendar year

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
BSAI	FLAT	3	8	0	11	16	26	3	70	13	86	74	160	6	78	13	97	89	186
	OTHR	3	6	0	9	16	24	1	65	13	79	75	154	4	71	13	88	90	178
	PCOD	64	33	1	98	20	118	35	119	29	183	92	275	99	152	30	281	112	393
	PLCK	2	6	0	8	14	22	1	62	13	76	74	150	3	68	13	84	88	172
	ROCK	3	8	0	11	15	26	3	62	13	78	73	151	6	70	13	89	88	177
Species Endorsements		75	61	1	137	79	216	43	378	81	502	388	890	118	439	82	639	467	1,106
GOA	FLAT	96	45	0	141	13	154	30	45	9	84	32	116	126	90	9	225	45	270
	OTHR	135	46	0	181	15	196	23	39	8	70	30	100	158	85	8	251	45	296
	PCOD	864	102	4	970	41	1,011	116	71	15	202	43	245	980	173	19	1,172	84	1,256
	PLCK	70	32	0	102	11	113	11	35	9	55	27	82	81	67	9	157	38	195
	ROCK	301	57	0	358	24	382	67	57	9	133	33	166	368	114	9	491	57	548
Species Endorsements		1,468	282	4	1,752	104	1,856	247	247	50	544	165	709	1,713	529	54	2,296	269	2,565
Total Licenses		1,641	343	5	1,889	183	2,072	290	625	131	1,046	653	1,699	1,831	968	136	2,935	736	3,671
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.1 The Nature of Licenses

Explicit

Configuration 615711		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessels must have made a landing in an area each calendar year.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
AI	FLAT	0	0	0	0	9	9	0	5	1	6	33	39	0	5	1	6	42	48
	OTHR	0	0	0	0	9	9	0	4	1	5	34	39	0	4	1	5	43	48
	PCOD	16	9	1	26	13	39	14	12	6	32	50	82	30	21	7	58	63	121
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
Species Endorsements		16	9	1	26	47	73	14	30	9	53	180	233	30	39	10	79	227	306
BS	FLAT	3	7	0	10	15	25	2	67	13	82	73	155	5	74	13	92	88	180
	OTHR	3	6	0	9	15	24	0	63	13	76	74	150	3	69	13	85	89	174
	PCOD	56	32	1	89	19	108	32	117	27	176	90	266	88	149	28	265	109	374
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	15	25	2	59	13	74	70	144	5	66	13	84	85	169
Species Endorsements		67	58	1	126	78	204	36	368	79	483	380	863	103	426	80	609	458	1,067
CG	FLAT	71	37	0	108	7	115	19	22	2	43	18	61	90	59	2	151	25	176
	OTHR	86	42	0	128	6	134	18	21	0	39	16	55	104	63	0	167	22	189
	PCOD	431	88	2	521	22	543	65	39	3	107	18	125	496	127	5	628	40	668
	PLCK	51	30	0	81	5	86	9	21	2	32	13	45	60	51	2	113	18	131
	ROCK	116	49	0	165	9	174	48	32	2	82	18	100	164	81	2	247	27	274
Species Endorsements		755	246	2	1,003	49	1,052	159	135	9	303	83	386	914	381	11	1,306	132	1,438
EG	FLAT	3	0	0	3	1	4	0	2	0	2	2	4	3	2	0	5	3	8
	OTHR	17	0	0	17	2	19	1	1	0	2	2	4	18	1	0	19	4	23
	PCOD	359	5	1	365	12	377	37	8	1	46	5	51	396	13	2	411	17	428
	PLCK	5	0	0	5	1	6	1	0	0	1	0	1	6	0	0	6	1	7
	ROCK	154	1	0	155	7	162	12	3	0	15	3	18	166	4	0	170	10	180
Species Endorsements		538	6	1	545	23	568	51	14	1	66	12	78	589	20	2	611	35	646
WG	FLAT	10	4	0	14	7	21	1	18	8	27	23	50	11	22	8	41	30	71
	OTHR	21	2	0	23	8	31	1	15	7	23	20	43	22	17	7	46	28	74
	PCOD	95	17	2	114	11	125	11	32	13	56	33	89	106	49	15	170	44	214
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	25	55
	ROCK	9	3	0	12	7	19	3	20	7	30	22	52	12	23	7	42	29	71
Species Endorsements		143	27	2	172	40	212	16	98	43	157	116	273	159	125	45	329	156	485
Total Licenses		1,519	346	7	1,872	237	2,109	278	845	141	1,062	771	1,833	1,795	991	148	2,934	1,008	3,942
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

Configuration 718711 Explicit Reference Configuration	Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessel must have made a landing in an area each calendar year.																		
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	3	0	3	29	32	0	3	0	3	38	41
	OFLT	0	0	0	0	7	7	0	4	1	5	24	29	0	4	1	5	31	36
	PCOD	16	9	1	26	13	39	14	12	6	32	50	82	30	21	7	58	63	121
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	6	6	0	0	0	0	9	9
Species Endorsements		16	9	1	26	62	88	14	30	10	54	217	271	30	39	11	80	279	359
Total Area Vessels		16	9	1	26	13	39	14	12	6	32	52	84	30	21	7	58	65	123
BS	AMCK	0	4	0	4	8	12	0	50	12	62	46	108	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	2	58	12	72	70	142	5	64	12	81	84	165
	OFLT	2	6	0	8	14	22	0	63	13	76	72	148	2	69	13	84	86	170
	PCOD	56	32	1	89	19	108	32	117	27	176	90	266	88	149	28	265	109	374
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	8	[illegible]
	ROCK	3	7	0	10	16	26	2	59	13	74	70	144	5	66	13	84	85	[illegible]
	RSOL	1	6	0	7	14	21	0	59	12	71	69	140	1	65	12	78	83	161
	SQID	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	151
Species Endorsements		67	74	1	142	109	251	36	529	117	682	557	1,239	103	603	118	824	666	1,490
Total Area Vessels		56	32	1	89	20	109	32	117	27	176	90	266	88	149	28	265	110	375
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	18	24	0	42	3	45	8	12	0	20	13	33	26	36	0	62	16	78
	PCOD	431	88	2	521	22	543	65	39	3	107	18	125	496	127	5	628	40	668
	PLCK	51	30	0	81	5	86	9	21	2	32	13	45	60	51	2	113	18	131
	SFLT	23	27	0	50	4	54	6	15	1	22	11	33	29	42	1	72	15	87
Total Endorsements		524	169	2	695	35	730	88	88	6	182	57	239	612	257	8	877	92	969
Total Area Vessels		443	91	2	536	23	559	88	45	3	136	19	155	531	136	5	672	42	714
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	359	5	1	365	12	377	37	8	1	46	5	51	396	13	2	411	17	428
	PLCK	5	0	0	5	1	6	1	0	0	1	0	1	6	0	0	6	1	7
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorsements		367	5	1	373	15	388	38	9	1	48	5	53	405	14	2	421	20	441
Total Area Vessels		388	6	1	395	12	407	42	10	1	53	6	59	430	16	2	448	18	466
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	2	0	6	6	12	1	13	7	21	21	42	5	15	7	27	27	54
	PCOD	95	17	2	114	11	125	11	32	13	56	33	89	106	49	15	170	44	214
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	25	55
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorsements		110	21	2	133	36	169	12	79	39	130	100	230	122	100	41	263	136	399
Total Area Vessels		98	18	2	118	11	127	13	35	13	61	34	95	109	53	15	177	45	222
Unique Vessels Licensed In the North Pacific		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.1 The Nature of Licenses

Explicit

Configuration 815711		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessels must have made a landing in an area each calendar year.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
BSAI	AMCK	0	4	0	4	10	14	0	50	12	62	50	112	0	54	12	66	60	126
	GTRB	3	6	0	9	14	23	2	60	12	74	71	145	5	66	12	83	85	168
	OFLT	2	6	0	8	14	22	0	65	13	78	73	151	2	71	13	86	87	173
	PCOD	64	33	1	98	20	118	35	119	29	183	92	275	99	152	30	281	112	393
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	15	25	2	61	13	76	71	147	5	68	13	86	86	172
	RSOL	1	6	0	7	14	21	0	60	12	72	70	142	1	66	12	79	84	163
	SQID	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	151
Species Endorsements		75	75	1	151	112	263	39	538	119	696	587	1283	114	613	120	847	679	1526
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	18	24	0	42	3	45	8	12	0	20	13	33	26	36	0	62	16	78
	PCOD	431	88	2	521	22	543	65	39	3	107	18	125	496	127	5	628	40	668
	PLCK	51	30	0	81	5	86	9	21	2	32	13	45	60	51	2	113	18	131
	SFLT	23	27	0	50	4	54	6	15	1	22	11	33	29	42	1	72	15	87
Species Endorsements		524	169	2	695	35	730	88	88	6	182	57	239	612	257	8	877	92	969
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	359	5	1	365	12	377	37	8	1	46	5	51	396	13	2	411	17	428
	PLCK	5	0	0	5	1	6	1	0	0	1	0	1	6	0	0	6	1	7
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorsements		367	5	1	373	15	388	38	9	1	48	5	53	405	14	2	421	20	441
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	2	0	6	6	12	1	13	7	21	21	42	5	15	7	27	27	54
	PCOD	95	17	2	114	11	125	11	32	13	56	33	89	106	49	15	170	44	214
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	26	56
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorsements		110	21	2	133	36	169	12	79	39	130	100	230	122	100	41	263	136	399
Total Licenses		1,078	270	6	1,352	198	1,550	177	714	165	1,056	729	1,785	1,255	984	171	2,406	927	3,335
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.2 License Recipients

Explicit

Configuration 725711
Part 1 of 3

CURRENT OWNERS

Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
Vessel must have made a landing in an area each calendar year.
Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP		<60'	60-124'	125'+	Total	CP		<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	3	0	3	29	32	0	3	0	3	38	41
	OFLT	0	0	0	0	7	7	0	4	1	5	24	29	0	4	1	5	31	36
	PCOD	16	9	1	26	13	39	14	12	6	32	50	82	30	21	7	58	63	121
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	6	6	0	0	0	0	9	9
Species Endorsements		16	9	1	26	62	88	14	30	10	54	217	271	30	39	11	80	279	359
Total Area Vessels		16	9	1	26	13	39	14	12	6	32	52	84	30	21	7	58	65	123
BS	AMCK	0	4	0	4	8	12	0	50	12	62	46	108	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	2	58	12	72	70	142	5	64	12	81	84	165
	OFLT	2	6	0	8	14	22	0	63	13	76	72	148	2	69	13	84	86	170
	PCOD	56	32	1	89	19	108	32	117	27	176	90	266	88	149	28	265	109	374
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	15	25	2	59	13	74	70	144	5	66	13	84	85	169
	RSOL	1	6	0	7	14	21	0	59	12	71	69	140	1	65	12	78	83	161
	SQID	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	151
Species Endorsements		67	74	1	142	109	251	36	529	117	682	557	1,239	103	603	118	824	666	1,490
Total Area Vessels		56	32	1	89	20	109	32	117	27	176	90	266	88	149	28	265	110	375
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	18	24	0	42	3	45	8	12	0	20	13	33	26	36	0	62	16	78
	PCOD	431	88	2	521	22	543	65	39	3	107	18	125	496	127	5	628	40	668
	PLCK	51	30	0	81	5	86	9	21	2	32	13	45	60	51	2	113	18	131
	SFLT	23	27	0	50	4	54	6	15	1	22	11	33	29	42	1	72	15	87
Total Endorsements		524	169	2	695	35	730	88	88	6	182	57	239	612	257	8	877	92	969
Total Area Vessels		443	91	2	536	23	559	88	45	3	136	19	155	531	136	5	672	42	714
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	359	5	1	365	12	377	37	8	1	46	5	51	396	13	2	411	17	428
	PLCK	5	0	0	5	1	6	1	0	0	1	0	1	6	0	0	6	1	7
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorsements		367	5	1	373	15	388	38	9	1	48	5	53	405	14	2	421	20	441
Total Area Vessels		388	6	1	395	12	407	42	10	1	53	6	59	430	16	2	448	18	466
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	2	0	6	6	12	1	13	7	21	21	42	5	15	7	27	27	54
	PCOD	95	17	2	114	11	125	11	32	13	56	33	89	106	49	15	170	44	214
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	26	56
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorsements		110	21	2	133	36	169	12	79	39	130	100	230	122	100	41	263	136	399
Total Area Vessels		96	16	2	116	11	127	13	35	13	61	34	95	109	53	16	177	45	222
Unique Vessels Licensed in the North Pacific		921	115	4	1,040	51	1,091	138	147	30	316	95	410	1,059	262	34	1,355	146	1,501

3.2.2.2 License Recipients

Explicit

Configuration 725711 Part 2 of 3 LANDING'S OWNER		Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessel must have made a landing in an area each calendar year. Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP		<60'	60-124'	125'+	Total	CP		<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	1	1	0	1	0	1	13	14	0	1	0	1	14	15
	GTRB	0	0	0	0	1	1	0	0	0	0	12	12	0	0	0	0	13	13
	OFLT	0	0	0	0	1	1	0	1	0	1	12	13	0	1	0	1	13	14
	PCOD	2	1	1	4	3	7	3	3	4	10	23	33	5	4	5	14	28	40
	PLCK	0	0	0	0	1	1	0	1	0	1	15	16	0	1	0	1	16	17
	ROCK	0	0	0	0	1	1	0	2	0	2	16	18	0	2	0	2	17	19
	RSOL	0	0	0	0	1	1	0	1	0	1	12	13	0	1	0	1	13	14
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
Species Endorsements		2	1	1	4	9	13	3	9	4	16	106	122	5	10	5	20	115	135
Total Area Vessels		2	1	1	4	3	7	3	4	4	11	26	37	5	5	5	15	29	44
BS	AMCK	0	3	0	3	3	6	0	12	0	12	24	36	0	15	0	15	27	42
	GTRB	1	4	0	5	4	9	0	13	0	13	29	42	1	17	0	18	33	51
	OFLT	0	6	0	6	3	9	0	21	0	21	29	50	0	27	0	27	32	59
	PCOD	7	9	1	17	6	23	8	26	5	39	36	75	15	35	6	56	42	98
	PLCK	0	6	0	6	4	10	0	20	0	20	29	49	0	26	0	26	33	59
	ROCK	1	6	0	7	3	10	0	14	0	14	30	44	1	20	0	21	33	54
	RSOL	0	4	0	4	3	7	0	19	0	19	30	49	0	23	0	23	33	56
	SQID	0	0	0	0	1	1	0	2	0	2	0	2	0	2	0	2	1	3
	YSOL	0	3	0	3	2	5	0	17	0	17	28	45	0	20	0	20	30	50
Species Endorsements		9	41	1	51	29	80	8	144	5	157	235	392	17	185	6	208	264	472
Total Area Vessels		7	9	1	17	6	23	8	28	5	41	36	77	15	37	6	58	42	100
CG	AMCK	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
	DFLT	3	5	0	8	2	10	1	3	0	4	4	8	4	8	0	12	6	18
	PCOD	44	12	0	56	5	61	16	9	2	27	5	32	60	21	2	83	10	93
	PLCK	6	7	0	13	3	16	2	5	1	8	4	12	8	12	1	21	7	28
	SFLT	0	7	0	7	1	8	3	5	1	9	5	14	3	12	1	16	6	22
Total Endorsements		53	31	0	84	11	95	22	22	4	48	21	69	75	53	4	132	32	164
Total Area Vessels		45	12	0	57	5	62	17	9	2	28	4	32	62	21	2	85	9	94
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	PCOD	36	0	0	36	1	37	4	2	0	6	2	8	40	2	0	42	3	45
	PLCK	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	SFLT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Species Endorsements		36	0	0	36	4	40	4	2	0	6	2	8	40	2	0	42	6	48
Total Area Vessels		36	0	0	36	1	37	4	2	0	6	2	8	40	2	0	42	3	45
WG	AMCK	0	1	0	1	1	2	0	1	0	1	7	8	0	2	0	2	8	10
	DFLT	0	1	0	1	2	3	1	1	9	11	0	11	1	2	9	12	2	14
	PCOD	8	2	0	10	3	13	5	10	5	20	17	37	13	12	5	30	20	50
	PLCK	1	1	0	2	2	4	0	4	1	5	10	15	1	5	1	7	12	19
	SFLT	0	1	0	1	1	2	0	4	1	5	10	15	0	5	1	6	11	17
Species Endorsements		9	6	0	15	9	24	6	20	16	42	44	86	15	26	16	57	53	110
Total Area Vessels		8	2	0	10	3	13	5	10	5	20	17	37	13	12	5	30	20	50
Unique Landings Owners Who Are Not Current Owners In the North Pacific		84	16	1	100	8	108	23	34	6	63	36	99	107	48	7	163	44	207
Total Licenses Issued Under Option A (CO+LO)		878	130	8	1,113	53	1,166	161	188	34	383	135	518	1,139	318	38	1,496	188	1,684

Explicit

Configuration 725711
Part 3 of 3

PERMIT HOLDERS

Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
Vessel must have made a landing in an area each calendar year.
Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP		<60'	60-124'	125'+	Total	CP		<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	0	0	0	0	1	1	32	33	0	0	1	1	32	33
	GTRB	0	0	0	0	1	1	0	1	0	1	41	42	0	1	0	1	42	43
	OFLT	0	0	0	0	0	0	0	2	1	3	33	36	0	2	1	3	33	36
	PCOD	6	4	0	10	4	14	2	8	5	15	68	83	8	12	5	25	72	97
	PLCK	0	0	0	0	0	0	0	4	2	6	58	64	0	4	2	6	58	64
	ROCK	0	0	0	0	3	3	0	1	0	1	45	46	0	1	0	1	48	49
	RSOL	0	0	0	0	0	0	0	0	1	1	35	36	0	0	1	1	35	36
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	9	9	0	0	0	0	9	9
Species Endorsements		6	4	0	10	8	18	2	16	10	28	321	349	8	20	10	38	329	367
Total Area Vessels		6	4	0	10	5	15	2	10	6	18	79	97	8	14	6	28	84	112
BS	AMCK	0	4	4	8	1	9	0	53	19	72	49	121	0	57	23	80	50	130
	GTRB	0	8	2	10	3	13	1	59	22	82	90	172	1	67	24	92	93	185
	OFLT	1	14	3	18	6	24	0	82	29	111	113	224	1	96	32	129	119	248
	PCOD	19	39	6	64	18	82	9	140	39	188	171	359	28	179	45	252	189	441
	PLCK	1	18	3	22	7	29	0	87	30	117	126	243	1	105	33	139	133	272
	ROCK	1	11	2	14	9	23	1	68	28	97	105	202	2	79	30	111	114	225
	RSOL	0	11	1	12	2	14	0	70	26	96	105	201	0	81	27	108	107	215
	SQID	0	1	0	1	0	1	0	0	2	2	1	3	0	1	2	3	1	4
	YSOL	0	8	3	11	1	12	0	64	22	86	74	160	0	72	25	97	76	172
Species Endorsements		22	114	24	160	47	207	11	623	217	851	834	1,685	33	737	241	1,011	881	1,892
Total Area Vessels		19	41	7	67	20	87	9	144	40	193	176	369	28	185	47	260	196	456
CG	AMCK	1	1	0	2	0	2	0	.0	0	0	1	1	1	1	0	2	1	3
	DFLT	4	44	0	48	2	50	2	13	0	15	15	30	6	57	0	63	17	80
	PCOD	160	104	0	264	17	281	24	35	5	64	21	85	184	139	5	328	38	366
	PLCK	20	53	0	73	4	77	5	24	3	32	7	39	25	77	3	105	11	116
	SFLT	6	51	0	57	2	59	3	20	2	25	11	36	9	71	2	82	13	95
Total Endorsements		191	253	0	444	25	469	34	92	10	136	55	191	225	345	10	580	80	660
Total Area Vessels		161	106	0	267	16	283	24	38	5	67	23	90	185	144	5	334	39	373
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PCOD	44	2	0	46	2	48	14	3	1	18	4	22	58	5	1	64	6	70
	PLCK	1	0	0	1	0	1	0	0	0	0	1	1	1	0	0	1	1	2
	SFLT	2	0	0	2	0	2	0	0	0	0	2	2	2	0	0	2	2	4
Species Endorsements		47	2	0	49	2	51	14	3	1	18	7	25	61	5	1	67	9	76
Total Area Vessels		45	2	0	47	2	49	14	3	1	18	4	22	59	5	1	65	6	71
WG	AMCK	0	0	0	0	0	0	0	8	4	12	20	32	0	8	4	12	20	32
	DFLT	1	1	0	2	1	3	0	17	8	25	34	59	1	18	8	27	35	62
	PCOD	41	12	1	54	6	60	4	41	13	58	44	102	45	53	14	112	50	162
	PLCK	6	0	2	8	0	8	0	25	12	37	23	60	6	25	14	45	23	68
	SFLT	3	0	2	5	0	5	0	19	11	30	26	56	3	19	13	35	26	61
Species Endorsements		51	13	5	69	7	76	4	110	48	162	147	309	55	123	53	231	154	385
Total Area Vessels		41	13	2	56	6	62	4	44	14	62	48	110	45	57	16	118	54	172
Unique Permit Holders Who Are Not Current Owners or Landings Owners in the North Pacific		246	134	7	387	33	420	47	163	44	260	190	450	293	303	51	647	223	870
Total Licenses Issued Under Option B (CO+LO+PH)		1,224	264	12	1,500	86	1,586	208	357	78	643	325	968	1,432	621	90	2,143	411	2,554

3.2.2.2 License Recipients

Explicit

Configuration 735711
Part 1 of 3

CURRENT OWNERS

Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
Vessel must have made a landing in an area each calendar year.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	3	0	3	29	32	0	3	0	3	38	41
	OFLT	0	0	0	0	7	7	0	4	1	5	24	29	0	4	1	5	31	36
	PCOD	16	9	1	26	13	39	14	12	6	32	50	82	30	21	7	58	63	121
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	6	6	0	0	0	0	9	9
Species Endorsements		16	9	1	26	62	88	14	30	10	54	217	271	30	39	11	80	279	359
Total Area Vessels		16	9	1	26	13	39	14	12	6	32	52	84	30	21	7	58	65	123
BS	AMCK	0	4	0	4	8	12	0	50	12	62	46	108	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	2	58	12	72	70	142	5	64	12	81	84	165
	OFLT	2	6	0	8	14	22	0	63	13	76	72	148	2	69	13	84	86	170
	PCOD	56	32	1	89	19	108	32	117	27	176	90	266	88	149	28	265	109	374
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	16	26	2	59	13	74	70	144	5	66	13	84	85	169
	RSOL	1	6	0	7	14	21	0	59	12	71	69	140	1	65	12	78	83	161
	SQID	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	151
Species Endorsements		67	74	1	142	109	251	36	529	117	682	557	1,239	103	603	118	824	666	1,490
Total Area Vessels		56	32	1	89	20	109	32	117	27	176	90	266	88	149	28	265	110	375
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	18	24	0	42	3	45	8	12	0	20	13	33	26	36	0	62	16	78
	PCOD	431	88	2	521	22	543	65	39	3	107	18	125	496	127	5	628	40	668
	PLCK	51	30	0	81	5	86	9	21	2	32	13	45	60	51	2	113	18	131
	SFLT	23	27	0	50	4	54	6	15	1	22	11	33	29	42	1	72	15	87
Total Endorsements		524	169	2	695	35	730	88	88	6	182	57	239	612	257	8	877	92	969
Total Area Vessels		443	91	2	536	23	559	88	45	3	136	19	155	531	136	5	672	42	714
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	359	5	1	365	12	377	37	8	1	46	5	51	396	13	2	411	17	428
	PLCK	5	0	0	5	1	6	1	0	0	1	0	1	6	0	0	6	1	7
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorsements		367	6	1	373	15	388	38	9	1	48	5	53	405	14	2	421	20	441
Total Area Vessels		388	6	1	395	12	407	42	10	1	53	6	59	430	16	2	448	18	466
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	2	0	6	6	12	1	13	7	21	21	42	5	15	7	27	27	54
	PCOD	95	17	2	114	11	125	11	32	13	56	33	89	106	49	15	170	44	214
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	25	55
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorsements		110	21	2	133	36	169	12	79	39	130	100	230	122	100	41	263	136	399
Total Area Vessels		96	18	2	116	11	127	13	35	13	61	34	95	109	53	15	177	45	222
Unique Vessels Licensed In the North Pacific		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,356	146	1,501

Configuration 735711
Part 2 of 3

PERMIT HOLDERS

Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1980 - June 27, 1992, Catch History. Vessel must have made a landing in an area each calendar year.

Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	0	0	0	0	1	1	32	33	0	0	1	1	32	33
	GTRB	0	0	0	0	1	1	0	1	0	1	42	43	0	1	0	1	43	44
	OFLT	0	0	0	0	0	0	0	2	1	3	34	37	0	2	1	3	34	37
	PCOD	6	4	0	10	4	14	2	8	5	15	69	84	8	12	5	25	73	98
	PLCK	0	0	0	0	0	0	0	4	2	6	59	65	0	4	2	6	59	65
	ROCK	0	0	0	0	3	3	0	2	0	2	46	48	0	2	0	2	49	51
	RSOL	0	0	0	0	0	0	0	0	1	1	35	36	0	0	1	1	35	36
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	9	9	0	0	0	0	9	9
Species Endorsements		6	4	0	10	8	18	2	17	10	29	326	355	8	21	10	39	334	373
Total Area Vessels		6	4	0	10	5	15	2	11	6	19	81	100	8	15	6	29	86	115
BS	AMCK	0	4	4	8	1	9	0	53	19	72	49	121	0	57	23	80	50	130
	GTRB	0	8	2	10	3	13	1	60	22	83	91	174	1	68	24	93	94	187
	OFLT	1	15	3	19	6	25	0	84	29	113	115	228	1	99	32	132	121	253
	PCOD	23	41	6	70	19	89	11	145	39	195	173	368	34	186	45	265	192	457
	PLCK	1	19	3	23	7	30	0	89	30	119	128	247	1	108	33	142	135	277
	ROCK	1	12	2	15	9	24	1	70	28	99	107	206	2	82	30	114	116	230
	RSOL	0	12	1	13	2	15	0	70	26	96	106	202	0	82	27	109	108	217
	SQID	0	1	0	1	0	1	0	0	2	2	1	3	0	1	2	3	1	4
	YSOL	0	8	3	11	1	12	0	65	22	87	74	161	0	73	25	98	75	173
Species Endorsements		26	120	24	170	48	218	13	636	217	866	844	1,710	39	756	241	1,036	892	1,928
Total Area Vessels		23	43	7	73	21	94	11	150	40	201	179	380	34	193	47	274	200	474
CG	AMCK	1	1	0	2	0	2	0	0	0	0	1	1	1	1	0	2	1	3
	DFLT	6	46	0	52	2	54	2	13	0	15	15	30	8	59	0	67	17	84
	PCOD	180	108	0	288	17	305	27	37	5	69	21	90	207	145	5	357	38	395
	PLCK	21	56	0	77	4	81	5	24	3	32	7	39	26	80	3	109	11	120
	SFLT	6	53	0	59	2	61	4	20	2	26	11	37	10	73	2	85	13	98
Total Endorsements		214	264	0	478	25	503	38	94	10	142	55	197	252	358	10	620	80	700
Total Area Vessels		181	110	0	291	16	307	28	40	5	73	23	96	209	150	5	364	39	403
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PCOD	67	2	0	69	2	71	14	3	1	18	4	22	81	5	1	87	6	93
	PLCK	1	0	0	1	0	1	0	0	0	0	1	1	1	0	0	1	1	2
	SFLT	2	0	0	2	0	2	0	0	0	0	2	2	2	0	0	2	2	4
Species Endorsements		70	2	0	72	2	74	14	3	1	18	7	25	84	5	1	90	9	99
Total Area Vessels		68	2	0	70	2	72	14	3	1	18	4	22	82	5	1	88	6	94
WG	AMCK	0	0	0	0	0	0	0	8	4	12	20	32	0	8	4	12	20	32
	DFLT	1	1	0	2	1	3	0	17	8	25	35	60	1	18	8	27	36	63
	PCOD	47	12	1	60	7	67	5	42	13	60	45	105	52	54	14	120	52	172
	PLCK	6	0	2	8	0	8	0	25	12	37	24	61	6	25	14	45	24	69
	SFLT	3	0	2	5	0	5	0	19	11	30	27	57	3	19	13	35	27	62
Species Endorsements		57	13	5	75	8	83	5	111	48	164	151	315	62	124	53	239	159	398
Total Area Vessels		47	13	2	62	7	69	5	45	14	64	49	113	52	58	16	126	56	182
Unique Permit Holders Who Are Not Current Owners In the North Pacific		295	138	7	440	36	476	52	176	44	272	183	455	347	314	51	712	228	940
Total Licenses Issued Under Option A (CO+PH)		1,189	253	11	1,453	80	1,533	180	330	72	582	282	864	1,378	583	63	2,045	372	2,417

3.2.2.2 License Recipients

Explicit

Configuration 735711
Part 3 of 3

LANDING'S OWNERS

Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
Vessel must have made a landing in an area each calendar year.
Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	126'+	Total	CP	Total	<60'	60-124'	126'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	1	1	0	1	0	1	13	14	0	1	0	1	14	15
	GTRB	0	0	0	0	1	1	0	0	0	0	11	11	0	0	0	0	12	12
	OFLT	0	0	0	0	1	1	0	1	0	1	11	12	0	1	0	1	12	13
	PCOD	2	1	1	4	3	7	3	2	4	9	23	32	5	3	5	13	26	39
	PLCK	0	0	0	0	1	1	0	1	0	1	14	15	0	1	0	1	15	16
	ROCK	0	0	0	0	1	1	0	1	0	1	15	16	0	1	0	1	16	17
	RSOL	0	0	0	0	1	1	0	1	0	1	12	13	0	1	0	1	13	14
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
Species Endorsements		2	1	1	4	9	13	3	7	4	14	102	116	5	8	5	18	111	129
Total Area Vessels		2	1	1	4	3	7	3	2	4	9	25	34	5	3	5	13	28	41
BS	AMCK	0	3	0	3	3	6	0	12	0	12	24	36	0	15	0	15	27	42
	GTRB	1	4	0	5	4	9	0	11	0	11	29	40	1	15	0	16	33	49
	OFLT	0	5	0	5	3	8	0	18	0	18	28	46	0	23	0	23	31	54
	PCOD	3	7	1	11	5	16	5	20	5	30	36	66	8	27	6	41	41	82
	PLCK	0	5	0	5	4	9	0	17	0	17	28	45	0	22	0	22	32	54
	ROCK	1	5	0	6	3	9	0	11	0	11	29	40	1	16	0	17	32	49
	RSOL	0	3	0	3	3	6	0	18	0	18	30	48	0	21	0	21	33	54
	SQID	0	0	0	0	1	1	0	2	0	2	0	2	0	2	0	2	1	3
	YSOL	0	3	0	3	2	5	0	16	0	16	7	23	0	19	0	19	9	28
Species Endorsements		5	35	1	41	28	69	5	125	5	135	211	346	10	160	6	176	239	415
Total Area Vessels		3	7	1	11	5	16	5	21	5	31	35	66	8	28	6	42	40	82
CG	AMCK	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
	DFLT	1	3	0	4	2	6	1	3	0	4	4	8	2	6	0	8	6	14
	PCOD	24	8	0	32	5	37	13	7	2	22	5	27	37	15	2	54	10	64
	PLCK	5	4	0	9	3	12	2	5	1	8	4	12	7	9	1	17	7	24
	SFLT	0	5	0	5	1	6	2	5	1	8	5	13	2	10	1	13	6	19
Total Endorsements		30	20	0	50	11	61	18	20	4	42	21	63	48	40	4	92	32	124
Total Area Vessels		25	8	0	33	5	38	13	7	2	22	4	26	38	15	2	55	9	64
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	PCOD	13	0	0	13	1	14	4	2	0	6	2	8	17	2	0	19	3	22
	PLCK	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	SFLT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Species Endorsements		13	0	0	13	4	17	4	2	0	6	2	8	17	2	0	19	6	26
Total Area Vessels		13	0	0	13	1	14	4	2	0	6	2	8	17	2	0	19	3	22
WG	AMCK	0	1	0	1	1	2	0	1	0	1	7	8	0	2	0	2	8	10
	DFLT	0	1	0	1	2	3	0	1	1	2	8	10	0	2	1	3	10	13
	PCOD	2	2	0	4	2	6	4	9	5	18	16	34	6	11	5	22	18	40
	PLCK	1	1	0	2	2	4	0	4	1	5	9	14	1	5	1	7	11	18
	SFLT	0	1	0	1	1	2	0	4	1	5	9	14	0	5	1	6	10	16
Species Endorsements		3	6	0	9	8	17	4	19	8	31	49	80	7	25	8	40	57	97
Total Area Vessels		2	2	0	4	2	6	4	9	5	18	16	34	6	11	5	22	18	40
Unique Landings Owners Who Are Not Current Owners or Permit Holders in the North Pacific		35	11	1	47	6	53	17	26	6	49	35	84	52	37	7	96	41	137
Total Licenses Issued Under Option B (CO+PH+LO)		1,224	264	12	1,500	86	1,586	207	358	78	641	327	968	1,431	620	90	2,141	413	2,554

Configuration 745711
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CURRENT OWNERS

Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
Vessel must have made a landing in an area each calendar year.
Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP		<60'	60-124'	125'+	Total	CP		<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	3	0	3	29	32	0	3	0	3	38	41
	OFLT	0	0	0	0	7	7	0	4	1	5	24	29	0	4	1	5	31	36
	PCOD	16	9	1	26	13	39	14	12	6	32	50	82	30	21	7	58	63	121
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	6	6	0	0	0	0	9	9
Species Endorsements		16	9	1	26	62	88	14	30	10	54	217	271	30	39	11	80	279	359
Total Area Vessels		16	9	1	26	13	39	14	12	6	32	52	84	30	21	7	58	65	123
BS	AMCK	0	4	0	4	8	12	0	50	12	62	46	108	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	2	58	12	72	70	142	5	64	12	81	84	165
	OFLT	2	6	0	8	14	22	0	63	13	76	72	148	2	69	13	84	86	170
	PCOD	56	32	1	89	19	108	32	117	27	176	90	266	88	149	28	265	109	374
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	15	25	2	59	13	74	70	144	5	66	13	84	85	169
	RSOL	1	6	0	7	14	21	0	59	12	71	69	140	1	65	12	78	83	161
	SQID	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	161
Species Endorsements		67	74	1	142	109	251	36	529	117	682	557	1,239	103	603	118	824	666	1,490
Total Area Vessels		56	32	1	89	20	109	32	117	27	176	90	266	88	149	28	265	110	375
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	18	24	0	42	3	45	8	12	0	20	13	33	26	36	0	62	16	78
	PCOD	431	88	2	521	22	543	65	39	3	107	18	125	496	127	5	628	40	668
	PLCK	51	30	0	81	5	86	9	21	2	32	13	45	60	51	2	113	18	131
	SFLT	23	27	0	50	4	54	6	15	1	22	11	33	29	42	1	72	15	87
Total Endorsements		524	169	2	695	35	730	88	88	6	182	57	239	612	257	8	877	92	969
Total Area Vessels		443	91	2	536	23	559	88	45	3	136	19	155	531	136	5	672	42	714
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	359	5	1	365	12	377	37	8	1	46	5	51	396	13	2	411	17	428
	PLCK	5	0	0	5	1	6	1	0	0	1	0	1	6	0	0	6	1	7
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorsements		367	5	1	373	15	388	38	9	1	48	5	53	405	14	2	421	20	441
Total Area Vessels		388	6	1	395	12	407	42	10	1	53	6	59	430	16	2	448	18	466
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	2	0	6	6	12	1	13	7	21	21	42	5	15	7	27	27	54
	PCOD	95	17	2	114	11	125	11	32	13	56	33	89	106	49	15	170	44	214
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	25	55
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorsements		110	21	2	133	36	169	12	79	39	130	100	230	122	100	41	263	136	399
Total Area Vessels		98	18	2	118	11	127	13	35	13	61	34	95	109	63	15	177	45	222
Unique Vessels Licensed in the North Pacific		921	115	4	1,040	51	1,091	138	147	30	316	95	410	1,059	262	34	1,356	146	1,601

3.2.2.2 License Recipients | Explicit

Configuration 745711
Part 2 of 3

Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
Vessel must have made a landing in an area each calendar year.

LANDING'S OWNERS		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	126'+	Total	CP	Total	<60'	60-124'	126'+	Total	CP	Total	<60'	60-124'	126'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	8	8	0	1	1	2	26	28	0	1	1	2	34	36
	GTRB	0	0	0	0	5	5	0	3	0	3	32	35	0	3	0	3	37	40
	DFLT	0	0	0	0	4	4	0	3	1	4	29	33	0	3	1	4	33	37
	PCOD	16	9	1	26	14	40	14	11	6	31	52	83	30	20	7	57	66	123
	PLCK	0	0	0	0	8	8	0	2	1	3	35	38	0	2	1	3	43	46
	ROCK	0	0	0	0	10	10	0	6	0	6	37	43	0	6	0	6	47	53
	RSOL	0	0	0	0	5	5	1	1	26	28	74	102	1	1	26	28	79	107
	SQD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	7	7
Species Endorsements		16	9	1	26	54	80	15	27	35	77	292	369	31	36	36	103	346	449
Total Area Vessels		16	9	1	26	14	40	14	12	6	32	56	88	30	21	7	58	70	128
BS	AMCK	0	6	0	6	5	11	0	43	10	53	50	103	0	49	10	59	55	114
	GTRB	3	9	0	12	11	23	2	51	12	65	73	138	5	60	12	77	84	161
	DFLT	2	11	0	13	16	29	0	65	12	77	76	153	2	76	12	90	92	182
	PCOD	56	36	2	94	23	117	28	114	26	168	95	263	84	150	28	262	118	380
	PLCK	2	11	0	13	17	30	0	63	12	75	77	152	2	74	12	88	94	182
	ROCK	3	12	0	15	13	28	2	53	12	67	73	140	5	65	12	82	86	168
	RSOL	1	9	0	10	14	24	0	59	10	69	74	143	1	68	10	79	88	167
	SQD	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	7	0	7	10	17	0	58	11	69	66	135	0	65	11	76	76	152
Species Endorsements		67	102	2	171	110	281	32	509	107	648	587	1,235	99	611	109	819	697	1,516
Total Area Vessels		56	36	2	94	24	118	28	116	26	170	95	265	84	152	28	264	119	383
CG	AMCK	1	0	0	1	1	2	0	1	0	1	3	4	1	1	0	2	4	6
	DFLT	18	23	0	41	5	46	8	12	0	20	12	32	26	35	0	61	17	78
	PCOD	421	88	2	511	25	536	70	40	4	114	16	130	491	128	6	625	41	666
	PLCK	52	30	0	82	8	90	9	20	3	32	11	43	61	50	3	114	19	133
	SFLT	22	28	0	50	3	53	8	15	2	25	12	37	30	43	2	75	15	90
Total Endorsements		514	169	2	685	42	727	95	88	9	192	54	246	609	257	11	877	96	973
Total Area Vessels		422	90	2	514	25	539	75	40	4	119	16	135	497	130	6	633	41	674
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	2	2	0	1	0	1	0	1	0	1	0	1	2	3
	PCOD	366	5	1	372	12	384	33	8	1	42	6	48	399	13	2	414	18	432
	PLCK	5	0	0	5	2	7	1	0	0	1	0	1	6	0	0	6	2	8
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorsements		374	5	1	380	17	397	34	9	1	44	6	50	408	14	2	424	23	447
Total Area Vessels		367	5	1	373	12	385	34	8	1	43	6	49	401	13	2	416	18	434
WG	AMCK	0	1	0	1	7	8	0	6	1	7	14	21	0	7	1	8	21	29
	DFLT	4	4	0	8	7	15	1	10	6	17	24	41	5	14	6	25	31	56
	PCOD	85	18	2	105	12	117	15	28	13	56	35	91	100	46	15	161	47	208
	PLCK	8	2	0	10	8	18	0	11	8	19	21	40	8	13	8	29	29	58
	SFLT	3	2	0	5	7	12	0	11	8	19	21	40	3	13	8	24	28	52
Species Endorsements		100	27	2	129	41	170	18	66	38	118	115	233	118	93	38	247	156	403
Total Area Vessels		86	19	2	107	12	119	15	30	13	58	36	94	101	49	15	165	48	213
Unique Landings Owners In the North Pacific		861	115	5	981	54	1,035	129	143	28	300	102	402	990	258	33	1,281	156	1,437
Total Licenses Issued Under Option A (CO+LO)		1,755	230	5	1,994	99	2,093	267	297	56	620	201	821	2,022	527	65	2,614	300	2,914

Configuration 748711
Part 3 of 8

PERMIT HOLDERS

Licenses Issued to Current Vessel Owners, Landings and Permit Holders Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
Vessel must have made a landing in an area each calendar year.
Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	0	0	0	0	1	1	33	34	0	0	1	1	33	34
	GTRB	0	0	0	0	1	1	0	3	0	3	43	46	0	3	0	3	44	47
	OFLT	0	0	0	0	0	0	0	3	1	4	35	39	0	3	1	4	35	39
	PCOD	17	10	0	27	4	31	11	10	5	26	72	98	28	20	5	53	76	129
	PLCK	0	0	0	0	0	0	0	4	2	6	60	66	0	4	2	6	60	66
	ROCK	0	0	0	0	3	3	0	4	0	4	47	51	0	4	0	4	50	54
	RSOL	0	0	0	0	0	0	0	0	1	1	36	37	0	0	1	1	36	37
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	9	9	0	0	0	0	9	9
Species Endorsements		17	10	0	27	8	35	11	24	10	45	335	380	28	34	10	72	343	415
Total Area Vessels		17	10	0	27	5	32	11	13	6	30	84	114	28	23	6	57	89	146
BS	AMCK	0	5	4	9	1	10	55	20	50	125	0	125	55	25	54	134	1	135
	GTRB	3	9	2	14	3	17	3	67	23	93	92	185	6	76	25	107	95	202
	OFLT	2	16	3	21	6	27	0	90	30	120	117	237	2	106	33	141	123	264
	PCOD	62	52	6	120	21	141	25	161	40	226	179	405	87	213	46	346	200	546
	PLCK	2	20	3	25	7	32	0	94	31	125	131	256	2	114	34	150	138	288
	ROCK	3	14	2	19	9	28	3	76	29	108	109	217	6	90	31	127	118	245
	RSOL	1	13	1	15	2	17	0	74	27	101	109	210	1	87	28	116	111	227
	SQID	0	1	0	1	0	1	0	0	2	2	1	3	0	1	2	3	1	4
	YSOL	0	8	3	11	1	12	0	67	23	90	77	167	0	75	26	101	78	179
Species Endorsements		73	138	24	235	50	285	86	649	255	990	815	1,805	159	787	279	1,225	865	2,090
Total Area Vessels		62	55	7	124	23	147	25	166	41	232	185	417	87	221	48	356	208	564
CG	AMCK	1	1	0	2	0	2	0	0	0	0	2	2	1	1	0	2	2	4
	DFLT	18	53	0	71	3	74	8	14	0	22	16	38	26	67	0	93	19	112
	PCOD	480	154	1	635	29	664	65	47	5	117	24	141	545	201	6	752	53	805
	PLCK	58	66	0	124	6	130	7	27	3	37	8	45	65	93	3	161	14	175
	SFLT	22	62	0	84	3	87	7	21	2	30	12	42	29	83	2	114	15	129
Total Endorsements		579	336	1	916	41	957	87	109	10	206	82	288	666	445	11	1,122	103	1,225
Total Area Vessels		482	157	1	640	29	669	70	60	6	125	26	151	552	207	6	765	55	820
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	0	0	0	1	0	1	1	2	0	1	0	1	1	2
	PCOD	373	7	1	381	11	392	31	5	1	37	5	42	404	12	2	418	16	434
	PLCK	5	0	0	5	0	5	1	0	0	1	2	3	6	0	0	6	2	8
	SFLT	4	0	0	4	0	4	0	0	0	0	2	2	4	0	0	4	2	6
Species Endorsements		382	7	1	390	11	401	32	6	1	39	10	49	414	13	2	429	21	450
Total Area Vessels		375	7	1	383	11	394	32	5	1	38	5	43	407	12	2	421	16	437
WG	AMCK	0	0	0	0	0	0	0	8	4	12	21	33	0	8	4	12	21	33
	DFLT	4	1	0	5	1	6	1	19	8	28	36	64	5	20	8	33	37	70
	PCOD	110	19	2	131	8	139	10	44	14	68	48	116	120	63	16	199	56	255
	PLCK	9	1	2	12	0	12	0	25	13	38	26	64	9	26	15	50	26	76
	SFLT	4	1	2	7	0	7	0	19	12	31	29	60	4	20	14	38	29	67
Species Endorsements		127	22	6	155	9	164	11	115	51	177	160	337	138	137	57	332	169	501
Total Area Vessels		111	20	3	134	8	142	10	48	15	73	52	125	121	68	18	207	60	267
Unique Permit Holders in the North Pacific		968	199	10	1,177	60	1,237	128	188	46	348	200	548	1,093	307	55	1,648	260	1,908
Total Licenses Issued Under Option B (CO+PH)		1,862	314	14	2,190	106	2,296	273	342	73	688	299	987	2,126	665	87	2,878	404	3,282
Total Licenses Issued Under Option C (CO+LO+PH)		2,723	429	19	3,171	189	3,330	392	446	101	947	401	1,348	3,115	924	120	4,189	590	4,719

3.2.2.3 License Designations — Explicit

Configuration 711711	Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessel must have made a landing in an area each year.			
		Current Owner's State of Residence		
Area	Species	Alaska	Other	Total
AI	AMCK	7	24	31
	GTRB	9	32	41
	OFLT	7	29	36
	PCOD	39	82	121
	PLCK	7	34	41
	ROCK	9	39	48
	RSOL	7	25	32
	SQUID	0	0	0
	YSOL	3	6	9
Species Endorsments		88	271	359
BS	AMCK	12	108	120
	GTRB	23	142	165
	OFLT	22	148	170
	PCOD	108	266	374
	PLCK	22	148	170
	ROCK	25	144	169
	RSOL	21	140	161
	SQID	2	8	10
	YSOL	16	135	151
Species Endorsments		251	1239	1490
CG	AMCK	2	3	5
	DFLT	45	33	78
	PCOD	543	125	668
	PLCK	86	45	131
	SFLT	54	33	87
Species Endorsements		730	239	969
EG	AMCK	0	0	0
	DFLT	1	1	2
	PCOD	377	51	428
	PLCK	6	1	7
	SFLT	4	0	4
Species Endorsements		388	53	441
WG	AMCK	6	22	28
	DFLT	12	42	54
	PCOD	125	89	214
	PLCK	16	39	55
	SFLT	10	38	48
Species Endorsements		169	230	399
Total Licenses		1626	2032	3658
Total Vessels/All Areas		1,091	410	1,501

3.2.2.3 License Designations

Explicit

Configuration 712711		Licenses Issued to Current Vessel Owners Based on the Vessel's, Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessels must have made a landing in an area each year.								
		Current Owner's State of Residence								
		Alaska			Other			Total		
Area	Species	CV	CP	Total	CV	CP	Total	CV	CP	Licenses
AI	AMCK	0	7	7	2	22	24	2	29	31
	GTRB	0	9	9	3	29	32	3	38	41
	OFLT	0	7	7	5	24	29	5	31	36
	PCOD	26	13	39	32	50	82	58	63	121
	PLCK	0	7	7	4	30	34	4	37	41
	ROCK	0	9	9	6	33	39	6	42	48
	RSOL	0	7	7	2	23	25	2	30	32
	SQID	0	0	0	0	0	0	0	0	0
	YSOL	0	3	3	0	6	6	0	9	9
Species Endorsements		26	62	88	54	217	271	80	279	359
BS	AMCK	4	8	12	62	46	108	66	54	120
	GTRB	9	14	23	72	70	142	81	84	165
	OFLT	8	14	22	76	72	148	84	86	170
	PCOD	89	19	108	176	90	266	265	109	374
	PLCK	8	14	22	75	73	148	83	87	170
	ROCK	10	15	25	74	70	144	84	85	169
	RSOL	7	14	21	71	69	140	78	83	161
	SQID	1	1	2	5	3	8	6	4	10
	YSOL	6	10	16	71	64	135	77	74	151
Species Endorsements		142	109	251	682	557	1,239	824	666	1,490
CG	AMCK	1	1	2	1	2	3	2	3	5
	DFLT	42	3	45	20	13	33	62	16	78
	PCOD	621	22	643	107	18	125	628	40	668
	PLCK	81	5	86	32	13	45	113	18	131
	SFLT	50	4	54	22	11	33	72	15	87
Species Endorsements		695	35	730	182	57	239	877	92	969
EG	AMCK	0	0	0	0	11	11	0	11	11
	DFLT	0	1	1	1	0	1	1	1	2
	PCOD	365	12	377	46	5	51	411	17	428
	PLCK	5	1	6	1	0	1	6	1	7
	SFLT	3	1	4	0	0	0	3	1	4
Species Endorsements		373	15	388	48	16	64	421	31	452
WG	AMCK	0	6	6	11	11	22	11	17	28
	DFLT	6	6	12	21	21	42	27	27	54
	PCOD	114	11	125	56	33	89	170	44	214
	PLCK	9	7	16	21	18	39	30	25	55
	SFLT	4	6	10	21	17	38	25	23	48
Species Endorsements		133	36	169	130	100	230	263	136	399
Total Licenses		1,369	257	1,626	1,096	947	2,043	2,465	1,204	3,669
Total Vessels/All Areas		1,040	51	1,091	315	95	410	1,355	146	1,501

3.2.2.3 License Designations

Explicit

Configuration 713711		Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1,1990 - June 27, 1992, Catch History. Vessel must have made a landing in an area each year.												
		Current Owner's State of Residence											
		Alaska				Other				Total			
Area	Species	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	Licenses
AI	AMCK	0	0	7	7	3	3	18	24	3	3	25	31
	GTRB	0	2	7	9	6	6	20	32	6	8	27	41
	OFLT	0	0	7	7	5	7	17	29	5	7	24	36
	PCOD	18	12	9	39	20	21	41	82	38	33	50	121
	PLCK	0	0	7	7	6	4	24	34	6	4	31	41
	ROCK	0	2	7	9	6	9	24	39	6	11	31	48
	RSOL	0	0	7	7	4	2	19	25	4	2	26	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	3	3	1	0	5	6	1	0	8	9
Species Endorsements		18	16	54	88	51	62	168	271	69	68	222	359
BS	AMCK	0	5	7	12	4	55	49	108	4	60	56	120
	GTRB	3	9	11	23	9	73	60	142	12	82	71	165
	OFLT	2	9	11	22	7	78	63	148	9	87	74	170
	PCOD	59	36	13	108	39	137	90	266	98	173	103	374
	PLCK	2	9	11	22	7	77	64	148	9	86	75	170
	ROCK	3	11	11	25	9	73	62	144	12	84	73	169
	RSOL	1	9	11	21	7	73	60	140	8	82	71	161
	SQID	0	1	1	2	0	4	4	8	0	5	5	10
	YSOL	0	6	10	16	7	69	59	135	7	75	69	151
Species Endorsements		70	95	86	251	89	639	511	1,239	159	734	597	1,490
CG	AMCK	1	0	1	2	0	1	2	3	1	1	3	5
	DFLT	18	25	2	45	8	18	7	33	26	43	9	78
	PCOD	445	94	4	543	65	50	10	125	510	144	14	668
	PLCK	53	31	2	86	9	28	8	45	62	59	10	131
	SFLT	24	28	2	54	6	20	7	33	30	48	9	87
Species Endorsements		541	178	11	730	88	117	34	239	629	295	45	969
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	1	1	0	1	0	1	0	1	1	2
	PCOD	370	5	2	377	38	10	3	51	408	15	5	428
	PLCK	5	0	1	6	1	0	0	1	6	0	1	7
	SFLT	3	0	1	4	0	0	0	0	3	0	1	4
Species Endorsements		378	5	5	388	39	11	3	53	417	16	8	441
WG	AMCK	0	1	5	6	1	8	13	22	1	9	18	28
	DFLT	4	3	5	12	2	20	20	42	6	23	25	54
	PCOD	98	20	7	125	12	47	30	89	110	67	37	214
	PLCK	8	3	5	16	1	18	20	39	9	21	25	55
	SFLT	3	2	5	10	1	17	20	38	4	19	25	48
Species Endorsements		113	29	27	169	17	110	103	230	130	139	130	399
Total Licenses		1,120	323	183	1,626	284	929	819	2,032	1,404	1,252	1,002	3,658
Total Vessels/All Areas		950	125	16	1,091	148	170	94	410	1,098	295	110	1,501

3.2.2.3 License Designations

Explicit

Configuration 714711		Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessel must have made a landing in an area each year.									
		Current Owner's State of Residence									
		Alaska			Other			Total			
Area	Species	In-Shore	Off-Shore	Total	In-Shore	Off-Shore	Total	In-Shore	Off-Shore	Licenses	
AI	AMCK	0	7	7	1	23	24	1	30	31	
	GTRB	0	9	9	2	30	32	2	39	41	
	OFLT	0	7	7	2	27	29	2	34	36	
	PCOD	23	16	39	22	60	82	45	76	121	
	PLCK	0	7	7	1	33	34	1	40	41	
	ROCK	0	9	9	3	36	39	3	45	48	
	RSOL	0	7	7	1	24	25	1	31	32	
	SQID	0	0	0	0	0	0	0	0	0	
	YSOL	0	3	3	0	6	6	0	9	9	
Species Endorsements		23	65	88	32	239	271	55	304	359	
BS	AMCK	0	12	12	6	102	108	6	114	120	
	GTRB	4	19	23	11	131	142	15	150	165	
	OFLT	2	20	22	8	140	148	10	160	170	
	PCOD	79	29	108	94	172	266	173	201	374	
	PLCK	2	20	22	7	141	148	9	161	170	
	ROCK	4	21	25	12	132	144	16	153	169	
	RSOL	1	20	21	6	134	140	7	154	161	
	SQID	0	2	2	0	8	8	0	10	10	
	YSOL	0	16	16	6	129	135	6	145	151	
Species Endorsements		92	159	251	150	1,089	1,239	242	1,248	1,490	
CG	AMCK	1	1	2	0	3	3	1	4	5	
	DFLT	26	19	45	10	23	33	36	42	78	
	PCOD	501	42	543	88	37	125	589	79	668	
	PLCK	65	21	86	16	29	45	81	50	131	
	SFLT	34	20	54	8	25	33	42	45	87	
Species Endorsements		627	103	730	122	117	239	749	220	969	
EG	AMCK	0	0	0	0	0	0	0	0	0	
	DFLT	0	1	1	1	0	1	1	1	2	
	PCOD	364	13	377	44	7	51	408	20	428	
	PLCK	5	1	6	1	0	1	6	1	7	
	SFLT	3	1	4	0	0	0	3	1	4	
Species Endorsements		372	16	388	46	7	53	418	23	441	
WG	AMCK	0	6	6	0	22	22	0	28	28	
	DFLT	6	6	12	5	37	42	11	43	54	
	PCOD	111	14	125	27	62	89	138	76	214	
	PLCK	8	8	16	1	38	39	9	46	55	
	SFLT	3	7	10	1	37	38	4	44	48	
Species Endorsements		128	41	169	34	196	230	162	237	399	
Total Licenses		1,242	384	1,626	384	1,848	2,032	1,626	2,032	3,658	
Total Vessels/All Areas		1,014	77	1,091	220	190	410	1,234	267	1,501	

Configuration 718711

Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History
Vessel must have made a landing in an area each year.

		Current Owner's State of Residence											
		Alaska				Other				Total			
		CV				CV				CV			
Species	Area	In-Shore	Off-Shore	CP	Total	In-Shore	Off-Shore	CP	Total	In-Shore	Off-Shore	CP	Licenses
AI	AMCK	0	0	7	7	1	1	22	24	1	1	29	31
	GTRB	0	0	9	9	2	1	29	32	2	1	38	41
	OFLT	0	0	7	7	2	3	24	29	2	3	31	36
	PCOD	23	3	13	39	22	10	60	82	45	13	63	121
	PLCK	0	0	7	7	1	3	30	34	1	3	37	41
	ROCK	0	0	9	9	3	3	33	39	3	3	42	48
	RSOL	0	0	7	7	1	1	23	25	1	1	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	3	3	0	0	6	6	0	0	9	9
Species Endorsements		23	3	82	88	32	22	217	271	55	25	279	359
BS	AMCK	0	4	8	12	6	56	46	108	6	60	54	120
	GTRB	4	5	14	23	11	61	70	142	15	66	84	165
	OFLT	2	6	14	22	8	68	72	148	10	74	86	170
	PCOD	79	10	19	108	94	82	90	266	173	92	109	374
	PLCK	2	6	14	22	7	68	73	148	9	74	87	170
	ROCK	4	6	16	25	12	62	70	144	16	68	85	169
	RSOL	1	6	14	21	6	65	69	140	7	71	83	161
	SQID	0	1	1	2	0	5	3	8	0	6	4	10
	YSOL	0	6	10	16	6	65	64	135	6	71	74	151
Species Endorsements		92	50	109	251	150	532	557	1,239	242	582	666	1,490
CG	AMCK	1	0	1	2	0	1	2	3	1	1	3	5
	DFLT	26	16	3	45	10	10	13	33	36	26	16	78
	PCOD	501	20	22	543	88	19	18	125	589	39	40	668
	PLCK	65	16	5	86	16	16	13	45	81	32	18	131
	SFLT	34	16	4	54	8	14	11	33	42	30	15	87
Species Endorsements		627	68	35	730	122	60	57	239	749	128	92	969
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	1	1	1	0	0	1	1	0	1	2
	PCOD	364	1	12	377	44	2	5	51	408	3	17	428
	PLCK	5	0	1	6	1	0	0	1	6	0	1	7
	SFLT	3	0	1	4	0	0	0	0	3	0	1	4
Species Endorsements		372	1	15	388	46	2	5	53	418	3	20	441
WG	AMCK	0	0	6	6	0	11	11	22	0	11	17	28
	DFLT	6	0	6	12	5	16	21	42	11	16	27	54
	PCOD	111	3	11	125	27	29	33	89	138	32	44	214
	PLCK	8	1	7	16	1	20	18	39	9	21	25	55
	SFLT	3	1	6	10	1	20	17	38	4	21	23	48
Species Endorsements		128	5	36	169	34	96	100	230	162	101	136	399
Total Licenses		1,242	127	257	1,626	384	712	936	2,032	1,626	839	1,193	3,658
Total Vessels/All Areas		1,014	26	51	1,091	220	95	95	410	1,234	121	146	1,501

Configuration 717711		Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessels must have made a landing in an area each calendar year.																				
		Current Owner's State of Residence																				
		Alaska							Other							Total						
		In-Shore			Off-Shore				In-Shore			Off-Shore				In-Shore			Off-Shore			
Area	Species	<60'	60-125'	>=125'	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	Licenses
AI	AMCK	0	0	0	0	0	7	7	0	0	1	3	3	17	24	0	0	1	3	3	24	31
	GTRB	0	0	0	0	2	7	9	0	2	0	6	4	20	32	0	2	0	6	6	27	41
	OFLT	0	0	0	0	0	7	7	0	1	1	5	6	16	29	0	1	1	5	6	23	36
	PCOD	16	7	0	2	5	9	39	14	7	1	6	14	40	82	30	14	1	8	19	49	121
	PLCK	0	0	0	0	0	7	7	0	0	1	6	4	23	34	0	0	1	6	4	30	41
	ROCK	0	0	0	0	2	7	9	0	3	0	6	6	24	39	0	3	0	6	8	31	48
	RSOL	0	0	0	0	0	7	7	0	0	1	4	2	18	25	0	0	1	4	2	25	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	3	3	0	0	0	1	0	5	6	0	0	0	1	0	8	9
Species Endorsements		16	7	0	2	9	54	88	14	13	5	37	39	163	271	30	20	5	39	48	217	359
BS	AMCK	0	0	0	0	5	7	12	0	3	3	4	62	46	108	0	3	3	4	67	53	120
	GTRB	3	1	0	0	8	11	23	2	7	2	7	66	58	142	5	8	2	7	74	69	165
	OFLT	2	0	0	0	9	11	22	0	5	3	7	73	60	148	2	6	3	7	62	71	170
	PCOD	58	23	0	3	13	13	108	32	54	8	7	83	82	266	88	77	8	10	96	95	374
	PLCK	2	0	0	0	9	11	22	0	4	3	7	73	61	148	2	4	3	7	82	72	170
	ROCK	3	1	0	0	10	11	25	2	7	3	7	66	59	144	5	8	3	7	76	70	169
	RSOL	1	0	0	0	9	11	21	0	3	3	7	70	57	140	1	3	3	7	79	68	161
	SQID	0	0	0	0	1	1	2	0	0	0	0	4	4	8	0	0	0	0	5	5	10
	YSOL	0	0	0	0	6	10	16	0	3	3	7	66	56	135	0	3	3	7	72	68	151
Species Endorsements		67	26	0	3	70	86	251	38	88	28	63	553	483	1,239	103	111	28	66	823	569	1,490
CG	AMCK	1	0	0	0	0	1	2	0	0	0	0	1	2	3	1	0	0	0	1	3	6
	DFLT	17	9	0	1	18	2	45	8	2	0	0	16	7	33	25	11	0	1	32	9	78
	PCOD	431	72	1	14	22	3	543	64	24	0	1	26	10	125	495	96	1	15	48	13	668
	PLCK	50	15	0	3	16	2	86	8	8	0	1	20	8	45	58	23	0	4	36	10	131
	SFLT	22	12	0	2	16	2	54	6	3	0	1	17	7	33	27	15	0	3	33	9	87
Species Endorsements		521	108	1	20	70	10	730	85	37	0	3	80	34	239	606	145	1	23	150	44	969
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0	1	0	0	0	1	2
	PCOD	358	5	1	12	0	1	377	37	6	1	1	4	2	51	395	11	2	13	4	3	428
	PLCK	5	0	0	0	0	1	6	1	0	0	0	0	0	1	6	0	0	0	0	1	7
	SFLT	3	0	0	0	0	1	4	0	0	0	0	0	0	0	3	0	0	0	0	1	4
Species Endorsements		366	5	1	12	0	4	388	38	7	1	1	4	2	53	404	12	2	13	4	6	441
WG	AMCK	0	0	0	0	1	5	6	0	0	0	1	8	13	22	0	0	0	1	9	18	28
	DFLT	4	2	0	0	1	5	12	1	4	0	1	16	20	42	5	6	0	1	17	26	54
	PCOD	95	16	1	3	5	6	125	11	14	2	1	33	28	89	106	29	3	4	38	34	214
	PLCK	8	0	0	0	3	5	16	0	0	1	1	18	19	39	8	0	1	1	21	24	55
	SFLT	3	0	0	0	2	5	10	0	0	1	1	17	19	38	3	0	1	1	19	24	48
Species Endorsements		110	17	1	3	12	26	169	12	18	4	5	92	99	230	122	35	5	8	104	126	399
Total Licenses		1,060	182	3	40	161	180	1,626	165	161	38	99	768	781	2,032	1,265	323	41	139	929	961	3,658
Total Vessels/All Areas		919	92	3	31	33	13	1,091	136	76	9	10	95	85	410	1,055	167	12	41	128	96	1,501

3.2.2.3 license Designation

Explicit

Configuration 718711		Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1990 - June 27, 1992, Catch History. Vessels must have made a landing in an area each calendar year.																					
		Current Owner's State of Residence																					
		Alaska								Other								Total					
		CV								CV								CV					
		In-Shore			Off-Shore					In-Shore			Off-Shore					In-Shore			Off-Shore				
Area	Species	<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	Total	<60'	60-125'	>=125'	<60'	60-125'	>=125'	CP	Licenses
AI	AMCK	0	0	0	0	0	0	7	7	0	0	1	0	1	0	22	24	0	0	1	0	1	0	7	9
	GTRB	0	0	0	0	0	0	9	9	0	2	0	0	1	0	29	32	0	2	0	0	1	0	9	12
	OFLT	0	0	0	0	0	0	7	7	0	1	1	0	3	0	24	29	0	1	1	0	3	0	7	12
	PCOD	18	7	0	0	2	1	13	39	14	7	1	0	6	6	60	82	30	14	1	0	7	6	13	71
	PLCK	0	0	0	0	0	0	7	7	0	0	1	0	3	0	30	34	0	0	1	0	3	0	7	11
	ROCK	0	0	0	0	0	0	9	9	0	3	0	0	3	0	33	39	0	3	0	0	3	0	9	15
	RSOL	0	0	0	0	0	0	7	7	0	0	1	0	1	0	23	25	0	0	1	0	1	0	7	9
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	3	3	0	0	0	0	0	0	6	6	0	0	0	0	0	0	3	3
Species Endorsements		18	7	0	0	2	1	62	88	14	13	5	0	17	6	217	271	30	20	5	0	19	8	62	142
BS	AMCK	0	0	0	0	4	0	8	12	0	3	3	0	47	9	46	108	0	3	3	0	61	9	8	74
	GTRB	3	1	0	0	5	0	14	23	2	7	2	0	61	10	70	142	5	8	2	0	56	10	14	95
	OFLT	2	0	0	0	6	0	14	22	0	5	3	0	58	10	72	148	2	5	3	0	64	10	14	98
	PCOD	56	23	0	0	9	1	19	108	32	54	8	0	63	19	90	266	88	77	8	0	72	20	19	284
	PLCK	2	0	0	0	8	0	14	22	0	4	3	0	58	10	73	148	2	4	3	0	64	10	14	97
	ROCK	3	1	0	0	6	0	16	25	2	7	3	0	52	10	70	144	6	8	3	0	58	10	16	99
	RSOL	1	0	0	0	6	0	14	21	0	3	3	0	58	9	69	140	1	3	3	0	62	9	14	92
	SQID	0	0	0	0	1	0	1	2	0	0	0	0	3	2	3	8	0	0	0	0	4	2	1	7
	YSOL	0	0	0	0	6	0	10	16	0	3	3	0	55	10	64	135	0	3	3	0	61	10	10	87
Species Endorsements		67	25	0	0	49	1	109	251	38	86	28	0	443	89	657	1,239	103	111	28	0	492	90	109	933
CG	AMCK	1	0	0	0	0	0	1	2	0	0	0	0	1	0	2	3	1	0	0	0	1	0	1	3
	DFLT	17	9	0	1	15	0	3	45	8	2	0	0	10	0	13	33	25	11	0	1	25	0	3	65
	PCOD	430	70	1	1	18	1	22	543	64	24	0	1	15	3	18	125	494	94	1	2	33	4	22	650
	PLCK	50	15	0	1	15	0	5	86	8	8	0	1	13	2	13	46	58	23	0	2	28	2	5	118
	SFLT	22	12	0	1	15	0	4	54	5	3	0	1	12	1	11	33	27	15	0	2	27	1	4	78
Species Endorsements		520	106	1	4	63	1	35	730	85	37	0	3	51	6	57	239	605	143	1	7	114	7	35	912
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	2
	PCOD	358	5	1	1	0	0	12	377	37	6	1	0	2	0	5	51	395	11	2	1	2	0	12	423
	PLCK	5	0	0	0	0	0	1	6	1	0	0	0	0	0	0	1	6	0	0	0	0	0	1	7
	SFLT	3	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	4
Species Endorsements		366	5	1	1	0	0	16	388	38	7	1	0	2	0	5	53	404	12	2	1	2	0	15	436
WG	AMCK	0	0	0	0	0	0	6	6	0	0	0	0	8	3	11	22	0	0	0	0	8	3	6	17
	DFLT	4	2	0	0	0	0	6	12	1	4	0	0	9	7	21	42	5	6	0	0	9	7	6	33
	PCOD	95	15	1	0	2	1	11	125	11	14	2	0	18	11	33	89	106	29	3	0	20	12	11	181
	PLCK	8	0	0	0	1	0	7	16	0	0	1	0	13	7	18	39	8	0	1	0	14	7	7	37
	SFLT	3	0	0	0	1	0	6	10	0	0	1	0	13	7	17	38	3	0	1	0	14	7	23	48
Species Endorsements		110	17	1	0	4	1	36	169	12	18	4	0	61	35	100	230	122	35	5	0	65	38	53	316
Total Licenses		1,079	160	3	5	118	4	257	1,626	185	161	38	3	674	135	936	2,032	1,264	321	41	8	692	139	274	2,739
Total Vessels/All Areas		919	92	3	2	23	1	61	1,091	136	75	9	2	72	21	95	410	1,055	167	12	4	95	22	146	1,601

3.2.2.4 Qualifying Period

Explicit

Configuration 715111	Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1978 - December 31, 1993, Catch History. Vessel must have made a landing in an area each calendar year.																		
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
AI	AMCK	2	13	2	17	10	27	11	54	17	82	66	148	13	67	19	99	78	176
	GTRB	30	22	3	65	15	70	34	65	20	119	77	196	64	87	23	174	92	266
	OFLT	2	12	1	15	11	26	9	41	18	68	62	130	11	53	19	83	73	156
	PCOD	34	27	2	63	17	80	40	94	30	164	94	258	74	121	32	227	111	338
	PLCK	2	14	2	18	11	29	11	65	28	104	70	174	13	79	30	122	81	203
	ROCK	33	30	3	66	18	84	43	91	27	161	88	249	76	121	30	227	106	333
	RSOL	1	13	1	15	9	24	10	48	17	75	67	132	11	61	18	90	66	156
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	2	0	2	3	5	1	7	4	12	18	30	1	9	4	14	21	35
Species Endorsements		104	133	14	251	94	345	159	465	161	785	632	1,317	263	598	176	1,038	626	1,662
BS	AMCK	6	23	1	29	10	39	14	94	26	134	65	199	19	117	27	163	76	238
	GTRB	64	61	3	108	16	124	54	141	38	233	92	325	108	192	41	341	108	449
	OFLT	45	49	2	96	16	112	52	133	38	223	91	314	97	182	40	319	107	426
	PCOD	273	96	3	372	29	401	121	216	56	393	102	495	394	312	59	765	131	896
	PLCK	70	50	2	122	18	140	[illegible]	145	41	247	90	337	131	195	43	369	108	477
	ROCK	109	62	3	174	20	194	[illegible]	142	37	246	92	338	178	204	40	420	112	532
	RSOL	24	45	1	70	16	86	37	128	36	201	82	283	61	173	37	271	98	369
	SQID	0	1	1	2	2	4	1	4	3	8	30	38	1	6	4	10	32	42
	YSOL	16	36	1	53	12	65	30	119	34	183	77	260	48	155	35	238	89	325
Species Endorsements		596	413	17	1,026	139	1,165	437	1,122	309	1,868	721	2,589	1,033	1,535	326	2,894	860	3,754
CG	AMCK	5	11	0	16	2	18	0	8	2	10	16	26	5	19	2	26	17	43
	DFLT	65	47	1	113	17	130	31	89	11	131	57	188	96	136	12	244	74	318
	PCOD	1,191	169	6	1,365	57	1,422	204	181	26	411	71	482	1,395	350	31	1,776	128	1,904
	PLCK	307	73	1	381	26	408	51	131	22	204	59	263	358	204	23	585	84	669
	SFLT	132	61	0	193	16	209	43	111	16	170	47	217	175	172	16	363	63	426
Species Endorsements		1,700	361	7	2,068	117	2,185	329	520	77	926	249	1,176	2,029	881	84	2,994	366	3,360
EG	AMCK	1	0	0	1	0	1	0	0	0	0	1	1	1	0	0	1	1	2
	DFLT	17	4	0	21	7	28	9	5	0	14	28	42	26	9	0	35	35	70
	PCOD	1,735	48	3	1,786	37	1,823	299	32	2	333	36	369	2,034	80	5	2,119	73	2,192
	PLCK	56	11	1	68	7	76	9	6	2	17	20	37	65	17	3	85	27	112
	SFLT	89	7	0	96	9	105	20	12	1	33	21	54	109	19	1	129	30	159
Species Endorsements		1,898	70	4	1,972	60	2,032	337	55	5	397	106	503	2,235	125	9	2,369	166	2,535
WG	AMCK	7	6	1	14	9	23	2	49	10	61	35	96	9	55	11	75	44	119
	DFLT	51	31	1	83	18	101	27	89	21	137	63	200	78	120	22	220	81	301
	PCOD	256	74	3	333	26	359	62	141	34	237	87	324	318	216	37	570	113	683
	PLCK	42	25	1	68	13	81	20	92	25	137	69	206	62	117	26	205	82	287
	SFLT	34	24	1	59	14	73	17	80	25	122	60	182	51	104	26	181	74	255
Species Endorsements		390	160	7	557	80	637	128	451	115	694	314	1,008	518	611	122	1,251	394	1,646
Total Licenses		4,688	1,137	49	5,874	490	6,364	1,390	2,613	667	4,670	1,922	6,592	6,078	3,750	716	10,544	2,412	12,956
Total Vessels		4,376	254	10	4,640	98	4,738	983	301	68	1,352	112	1,464	5,359	555	78	5,992	210	6,202

3.2.2.4 Qualifying Period

Explicit

Configuration 715211		Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - June 27, 1992, Catch History																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Total	<60'	60-125'	>125'	Total	CP	Licenses
AI	AMCK	0	2	1	3	10	13	1	20	8	27	48	75	1	22	7	30	58	88
	GTRB	8	9	1	18	13	31	18	24	3	43	62	105	24	33	4	61	75	136
	OFLT	0	2	0	2	9	11	3	15	5	23	50	73	3	17	5	25	59	84
	PCOD	19	13	2	34	16	50	23	48	13	82	78	160	42	59	15	116	94	210
	PLCK	0	0	1	1	10	11	3	33	13	49	60	109	3	33	14	50	70	120
	ROCK	9	14	2	25	15	40	18	47	7	70	75	145	25	61	9	95	90	185
	RSOL	0	1	0	1	8	9	3	5	4	12	45	57	3	6	4	13	53	66
	SQID	0	0	0	0	0	0	0	2	0	2	0	2	0	2	0	2	0	2
	YSOL	0	0	0	0	3	3	0	0	0	0	12	12	0	0	0	0	15	15
Species Endorsements		36	41	7	84	84	168	65	192	51	308	430	738	101	233	58	392	514	906
BS	AMCK	1	12	1	14	9	23	2	74	18	94	58	152	3	86	19	108	67	175
	GTRB	25	24	1	50	16	66	20	99	25	144	83	227	45	123	26	194	99	293
	OFLT	24	38	2	64	15	79	22	105	28	155	86	241	46	143	30	219	101	320
	PCOD	204	82	3	289	27	316	80	172	39	291	98	389	284	254	42	580	125	705
	PLCK	42	43	2	87	17	104	31	109	31	171	88	259	73	152	33	258	105	363
	ROCK	54	41	2	97	20	117	32	110	26	168	81	249	86	151	28	265	101	366
	RSOL	14	37	1	52	16	68	17	100	28	145	77	222	31	137	29	197	93	290
	SQID	0	1	0	1	1	2	0	4	2	6	4	10	0	5	2	7	5	12
	YSOL	8	27	1	36	11	47	15	90	25	130	72	202	23	117	26	166	83	249
Species Endorsements		372	305	13	690	132	822	219	863	222	1,304	647	1,951	591	1,168	235	1,994	779	2,773
CG	AMCK	2	0	0	2	2	4	0	1	0	1	10	11	2	1	0	3	12	15
	DFLT	44	33	1	78	9	87	14	42	2	58	42	100	58	75	3	136	51	187
	PCOD	675	117	3	795	43	838	102	103	13	218	56	274	777	220	16	1,013	99	1,112
	PLCK	187	46	1	234	16	250	19	67	10	96	46	142	206	113	11	330	62	392
	SFLT	74	39	0	113	8	121	14	55	7	76	38	114	88	94	7	189	46	235
Species Endorsements		982	235	5	1,222	78	1,300	149	268	32	449	192	641	1,131	503	37	1,671	270	1,941
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	1	0	4	5	9	4	1	0	5	15	20	7	2	0	9	20	29
	PCOD	741	10	1	752	20	772	94	9	1	104	17	121	835	19	2	856	37	893
	PLCK	12	2	0	14	4	18	5	0	0	5	12	17	17	2	0	19	16	35
	SFLT	10	2	0	12	3	15	2	3	0	5	9	14	12	5	0	17	12	29
Species Endorsements		766	15	1	782	32	814	105	13	1	119	53	172	871	28	2	901	65	966
WG	AMCK	0	0	1	1	9	10	0	17	6	23	28	51	0	17	7	24	37	61
	DFLT	15	15	1	31	13	44	12	43	15	70	55	125	27	58	16	101	68	169
	PCOD	153	38	3	194	19	213	32	90	27	149	74	223	185	128	30	343	93	436
	PLCK	22	11	0	33	12	45	7	64	20	91	63	154	29	75	20	124	75	199
	SFLT	13	10	0	23	12	35	6	51	20	77	55	132	19	61	20	100	87	187
Species Endorsements		203	74	5	282	65	347	67	265	88	410	275	685	260	339	93	692	340	1,032
Total Licenses		2,359	670	31	3,060	391	3,451	595	1,601	394	2,590	1,597	4,187	2,954	2,271	425	5,650	1,988	7,638
Total Vessels		1,940	159	6	2,105	80	2,185	401	216	45	662	107	769	2,341	375	51	2,767	187	2,954

3.2.2.4 Qualifying Period

Explicit

Configuration 715311		Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - date of final action, Catch History.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	1	3	2	6	10	16	4	21	9	34	64	98	5	24	11	40	74	114
	GTRB	10	10	1	21	14	35	20	33	15	68	72	140	30	43	16	89	86	175
	OFLT	0	2	1	3	11	14	5	21	12	38	59	97	5	23	13	41	70	111
	PCOD	20	13	2	35	17	52	29	60	24	113	89	202	49	73	26	148	106	254
	PLCK	0	1	2	3	10	13	4	43	21	68	67	135	4	44	23	71	77	148
	ROCK	11	14	2	27	16	43	23	58	16	96	85	180	34	70	18	122	101	223
	RSOL	0	2	0	2	9	11	3	6	9	18	52	70	3	8	9	20	61	81
	SQID	0	0	0	0	2	2	0	2	0	2	19	21	0	2	0	2	21	23
	YSOL	0	0	0	0	3	3	0	1	1	2	16	18	0	1	1	2	19	21
Species Endorsements		42	45	10	97	92	189	88	243	107	438	523	961	130	288	117	535	616	1,150
BS	AMCK	4	15	1	20	10	30	2	79	23	104	83	187	6	94	24	124	73	197
	GTRB	40	29	2	71	16	87	37	112	31	180	85	265	77	141	33	251	101	352
	OFLT	36	39	2	77	16	93	37	115	32	184	89	273	73	154	34	261	106	366
	PCOD	237	84	3	324	28	352	99	190	49	338	99	437	336	274	52	662	127	789
	PLCK	62	44	2	108	18	126	46	123	35	204	89	293	108	167	37	312	107	419
	ROCK	79	45	2	126	20	146	47	122	29	198	86	284	126	167	31	324	106	430
	RSOL	20	39	1	60	16	76	24	109	30	163	81	244	44	148	31	223	97	320
	SQID	0	1	1	2	2	4	1	4	3	8	30	38	1	5	4	10	32	42
	YSOL	13	28	1	42	12	54	20	99	31	150	76	226	33	127	32	192	88	280
Species Endorsements		491	324	15	830	138	968	313	953	263	1,529	698	2,227	804	1,277	278	2,359	836	3,195
CG	AMCK	3	2	0	5	2	7	0	2	0	2	12	14	3	4	0	7	14	21
	DFLT	54	37	1	92	17	109	22	53	5	80	51	131	76	90	6	172	68	240
	PCOD	771	130	4	905	51	956	128	129	17	274	63	337	899	259	21	1,179	114	1,293
	PLCK	222	48	1	271	21	292	31	88	14	133	52	185	253	136	15	404	73	477
	SFLT	86	43	0	129	13	142	24	66	9	99	41	140	110	109	9	228	54	282
Species Endorsements		1,136	260	6	1,402	104	1,506	205	338	45	588	219	807	1,341	598	51	1,990	323	2,313
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	8	3	0	11	6	17	5	3	0	8	21	29	13	6	0	19	27	46
	PCOD	927	21	3	951	26	977	136	17	1	154	26	180	1,063	38	4	1,105	52	1,157
	PLCK	20	5	1	26	5	31	6	3	1	10	17	27	26	8	2	36	22	58
	SFLT	14	3	0	17	5	22	4	3	0	7	11	18	18	6	0	24	16	40
Species Endorsements		969	32	4	1,005	42	1,047	151	26	2	179	75	254	1,120	58	6	1,184	117	1,301
WG	AMCK	6	2	1	9	9	18	1	25	8	34	30	64	7	27	9	43	39	82
	DFLT	29	16	1	46	17	63	18	51	18	87	57	144	47	67	19	133	74	207
	PCOD	168	43	3	214	23	237	40	97	32	169	77	246	208	140	35	383	100	483
	PLCK	37	16	1	54	13	67	12	70	22	104	68	172	49	86	23	158	81	239
	SFLT	27	13	1	41	13	54	12	59	22	93	57	150	39	72	23	134	70	204
Species Endorsements		267	90	7	364	75	439	63	302	102	467	269	776	350	392	109	851	364	1,215
Total Licenses		2,905	751	42	3,698	451	4,149	840	1,862	519	3,221	1,804	5,025	3,745	2,613	561	6,919	2,255	9,174
Total Vessels		2,257	177	8	2,442	81	2,523	551	236	55	842	109	951	2,808	413	63	3,284	190	3,474

3.2.2.4 Qualifying Period

Explicit

Configuration 716411		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - December 31, 1993, Catch History.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	1	3	2	6	10	16	3	15	8	26	60	86	4	18	10	32	70	102
	GTRB	8	8	1	17	12	29	18	30	14	62	67	129	26	38	15	79	79	158
	DFLT	0	2	1	3	11	14	4	18	12	34	55	89	4	20	13	37	66	103
	PCOD	20	11	2	33	16	49	28	56	23	107	88	195	48	67	25	140	104	244
	PLCK	0	1	2	3	10	13	3	40	20	63	65	128	3	41	22	66	75	141
	ROCK	5	12	2	19	15	34	21	51	15	87	81	168	26	63	17	106	96	202
	RSOL	0	2	0	2	9	11	2	4	8	14	52	66	2	6	8	16	61	77
	SQID	0	0	0	0	2	2	0	2	0	2	19	21	0	2	0	2	21	23
	YSOL	0	0	0	0	3	3	0	1	1	2	15	17	0	1	1	2	18	20
Species Endorsements		34	39	10	83	88	171	79	217	101	397	502	899	113	256	111	480	590	1,070
BS	AMCK	4	13	1	18	9	27	0	64	20	84	58	142	4	77	21	102	67	169
	GTRB	40	25	2	67	15	82	34	103	30	167	84	251	74	128	32	234	99	333
	DFLT	36	35	2	73	16	89	32	109	30	171	89	260	68	144	32	244	105	349
	PCOD	236	83	3	322	28	350	90	186	48	324	98	422	326	271	49	646	126	772
	PLCK	62	42	2	106	18	124	37	118	32	187	89	276	99	160	34	293	107	400
	ROCK	79	44	2	125	20	145	42	116	28	186	86	272	121	160	30	311	106	417
	RSOL	20	34	1	55	16	71	20	103	27	150	81	231	40	137	28	205	97	302
	SQID	0	1	1	2	2	4	1	4	3	8	29	37	1	5	4	10	31	41
	YSOL	13	23	1	37	12	49	16	94	29	139	76	215	29	117	30	176	88	264
Species Endorsements		490	300	15	805	136	941	272	899	245	1,416	690	2,106	762	1,199	260	2,221	826	3,047
CG	AMCK	3	2	0	5	2	7	0	2	0	2	12	14	3	4	0	7	14	21
	DFLT	54	37	1	92	17	109	22	53	5	80	50	130	76	90	6	172	67	239
	PCOD	764	130	4	898	50	948	128	127	17	272	63	335	892	257	21	1,170	113	1,283
	PLCK	222	48	1	271	21	292	31	88	14	133	52	185	253	136	15	404	73	477
	SFLT	86	43	0	129	13	142	24	66	9	99	41	140	110	109	9	228	54	282
Species Endorsements		1,129	260	6	1,395	103	1,498	205	336	45	586	218	804	1,334	596	51	1,981	321	2,302
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	7	3	0	10	8	18	5	3	0	8	21	29	12	6	0	18	27	45
	PCOD	875	20	3	898	26	924	126	16	1	143	25	168	1,001	36	4	1,041	51	1,092
	PLCK	15	4	1	20	5	25	5	3	1	9	17	26	20	7	2	29	22	51
	SFLT	11	2	0	13	5	18	4	3	0	7	11	18	15	5	0	20	16	36
Species Endorsements		908	29	4	941	42	983	140	25	2	167	74	241	1,048	54	6	1,108	116	1,224
WG	AMCK	6	2	1	9	8	17	1	23	8	32	28	60	7	25	9	41	36	77
	DFLT	28	16	1	45	15	60	17	51	18	86	56	142	45	67	19	131	71	202
	PCOD	162	43	3	208	22	230	40	97	31	168	75	243	202	140	34	376	97	473
	PLCK	37	16	1	54	13	67	12	70	22	104	68	172	49	86	23	158	81	239
	SFLT	27	13	1	41	12	53	12	59	22	93	67	160	39	72	23	134	69	203
Species Endorsements		260	90	7	357	70	427	82	300	101	483	284	767	342	390	108	840	354	1,194
Total Licenses		2,821	716	42	3,581	439	4,020	778	1,777	494	3,049	1,768	4,817	3,599	2,495	536	6,630	2,207	8,837
Total Vessels		2,193	175	8	2,376	80	2,456	635	232	52	819	107	926	2,728	407	60	3,195	187	3,382

3.2.2.4 Qualifying Period

Explicit

Configuration 715511

Licenses Issued to Current Vessel Owners Based on The Vessel's, Catch History, three years prior to the date of final action.

Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	1	2	2	5	9	14	3	4	6	13	53	66	4	6	8	18	62	80
	GTRB	3	4	1	8	11	19	14	21	14	49	50	99	17	25	15	57	61	118
	OFLT	0	1	1	2	10	12	3	11	11	25	38	63	3	12	12	27	48	75
	PCOD	4	4	2	10	14	24	10	28	21	59	82	141	14	32	23	69	96	165
	PLCK	0	1	2	3	9	12	2	25	20	47	58	105	2	26	22	50	67	117
	ROCK	4	5	2	11	13	24	16	29	14	59	73	132	20	34	16	70	86	156
	RSOL	0	1	0	1	8	9	1	3	7	11	41	52	1	4	7	12	49	61
	SQID	0	0	0	0	2	2	0	0	0	0	19	19	0	0	0	0	21	21
	YSOL	0	0	0	0	0	0	0	1	1	2	8	10	0	1	1	2	8	10
Species Endorsements		12	18	10	40	76	116	49	122	94	265	422	687	61	140	104	305	498	803
BS	AMCK	3	7	1	11	6	17	0	40	15	55	38	93	3	47	16	66	44	110
	GTRB	27	16	2	45	12	57	28	82	24	134	76	210	55	98	26	179	88	267
	OFLT	17	21	2	40	16	56	19	78	28	125	79	204	36	99	30	165	95	260
	PCOD	70	33	2	105	20	125	31	133	42	206	93	299	101	166	44	311	113	424
	PLCK	29	21	2	52	16	68	21	90	30	141	77	218	50	111	32	193	93	286
	ROCK	44	22	2	68	16	84	26	89	25	140	79	219	70	111	27	208	95	303
	RSOL	8	17	1	26	13	39	8	68	23	99	74	173	16	85	24	125	87	212
	SQID	0	0	1	1	1	2	1	0	1	2	27	29	1	0	2	3	28	31
	YSOL	7	13	1	21	12	33	8	69	26	103	66	169	15	82	27	124	78	202
Species Endorsements		205	150	14	369	112	481	142	649	214	1,005	809	1,814	347	799	228	1,374	721	2,095
CG	AMCK	2	2	0	4	0	4	0	1	0	1	5	6	2	3	0	5	5	10
	DFLT	28	31	0	59	15	74	11	39	4	54	33	87	39	70	4	113	48	161
	PCOD	564	107	3	674	38	712	88	88	9	185	44	229	652	195	12	859	82	941
	PLCK	179	41	0	220	17	237	27	72	9	108	31	139	206	113	9	328	48	376
	SFLT	70	37	0	107	10	117	19	46	4	69	24	93	89	83	4	176	34	210
Species Endorsements		843	218	3	1,064	80	1,144	145	246	26	417	137	554	988	464	29	1,481	217	1,698
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	5	2	0	7	3	10	1	2	0	3	13	16	6	4	0	10	16	26
	PCOD	565	18	2	585	18	603	74	16	1	91	18	109	639	34	3	676	36	712
	PLCK	9	3	1	13	3	16	1	3	1	5	10	15	10	6	2	18	13	31
	SFLT	7	1	0	8	2	10	2	0	0	2	2	4	9	1	0	10	4	14
Species Endorsements		586	24	3	613	26	639	78	21	2	101	43	144	664	45	5	714	69	783
WG	AMCK	6	2	1	9	8	17	1	11	2	14	12	26	7	13	3	23	20	43
	DFLT	26	9	1	36	13	49	10	27	6	43	26	69	36	36	7	79	39	118
	PCOD	98	24	3	125	17	142	25	57	16	98	45	143	123	81	19	223	62	285
	PLCK	32	13	1	46	11	57	11	48	16	75	35	110	43	59	19	121	46	167
	SFLT	23	11	1	35	10	45	12	37	12	61	30	91	35	48	13	96	40	136
Species Endorsements		185	59	7	251	59	310	59	178	54	291	148	439	244	237	61	542	207	749
Total Licenses		1,831	469	37	2,337	353	2,690	473	1,218	390	2,079	1,359	3,438	2,304	1,685	427	4,416	1,712	6,128
Total Vessels		1,559	147	6	1,712	61	1,773	373	199	45	617	102	719	1,932	346	51	2,329	163	2,492

3.2.2.5 Landings Requirements for General License Qualification

Explicit

Configuration 715721

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	3	0	3	29	32	0	3	0	3	38	41
	OFLT	0	0	0	0	7	7	0	4	1	5	24	29	0	4	1	5	31	36
	PCOD	13	8	1	22	13	35	14	12	6	32	50	82	27	20	7	54	63	117
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	6	6	0	0	0	0	9	9
Species Endorements		13	8	1	22	62	84	14	30	10	54	217	271	27	38	11	76	279	355
BS	AMCK	0	4	0	4	8	12	0	50	12	62	46	108	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	2	58	12	72	70	142	5	64	12	81	84	165
	OFLT	2	6	0	8	14	22	0	63	13	76	72	148	2	69	13	84	86	170
	PCOD	50	29	1	80	18	98	28	106	25	159	90	249	78	135	26	239	108	347
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	15	25	2	59	13	74	70	144	5	66	13	84	85	169
	RSOL	1	6	0	7	14	21	0	59	12	71	69	140	1	65	12	78	83	161
	SQID	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	151
Species Endorements		61	71	1	133	108	241	32	518	115	665	557	1,222	93	589	116	798	665	1,463
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	18	24	0	42	3	45	8	12	0	20	13	33	26	36	0	62	16	78
	PCOD	409	87	2	498	21	519	63	38	3	104	18	122	472	125	5	602	39	641
	PLCK	51	30	0	81	5	86	9	21	2	32	13	45	60	51	2	113	18	131
	SFLT	23	27	0	50	4	54	6	16	1	22	11	33	29	42	1	72	15	87
Species Endorements		502	168	2	672	34	706	86	87	6	179	57	236	588	255	8	851	91	942
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	287	4	0	291	11	302	27	7	0	34	5	39	314	11	0	325	16	341
	PLCK	5	0	0	5	1	6	1	0	0	1	0	1	6	0	0	6	1	7
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorements		295	4	0	299	14	313	28	8	0	36	5	41	323	12	0	335	19	354
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	2	0	6	6	12	1	13	7	21	21	42	5	15	7	27	27	54
	PCOD	84	16	1	100	10	110	9	32	13	54	33	87	93	47	14	154	43	197
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	25	55
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorements		99	19	1	119	35	154	10	79	39	128	100	228	109	98	40	247	135	382
Total Licenses		970	270	5	1,245	253	1,498	170	722	170	1,062	936	1,998	1,140	992	175	2,307	1,189	3,496
Total Vessels		808	108	2	918	47	965	121	136	27	284	95	379	929	244	29	1,202	142	1,344

3.2.2.4 Qualifying Period

Configuration 715411		Licenses Issued to Current Vessel Owners Based on The Vessel's, June 28, 1989 - June 27, 1992, and the 3 years prior to final action, Catch History.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	1	4	2	7	10	17	4	22	9	35	64	99	5	26	11	42	74	116
	GTRB	10	10	1	21	14	35	20	34	16	70	73	143	30	44	17	91	87	178
	OFLT	0	3	1	4	11	15	5	22	14	41	59	100	5	25	15	45	70	115
	PCOD	21	13	2	36	17	53	30	61	25	116	91	207	51	74	27	152	108	260
	PLCK	0	1	2	3	10	13	4	44	22	70	68	138	4	45	24	73	78	151
	ROCK	11	14	2	27	16	43	24	57	18	99	85	184	35	71	20	126	101	227
	RSOL	0	2	0	2	9	11	3	6	9	18	52	70	3	8	9	20	61	81
	SQID	0	0	0	0	2	2	0	2	0	2	19	21	0	2	0	2	21	23
	YSOL	0	0	0	0	3	3	0	1	2	3	16	19	0	1	2	3	19	22
Species Endorsements		43	47	10	100	92	192	90	249	115	454	527	981	133	296	125	554	619	1,173
BS	AMCK	4	15	1	20	10	30	3	80	23	106	63	169	7	95	24	126	73	199
	GTRB	40	29	2	71	16	87	39	113	32	184	86	270	79	142	34	255	102	357
	OFLT	36	39	2	77	16	93	40	115	33	188	89	277	76	154	35	265	105	370
	PCOD	240	84	3	327	28	355	102	193	49	344	99	443	342	277	52	671	127	798
	PLCK	62	44	2	108	18	126	48	125	35	208	89	297	110	169	37	316	107	423
	ROCK	79	45	2	126	20	146	48	123	30	201	87	288	127	168	32	327	107	434
	RSOL	20	39	1	60	16	76	26	110	30	166	81	247	46	149	31	226	97	323
	SQID	0	1	1	2	2	4	1	4	3	8	30	38	1	5	4	10	32	42
	YSOL	13	28	1	42	12	54	20	99	31	150	76	226	33	127	32	192	88	280
Species Endorsements		494	324	15	833	138	971	327	962	266	1,555	700	2,255	821	1,286	281	2,388	838	3,226
CG	AMCK	4	2	0	6	2	8	0	2	0	2	15	17	4	4	0	8	17	25
	DFLT	55	40	1	96	17	113	23	65	6	84	53	137	78	95	7	180	70	250
	PCOD	787	134	4	925	51	976	134	132	19	285	66	351	921	266	23	1,210	117	1,327
	PLCK	225	50	1	276	21	297	32	91	16	139	57	196	257	141	17	415	78	493
	SFLT	86	45	0	131	14	145	25	67	11	103	44	147	111	112	11	234	58	292
Species Endorsements		1,157	271	6	1,434	105	1,539	214	347	52	613	235	848	1,371	618	58	2,047	340	2,387
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	9	3	0	12	7	19	6	4	0	10	26	36	15	7	0	22	33	55
	PCOD	1,025	23	3	1,051	29	1,080	154	17	1	172	30	202	1,179	40	4	1,223	59	1,282
	PLCK	23	5	1	29	6	35	7	3	1	11	19	30	30	8	2	40	25	65
	SFLT	15	3	0	18	6	24	5	3	0	8	20	28	20	6	0	26	26	52
Species Endorsements		1,072	34	4	1,110	48	1,158	172	27	2	201	95	296	1,244	61	6	1,311	143	1,454
WG	AMCK	6	2	1	9	9	18	1	25	9	35	31	66	7	27	10	44	40	84
	DFLT	29	18	1	48	17	63	18	51	18	87	58	145	47	67	19	133	75	208
	PCOD	186	43	3	232	23	255	43	98	32	173	81	254	229	141	35	405	104	509
	PLCK	37	17	1	55	13	68	13	71	23	107	68	175	50	88	24	162	81	243
	SFLT	27	13	1	41	13	54	13	69	23	95	58	153	40	72	24	136	71	207
Species Endorsements		141	89	2	232	48	280	63	229	67	359	214	573	204	318	69	591	262	853
Total Licenses		2,907	765	37	3,709	431	4,140	866	1,614	602	3,182	1,771	4,953	3,773	2,579	639	6,891	2,202	9,093
Total Vessels		1,559	147	6	1,712	60	1,772	359	195	42	596	100	696	1,918	342	48	2,306	160	2,466

3.2.2.5 Landings Requirements for General License Qualification

Explicit

Configuration 718741		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	3	0	3	29	32	0	3	0	3	38	41
	OFLT	0	0	0	0	7	7	0	4	1	5	24	29	0	4	1	5	31	36
	PCOD	10	7	1	18	13	31	13	11	6	30	49	79	23	18	7	48	62	110
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	6	6	0	0	0	0	9	9
Species Endorements		10	7	1	18	62	80	13	29	10	52	216	268	23	36	11	70	278	348
BS	AMCK	0	4	0	4	8	12	0	50	12	62	46	108	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	2	58	12	72	70	142	5	64	12	81	84	165
	OFLT	2	6	0	8	14	22	0	63	13	76	72	148	2	69	13	84	86	170
	PCOD	37	26	1	63	19	82	24	105	24	153	90	243	61	130	25	216	109	325
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	15	25	2	59	13	74	70	144	5	66	13	84	85	169
	RSOL	1	6	0	7	14	21	0	59	12	71	69	140	1	65	12	78	83	161
	SQID	0	1	0	1	1	.2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	151
Species Endorements		48	67	1	116	109	225	26	517	114	659	557	1,216	76	584	115	775	666	1,441
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	17	24	0	41	3	44	6	12	0	18	13	31	23	36	0	59	16	75
	PCOD	302	75	1	378	14	392	40	36	3	79	17	96	342	111	4	457	31	488
	PLCK	49	30	0	79	5	84	9	20	2	31	13	44	58	50	2	110	18	128
	SFLT	22	27	0	49	4	53	5	15	1	21	11	32	27	42	1	70	15	85
Species Endorements		391	158	1	548	27	575	60	84	6	150	56	206	451	240	7	698	83	781
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	44	0	0	44	3	47	8	4	0	12	4	16	52	4	0	56	7	63
	PLCK	4	0	0	4	1	5	0	0	0	0	0	0	4	0	0	4	1	5
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorements		51	0	0	51	6	57	8	5	0	13	4	17	59	5	0	64	10	74
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	1	0	5	6	11	1	13	7	21	21	42	5	14	7	26	27	53
	PCOD	63	12	1	76	10	86	7	31	12	50	32	82	70	43	13	126	42	168
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	25	55
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorements		78	15	1	94	35	129	8	78	38	124	99	223	86	93	39	218	134	352
Total Licenses		678	245	4	927	239	1,066	117	713	168	998	932	1,930	695	958	172	1,825	1,171	2,996
Total Vessels		401	86	1	488	33	521	86	128	26	220	92	312	487	214	27	708	126	833

3.2.2.6 Landings Requirements for General License Qualification

Explicit

Configuration 715731		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27 1992, 1993, Catch History.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	3	0	3	29	32	0	3	0	3	38	41
	OFLT	0	0	0	0	7	7	0	4	1	5	24	29	0	4	1	5	31	36
	PCOD	11	8	1	20	13	33	14	11	6	31	49	80	25	19	7	51	62	113
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	6	6	0	0	0	0	9	9
Species Endorements		11	8	1	20	62	82	14	29	10	53	216	269	25	37	11	73	278	351
BS	AMCK	0	4	0	4	8	12	0	50	12	62	46	108	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	2	58	12	72	70	142	5	64	12	81	84	165
	OFLT	2	6	0	8	14	22	0	63	13	76	72	148	2	69	13	84	86	170
	PCOD	41	26	1	68	19	87	27	107	24	158	90	248	68	133	25	226	109	335
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	15	25	2	59	13	74	70	144	5	66	13	84	85	169
	RSOL	1	6	0	7	14	21	0	59	12	71	69	140	1	65	12	78	83	161
	SQID	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	151
Species Endorements		52	68	1	121	109	230	31	519	114	664	657	1,221	83	587	115	785	666	1,451
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	18	24	0	42	3	45	8	12	0	20	13	33	26	36	0	62	16	78
	PCOD	328	80	1	409	15	424	45	37	3	85	17	102	373	117	4	494	32	526
	PLCK	50	30	0	80	5	85	9	21	2	32	13	45	59	51	2	112	18	130
	SFLT	22	27	0	49	4	53	6	15	1	22	11	33	28	42	1	71	15	86
Species Endorements		419	161	1	581	28	609	68	86	8	160	56	216	487	247	7	741	84	825
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	79	1	0	80	5	85	11	5	0	16	5	21	90	6	0	96	10	106
	PLCK	5	0	0	5	1	6	0	0	0	0	0	0	5	0	0	5	1	6
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorements		87	1	0	88	8	96	11	6	0	17	5	22	98	7	0	105	13	118
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	1	0	5	6	11	1	13	7	21	21	42	5	14	7	26	27	53
	PCOD	66	13	1	80	10	90	8	32	12	52	32	84	74	45	13	132	42	174
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	25	55
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorements		81	16	1	98	35	133	9	79	38	126	99	225	90	95	39	224	134	358
Total Licenses		650	254	4	908	242	1,150	133	719	168	1,020	933	1,953	783	973	172	1,928	1,175	3,103
Total Vessels		474	92	1	567	36	603	84	133	26	243	93	336	558	225	27	810	129	939

3.2.2.6 Landings Requirements for Endorsement Qualification

Explicit

Configuration 716712

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. This option includes two landings minimum for endorsement.

Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	0	1	20	21	0	1	0	1	27	28
	GTRB	0	0	0	0	9	9	0	2	0	2	26	28	0	2	0	2	35	37
	OFLT	0	0	0	0	7	7	0	0	0	0	21	21	0	0	0	0	28	28
	PCOD	7	6	1	14	13	27	11	10	6	27	49	76	18	16	7	41	62	103
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	32	38	0	6	0	6	41	47
	RSOL	0	0	0	0	7	7	0	1	0	1	22	23	0	1	0	1	29	30
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	2	2	0	0	0	0	5	5	0	0	0	0	7	7
Species Endorsements		7	6	1	14	61	75	11	23	7	41	205	246	18	29	8	55	266	321
BS	AMCK	0	2	0	2	8	10	0	36	11	47	42	89	0	38	11	49	50	99
	GTRB	2	3	0	5	13	18	1	50	12	63	69	132	3	53	12	68	82	150
	OFLT	2	6	0	8	14	22	0	60	13	73	72	145	2	66	13	81	86	167
	PCOD	44	26	1	71	17	88	27	103	24	154	89	243	71	129	25	225	106	331
	PLCK	2	6	0	8	14	22	0	61	13	74	71	145	2	67	13	82	85	167
	ROCK	1	7	0	8	15	23	2	55	13	70	68	138	3	62	13	78	83	161
	RSOL	0	5	0	5	12	17	0	56	11	67	67	134	0	61	11	72	79	151
	SQID	0	1	0	1	1	2	0	0	2	2	1	3	0	1	2	3	2	5
	YSOL	0	4	0	4	10	14	0	53	13	66	60	126	0	57	13	70	70	140
Species Endorsements		51	60	1	112	104	216	30	474	112	616	539	1,155	81	534	113	728	643	1,371
CG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	9	21	0	30	3	33	2	9	0	11	11	22	11	30	0	41	14	55
	PCOD	405	84	2	491	21	512	58	35	2	95	18	113	463	119	4	586	39	625
	PLCK	38	26	0	64	5	69	5	17	2	24	12	36	43	43	2	88	17	105
	SFLT	12	25	0	37	4	41	6	13	1	20	9	29	18	38	1	57	13	70
Species Endorsements		464	156	2	622	33	655	71	74	5	150	51	201	535	230	7	772	84	856
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	2
	PCOD	267	4	0	271	11	282	27	5	0	32	4	36	294	9	0	303	16	318
	PLCK	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
	SFLT	2	0	0	2	1	3	0	0	0	0	0	0	2	0	0	2	1	3
Species Endorsements		272	4	0	276	14	290	27	6	0	33	4	37	299	10	0	309	18	327
WG	AMCK	0	0	0	0	6	6	0	3	3	6	6	12	0	3	3	6	12	18
	DFLT	2	1	0	3	5	8	1	12	3	16	19	35	3	13	3	19	24	43
	PCOD	69	9	1	79	9	88	7	29	12	48	32	80	76	38	13	127	41	168
	PLCK	4	1	0	5	6	11	0	13	8	21	17	38	4	14	8	26	23	49
	SFLT	3	1	0	4	6	10	0	13	8	21	16	37	3	14	8	25	22	47
Species Endorsements		78	12	1	91	32	123	8	70	34	112	90	202	86	82	35	203	122	325
Total Licenses		872	238	5	1,115	244	1,359	147	647	158	952	889	1,841	1,019	885	163	2,067	1,133	3,200
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.5 Landings Requirements for General License Qualification

Explicit

Configuration 718751		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	3	0	3	29	32	0	3	0	3	38	41
	OFLT	0	0	0	0	7	7	0	4	1	5	24	29	0	4	1	5	31	36
	PCOD	9	6	1	16	13	29	9	9	6	24	49	73	18	15	7	40	62	102
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	6	0	6	33	39	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	6	6	0	0	0	0	9	9
Species Endorements		9	6	1	16	62	78	9	27	10	46	216	262	18	33	11	62	278	340
BS	AMCK	0	4	0	4	8	12	0	50	12	62	46	108	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	2	58	12	72	70	142	5	64	12	81	84	165
	OFLT	2	6	0	8	14	22	0	63	13	76	72	148	2	69	13	84	86	170
	PCOD	32	24	1	57	19	76	19	99	24	142	90	232	51	123	25	199	109	308
	PLCK	2	6	0	8	14	22	0	62	13	75	73	148	2	68	13	83	87	170
	ROCK	3	7	0	10	16	26	2	59	13	74	70	144	5	66	13	84	85	169
	RSOL	1	6	0	7	14	21	0	59	12	71	69	140	1	65	12	78	83	161
	SQID	0	1	0	1	1	2	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	58	13	71	64	135	0	64	13	77	74	151
Species Endorements		43	66	1	110	109	219	23	511	114	648	557	1,205	66	577	115	758	666	1,424
CG	AMCK	1	0	0	1	1	2	0	1	0	1	2	3	1	1	0	2	3	5
	DFLT	14	24	0	38	3	41	5	12	0	17	13	30	19	36	0	55	16	71
	PCOD	262	71	1	334	14	348	35	35	3	73	17	90	297	106	4	407	31	438
	PLCK	47	30	0	77	5	82	9	20	2	31	13	44	56	50	2	108	18	126
	SFLT	21	27	0	48	4	52	5	15	1	21	11	32	26	42	1	69	15	84
Species Endorements		345	152	1	498	27	525	54	83	6	143	56	199	399	235	7	641	83	724
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	PCOD	30	0	0	30	1	31	6	3	0	9	4	13	36	3	0	39	5	44
	PLCK	4	0	0	4	1	5	0	0	0	0	0	0	4	0	0	4	1	5
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	3	0	0	3	1	4
Species Endorements		37	0	0	37	4	41	6	3	0	9	4	13	43	3	0	46	8	54
WG	AMCK	0	0	0	0	6	6	0	8	3	11	11	22	0	8	3	11	17	28
	DFLT	4	1	0	5	6	11	0	13	7	20	21	41	4	14	7	25	27	52
	PCOD	56	12	1	69	10	79	5	29	12	46	32	78	61	41	13	115	42	157
	PLCK	8	1	0	9	7	16	0	13	8	21	18	39	8	14	8	30	25	55
	SFLT	3	1	0	4	6	10	0	13	8	21	17	38	3	14	8	25	23	48
Species Endorements		71	15	1	87	35	122	5	78	36	119	99	218	76	91	39	206	134	340
Total Licenses		505	239	4	748	237	985	97	700	168	965	932	1,897	602	939	172	1,713	1,169	2,882
Total Vessels		340	82	1	423	31	454	52	121	26	199	92	291	392	203	27	622	123	745

3.2.2.6 Landings Requirements for Endorsement Qualification — Explicit

Configuration 715714

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
This option includes four landings minimum for endorsement.

Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	0	1	19	20	0	1	0	1	26	27
	GTRB	0	0	0	0	8	8	0	2	0	2	18	20	0	2	0	2	26	28
	OFLT	0	0	0	0	7	7	0	0	0	0	17	17	0	0	0	0	24	24
	PCOD	3	2	1	6	10	16	8	5	5	18	45	61	9	7	6	22	55	77
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	4	0	4	29	33	0	4	0	4	38	42
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RSOL	0	0	0	0	7	7	0	1	0	1	16	17	0	1	0	1	23	24
	YSOL	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Species Endorsements		3	2	1	6	56	62	8	16	8	28	174	202	9	18	7	34	230	264
BS	AMCK	0	1	0	1	5	6	0	21	9	30	32	62	0	22	9	31	37	68
	GTRB	1	3	0	4	13	17	1	40	11	52	66	118	2	43	11	56	79	135
	OFLT	1	6	0	7	14	21	0	56	13	69	71	140	1	62	13	76	85	161
	PCOD	29	19	1	49	15	64	17	92	23	132	87	219	46	111	24	181	107	283
	PLCK	0	6	0	6	13	19	0	59	13	72	71	143	0	65	13	78	[illegible]	162
	ROCK	1	5	0	6	15	21	2	50	13	65	65	130	3	55	13	71	80	161
	RSOL	0	3	0	3	12	16	0	55	11	66	64	130	0	58	11	69	76	145
	SQID	0	1	0	1	1	2	0	0	1	1	1	2	0	1	1	2	2	4
	YSOL	0	1	0	1	9	10	0	39	11	50	54	104	0	40	11	51	63	114
Species Endorsements		32	45	1	78	97	176	20	412	105	537	511	1,048	52	457	106	615	608	1,223
CG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	20	0	23	3	26	1	7	0	8	8	16	4	27	0	31	11	42
	PCOD	350	73	0	423	17	440	45	32	2	79	15	94	396	105	2	502	32	534
	PLCK	16	23	0	38	4	42	3	14	1	18	10	28	18	37	1	56	14	70
	SFLT	5	24	0	29	3	32	3	12	1	16	9	25	8	36	1	45	12	57
Species Endorsements		373	140	0	513	27	540	52	65	4	121	42	163	425	205	4	634	69	703
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	PCOD	122	0	0	122	8	130	16	0	0	16	1	17	138	0	0	138	9	147
	PLCK	2	0	0	2	1	3	0	0	0	0	0	0	2	0	0	2	1	3
	SFLT	1	0	0	1	1	2	0	0	0	0	0	0	1	0	0	1	1	2
Species Endorsements		125	0	0	125	11	136	16	0	0	16	1	17	141	0	0	141	12	153
WG	AMCK	0	0	0	0	5	5	0	1	2	3	6	9	0	1	2	3	11	14
	DFLT	1	1	0	2	5	7	1	6	3	10	16	26	2	7	3	12	21	33
	PCOD	50	4	1	55	9	64	3	26	8	37	31	68	53	30	9	92	40	132
	PLCK	3	1	0	4	6	10	0	13	8	21	15	36	3	14	8	25	21	46
	SFLT	1	1	0	2	6	8	0	10	7	17	15	32	1	11	7	19	21	40
Species Endorsements		55	7	1	63	31	94	4	58	26	88	83	171	59	63	29	151	114	265
Total Licenses		588	194	3	785	222	1,007	98	549	143	790	811	1,601	686	743	146	1,575	1,033	2,608
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.6 Landi.g Requirements for Endorsement Qualification

Explicit

Configuration 715713	Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. This option includes three landing minimum for endorsement.																		
	Current Owner's State of Residence																		
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	7	7	0	1	0	1	20	21	0	1	0	1	27	28
	GTRB	0	0	0	0	9	9	0	2	0	2	23	25	0	2	0	2	32	34
	OFLT	0	0	0	0	7	7	0	0	0	0	19	19	0	0	0	0	26	26
	PCOD	3	2	1	6	11	17	7	5	5	17	46	63	10	7	6	23	57	80
	PLCK	0	0	0	0	7	7	0	3	1	4	30	34	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	5	0	5	32	37	0	5	0	5	41	46
	RSOL	0	0	0	0	7	7	0	1	0	1	17	18	0	1	0	1	24	25
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	1	1	0	0	0	0	4	4	0	0	0	0	5	5
Species Endorsements		3	2	1	6	58	64	7	17	6	30	191	221	10	19	7	36	249	285
BS	AMCK	0	1	0	1	5	6	0	26	11	37	38	75	0	27	11	38	43	81
	GTRB	1	3	0	4	13	17	1	46	12	59	68	127	2	49	12	63	81	144
	OFLT	1	6	0	7	14	21	0	57	13	70	72	142	1	63	13	77	86	163
	PCOD	33	20	1	54	16	70	19	97	23	139	87	226	52	117	24	193	103	296
	PLCK	1	6	0	7	14	21	0	60	13	73	71	144	1	66	13	80	85	165
	ROCK	1	6	0	7	15	22	2	51	13	66	66	132	3	57	13	73	81	154
	RSOL	0	3	0	3	12	15	0	55	11	66	66	132	0	58	11	69	78	147
	SQID	0	1	0	1	1	2	0	0	1	1	1	2	0	1	1	2	2	4
	YSOL	0	2	0	2	10	12	0	43	13	56	57	113	0	45	13	58	67	125
Species Endorsements		37	48	1	86	100	186	22	435	110	567	526	1,093	59	483	111	653	626	1,279
CG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	5	21	0	26	3	29	1	8	0	9	11	20	6	29	0	35	14	49
	PCOD	362	73	1	436	17	453	47	32	2	81	16	97	409	105	3	517	33	550
	PLCK	26	25	0	51	4	55	4	14	2	20	10	30	30	39	2	71	14	85
	SFLT	8	25	0	33	3	36	3	12	1	16	9	25	11	37	1	49	12	61
Species Endorsements		401	144	1	546	27	573	55	66	5	126	47	173	456	210	6	672	74	746
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	PCOD	164	0	0	164	8	172	17	0	0	17	1	18	181	0	0	181	9	190
	PLCK	2	0	0	2	1	3	0	0	0	0	0	0	2	0	0	2	1	3
	SFLT	2	0	0	2	1	3	0	0	0	0	0	0	2	0	0	2	1	3
Species Endorsements		168	0	0	168	11	179	17	0	0	17	1	18	185	0	0	185	12	197
WG	AMCK	0	0	0	0	5	5	0	3	3	6	6	12	0	3	3	6	11	17
	DFLT	2	1	0	3	5	8	1	9	3	13	18	31	3	10	3	16	23	39
	PCOD	51	6	1	58	9	67	3	26	8	37	31	68	54	32	9	95	40	135
	PLCK	3	1	0	4	6	10	0	13	8	21	16	37	3	14	8	25	22	47
	SFLT	1	1	0	2	6	8	0	12	8	20	15	35	1	13	8	22	21	43
Species Endorsements		57	9	1	67	31	98	4	63	30	97	86	183	61	72	31	164	117	281
Total Licenses		666	203	4	873	227	1,100	105	581	151	837	851	1,688	771	784	155	1,710	1,078	2,788
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.6 Landings Requirements for Endorsement Qualification

Explicit

Configuration 715718		Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. Two landings in year prior to Council Action. Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	6	6	0	0	0	0	6	6	0	0	0	0	12	12
	GTRB	0	0	0	0	6	6	0	2	0	2	7	9	0	2	0	2	13	16
	OFLT	0	0	0	0	3	3	0	2	0	2	7	9	0	2	0	2	10	12
	PCOD	0	0	0	0	6	6	1	2	2	5	26	31	1	2	2	5	32	37
	PLCK	0	0	0	0	6	6	0	2	1	3	22	25	0	2	1	3	28	31
	ROCK	0	0	0	0	7	7	0	4	0	4	18	22	0	4	0	4	25	29
	RSOL	0	0	0	0	5	5	0	0	0	0	7	7	0	0	0	0	12	12
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Species Endorsements		0	0	0	0	39	39	1	12	3	16	93	109	1	12	3	16	132	148
BS	AMCK	0	0	0	0	0	0	0	13	1	14	11	25	0	13	1	14	11	26
	GTRB	0	0	0	0	9	9	1	23	7	31	44	76	1	23	7	31	53	84
	OFLT	0	4	0	4	11	15	0	51	12	63	61	124	0	55	12	67	72	139
	PCOD	0	10	1	11	15	26	3	65	18	86	76	162	3	75	19	97	91	188
	PLCK	0	5	0	5	11	16	0	53	13	66	66	132	0	58	13	71	77	148
	ROCK	0	1	0	1	13	14	1	46	10	57	49	106	1	47	10	58	62	120
	RSOL	0	2	0	2	8	10	0	42	9	51	58	109	0	44	9	53	66	119
	SQID	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	YSOL	0	2	0	2	6	8	0	33	6	39	49	88	0	35	6	41	55	96
Species Endorsements		0	24	1	25	73	98	5	326	76	407	415	822	5	350	77	432	488	920
CG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	18	0	21	1	22	1	5	0	6	5	11	4	23	0	27	6	33
	PCOD	167	44	0	211	9	220	15	17	2	34	10	44	182	61	2	245	19	264
	PLCK	8	23	0	31	1	32	1	9	1	11	5	16	9	32	1	42	6	48
	SFLT	4	22	0	26	1	27	1	7	1	9	5	14	5	29	1	35	6	41
Species Endorsements		182	107	0	289	12	301	18	38	4	60	25	85	200	145	4	349	37	386
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
	PCOD	89	0	0	89	1	90	7	0	0	7	2	9	96	0	0	96	3	99
	PLCK	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	1
	SFLT	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	1
Species Endorsements		91	0	0	91	1	92	7	0	0	7	2	9	98	0	0	98	3	101
WG	AMCK	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	2
	DFLT	1	0	0	1	1	2	0	0	0	0	4	4	1	0	0	1	5	6
	PCOD	33	8	0	41	7	48	3	7	3	13	15	28	36	15	3	54	22	76
	PLCK	2	0	0	2	1	3	0	4	2	6	5	11	2	4	2	8	6	14
	SFLT	1	0	0	1	2	3	0	1	1	2	5	7	1	1	1	3	7	10
Species Endorsements		37	8	0	45	11	56	3	12	6	21	31	52	40	20	6	66	42	108
Total Licenses		310	139	1	450	136	586	34	388	89	511	566	1,077	344	527	90	961	702	1,663
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.8 Landings Requirements for Endorsement Qualification

Explicit

Configuration 715715

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. One landing in year prior to Council Action.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	6	6	0	1	0	1	6	7	0	1	0	1	12	13
	GTRB	0	0	0	0	7	7	0	2	0	2	13	15	0	2	0	2	20	22
	OFLT	0	0	0	0	4	4	0	3	0	3	8	11	0	3	0	3	12	16
	PCOD	1	0	0	1	7	8	1	4	2	7	29	36	2	4	2	8	36	44
	PLCK	0	0	0	0	6	6	0	3	1	4	24	28	0	3	1	4	30	34
	ROCK	0	0	0	0	7	7	0	4	0	4	19	23	0	4	0	4	26	30
	RSOL	0	0	0	0	6	6	0	1	0	1	9	10	0	1	0	1	15	16
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
Species Endorsements		1	0	0	1	43	44	1	18	3	22	109	131	2	18	3	23	152	175
BS	AMCK	0	0	0	0	3	3	0	19	4	23	16	39	0	19	4	23	19	42
	GTRB	0	0	0	0	10	10	2	33	8	43	52	95	2	33	8	43	62	105
	OFLT	0	5	0	5	11	16	0	51	13	64	63	127	0	56	13	69	74	143
	PCOD	2	10	1	13	16	29	3	66	19	88	78	166	5	76	20	101	94	195
	PLCK	0	5	0	5	11	16	0	54	13	67	67	134	0	59	13	72	78	150
	ROCK	0	2	0	2	14	16	1	49	10	60	55	115	1	51	10	62	69	131
	RSOL	0	4	0	4	8	12	0	43	9	52	61	113	0	47	9	56	69	125
	SQID	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	YSOL	0	4	0	4	8	12	0	39	7	46	51	97	0	43	7	50	59	109
Species Endorsements		2	30	1	33	81	114	6	354	83	443	444	887	8	384	84	476	525	1,001
CG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	20	0	23	1	24	1	5	0	6	6	12	4	25	0	29	7	36
	PCOD	194	48	0	242	9	251	18	20	2	40	11	51	212	68	2	282	20	302
	PLCK	17	24	0	41	1	42	2	12	2	16	5	21	19	36	2	57	6	63
	SFLT	5	22	0	27	1	28	1	9	1	11	5	16	6	31	1	38	6	44
Species Endorsements		219	114	0	333	12	345	22	48	5	73	27	100	241	160	5	406	39	445
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PCOD	157	3	0	160	4	164	9	2	0	11	3	14	166	5	0	171	7	178
	PLCK	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	1
	SFLT	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	1
Species Endorsements		159	3	0	162	4	166	9	2	0	11	3	14	168	5	0	173	7	180
WG	AMCK	0	0	0	0	0	0	0	1	0	1	2	3	0	1	0	1	2	3
	DFLT	1	1	0	2	1	3	0	1	0	1	4	5	1	2	0	3	5	8
	PCOD	33	9	0	42	7	49	3	7	3	13	16	29	36	16	3	55	23	78
	PLCK	2	0	0	2	3	5	0	4	2	6	6	12	2	4	2	8	9	17
	SFLT	2	0	0	2	4	6	0	3	2	5	7	12	2	3	2	7	11	18
Species Endorsements		38	10	0	48	15	63	3	18	7	28	35	61	41	28	7	74	50	124
Total Licenses		419	157	1	577	155	732	41	436	98	575	618	1,193	460	593	99	1,152	773	1,925
Total Vessels		921	116	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501

3.2.2.8 Landings Requirements for Endorsement Qualification — Explicit

Configuration 715718

Licenses Issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History.
Four landings in year prior to Council Action.

Current Owner's State of Residence

		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses
AI	AMCK	0	0	0	0	6	6	0	0	0	0	6	6	0	0	0	0	12	12
	GTRB	0	0	0	0	3	3	0	0	0	0	5	5	0	0	0	0	8	8
	OFLT	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	4	4
	PCOD	0	0	0	0	6	6	0	1	2	3	20	23	0	1	2	3	26	29
	PLCK	0	0	0	0	3	3	0	2	0	2	19	21	0	2	0	2	22	24
	ROCK	0	0	0	0	7	7	0	2	0	2	15	17	0	2	0	2	22	24
	RSOL	0	0	0	0	4	4	0	0	0	0	6	6	0	0	0	0	10	10
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Species Endorsements		0	0	0	0	29	29	0	5	2	7	75	82	0	5	2	7	104	111
BS	AMCK	0	0	0	0	0	0	0	6	1	7	7	14	0	6	1	7	7	14
	GTRB	0	0	0	0	5	5	0	12	6	18	33	51	0	12	6	18	38	56
	OFLT	0	4	0	4	11	15	0	49	12	61	58	119	0	53	12	65	69	134
	PCOD	0	10	1	11	15	26	2	64	18	84	74	158	2	74	19	95	89	184
	PLCK	0	5	0	5	11	16	0	52	13	65	64	129	0	57	13	70	75	145
	ROCK	0	1	0	1	12	13	1	40	10	51	37	88	1	41	10	52	49	101
	RSOL	0	2	0	2	7	9	0	35	9	44	55	99	0	37	9	46	62	108
	SQID	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	YSOL	0	1	0	1	6	7	0	24	5	29	45	74	0	25	5	30	51	81
Species Endorsements		0	23	1	24	67	91	3	282	74	359	374	733	3	305	75	383	441	824
CG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	16	0	19	1	20	0	5	0	5	5	10	3	21	0	24	6	30
	PCOD	126	41	0	166	6	172	11	13	2	26	10	36	136	54	2	192	16	208
	PLCK	7	22	0	29	1	30	1	9	1	11	3	14	8	31	1	40	4	44
	SFLT	4	21	0	25	1	26	0	7	1	8	3	11	4	28	1	33	4	37
Species Endorsements		139	100	0	239	9	248	12	34	4	50	21	71	151	134	4	289	30	319
EG	AMCK	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
	DFLT	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
	PCOD	39	0	0	39	1	40	5	0	0	5	0	5	44	0	0	44	1	45
	PLCK	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
	SFLT	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
Species Endorsements		39	0	0	39	1	40	5	0	0	5	0	5	44	0	0	44	1	45
WG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3	3
	PCOD	32	5	0	37	2	39	3	3	1	7	10	17	35	8	1	44	12	56
	PLCK	2	0	0	2	0	2	0	3	1	4	4	8	2	3	1	6	4	10
	SFLT	1	0	0	1	0	1	0	0	1	1	2	3	1	0	1	2	2	4
Species Endorsements		35	5	0	40	2	42	3	6	3	12	20	32	38	11	3	52	22	74
Total Licenses		213	128	1	342	108	450	23	327	83	433	490	923	236	455	84	776	698	1,373
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	316	95	410	1,059	262	34	1,355	146	1,501

3.2.2.6 Landings Requirements for Endorsement Qualification

Explicit

Configuration 715717		Licenses issued to Current Vessel Owners Based on The Vessel's, January 1, 1990 - June 27, 1992, Catch History. Three landings in year prior to Council Action.																		
		Current Owner's State of Residence																		
		Alaska						Other						Total						
		CV						CV						CV						
Area	Species	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Licenses	
AI	AMCK	0	0	0	0	6	6	0	0	0	0	6	6	0	0	0	0	12	12	
	GTRB	0	0	0	0	5	5	0	0	0	0	5	5	0	0	0	0	10	10	
	OFLT	0	0	0	0	2	2	0	0	0	0	6	6	0	0	0	0	8	8	
	PCOD	0	0	0	0	6	6	0	1	2	3	24	27	0	1	2	3	30	33	
	PLCK	0	0	0	0	5	5	0	2	1	3	22	25	0	2	1	3	27	30	
	ROCK	0	0	0	0	7	7	0	4	0	4	17	21	0	4	0	4	24	28	
	RSOL	0	0	0	0	4	4	0	0	0	0	7	7	0	0	0	0	11	11	
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Species Endorsements		0	0	0	0	35	35	0	7	3	10	87	97	0	7	3	10	122	132	
BS	AMCK	0	0	0	0	0	0	0	6	1	7	8	15	0	6	1	7	8	15	
	GTRB	0	0	0	0	8	8	1	14	7	22	36	58	1	14	7	22	44	66	
	OFLT	0	4	0	4	11	15	0	60	12	62	60	122	0	64	12	66	71	137	
	PCOD	0	10	1	11	15	26	2	64	18	84	75	159	2	74	19	95	90	185	
	PLCK	0	5	0	5	11	16	0	52	13	65	64	129	0	57	13	70	75	145	
	ROCK	0	1	0	1	13	14	1	44	10	55	40	95	1	45	10	56	53	109	
	RSOL	0	2	0	2	7	9	0	39	9	48	56	104	0	41	9	50	63	113	
	SQID	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	
	YSOL	0	2	0	2	6	8	0	28	6	32	48	80	0	28	6	34	54	88	
Species Endorsements		0	24	1	25	71	96	4	295	76	375	388	763	4	319	77	400	459	859	
CG	AMCL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	DFLT	3	17	0	20	1	21	0	5	0	5	5	10	3	22	0	25	6	31	
	PCOD	143	42	0	185	8	193	13	15	2	30	10	40	156	57	2	215	18	233	
	PLCK	7	22	0	29	1	30	1	9	1	11	3	14	8	31	1	40	4	44	
	SFLT	4	22	0	26	1	27	0	7	1	8	3	11	4	29	1	34	4	38	
Species Endorsements		157	103	0	260	11	271	14	36	4	54	21	75	171	139	4	314	32	346	
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	DFLT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	PCOD	52	0	0	52	1	53	5	0	0	5	1	6	57	0	0	57	2	59	
	PLCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	SFLT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Species Endorsements		52	0	0	52	1	53	5	0	0	5	1	6	57	0	0	57	2	59	
WG	AMCK	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	2	
	DFLT	0	0	0	0	1	1	0	0	0	0	3	3	0	0	0	0	4	4	
	PCOD	32	5	0	37	5	42	3	5	1	9	11	20	35	10	1	46	16	62	
	PLCK	2	0	0	2	1	3	0	3	1	4	4	8	2	3	1	6	5	11	
	SFLT	1	0	0	1	1	2	0	1	1	2	3	5	1	1	1	3	4	7	
Species Endorsements		35	5	0	40	8	48	3	9	3	15	23	38	38	14	3	55	31	86	
Total Licenses		244	132	1	377	126	503	26	347	88	459	520	979	270	479	89	836	646	1,482	
Total Vessels		921	115	4	1,040	51	1,091	138	147	30	315	95	410	1,059	262	34	1,355	146	1,501	

Configuration 715711
Part 2 of 2

Licenses Issued to Current Vessel Owners Based on the Vessels, January 1, 1990 - June 27, 1992, Catch History

Current Owner's State of Residence

Area	Species	Alaska Total CV <60'	Alaska Total CV 60-124'	Alaska Total CV 125'+	Alaska Total CV Total	Alaska Total CP	Alaska Total Total	Oregon/Other CV <60'	Oregon/Other CV 60-124'	Oregon/Other CV 125'+	Oregon/Other CV Total	Oregon/Other CP	Oregon/Other Total	Washington CV <60'	Washington CV 60-124'	Washington CV 125'+	Washington CV Total	Washington CP	Washington Total	Total CV <60'	Total CV 60-124'	Total CV 125'+	Total CV Total	Total CP	Total Total
AI	AMCK	0	0	0	0	7	7	0	0	0	0	0	0	0	1	1	2	22	24	0	1	1	2	29	31
	GTRB	0	0	0	0	9	9	0	1	0	1	0	1	0	2	0	2	29	31	0	3	0	3	38	41
	DFLT	0	0	0	0	7	7	0	2	0	2	0	2	0	2	1	3	24	27	0	4	1	5	31	36
	PCOD	16	9	1	26	13	39	3	3	0	6	1	7	11	9	6	26	49	75	30	21	7	58	63	121
	PLCK	0	0	0	0	7	7	0	2	0	2	0	2	0	1	1	2	30	32	0	3	1	4	37	41
	ROCK	0	0	0	0	9	9	0	2	0	2	0	2	0	4	0	4	33	37	0	6	0	6	42	48
	RSOL	0	0	0	0	7	7	0	0	0	0	0	0	0	1	1	2	23	25	0	1	1	2	30	32
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	9	9
Total Area Endorsements		16	9	1	26	62	88	3	10	0	13	1	14	11	20	10	41	216	257	30	39	11	80	279	359
Total Area Vessels		16	9	1	26	13	39	3	3	0	6	1	7	11	9	6	26	51	77	30	21	7	58	65	123
BS	AMCK	0	4	0	4	8	12	0	8	0	8	2	10	0	42	12	54	44	98	0	54	12	66	54	120
	GTRB	3	6	0	9	14	23	0	8	0	8	2	10	2	50	12	64	68	132	5	64	12	81	84	165
	DFLT	2	6	0	8	14	22	0	9	0	9	3	12	0	54	13	67	69	136	2	69	13	84	86	170
	PCOD	56	32	1	89	19	108	11	17	2	30	5	35	21	100	25	146	85	231	88	149	28	265	109	374
	PLCK	2	6	0	8	14	22	0	9	0	9	3	12	0	53	13	66	70	136	2	68	13	83	87	170
	ROCK	3	7	0	10	15	25	0	9	0	9	3	12	2	50	13	65	67	132	5	66	13	84	85	169
	RSOL	1	6	0	7	14	21	0	9	0	9	3	12	0	50	12	62	66	128	1	65	12	78	83	161
	SQID	0	1	0	1	1	2	0	0	0	0	0	0	0	3	2	5	3	8	0	4	2	6	4	10
	YSOL	0	6	0	6	10	16	0	9	0	9	3	12	0	49	13	62	61	123	0	64	13	77	74	151
Total Area Endorsements		67	74	1	142	109	251	11	78	2	91	24	115	26	451	116	591	533	1,124	103	603	118	824	666	1,490
Total Area Vessels		56	32	1	89	20	109	11	17	2	30	5	35	21	100	25	146	85	231	88	149	28	265	110	375
CG	AMCK	1	0	0	1	1	2	0	1	0	1	0	1	0	0	0	0	2	2	1	1	0	2	3	5
	DFLT	18	24	0	42	3	45	3	5	0	8	1	9	5	7	0	12	12	24	26	36	0	62	16	78
	PCOD	416	88	2	506	21	527	39	13	0	52	3	55	41	26	3	70	16	86	496	127	5	628	40	668
	PLCK	51	30	0	81	5	86	4	8	0	12	2	14	5	13	2	20	11	31	60	51	2	113	18	131
	SFLT	23	27	0	50	4	54	2	5	0	7	2	9	4	10	1	15	9	24	29	42	1	72	15	87
Total Area Endorsements		509	169	2	680	33	713	48	32	0	80	8	88	55	56	6	117	50	167	612	257	8	877	91	968
Total Area Vessels		428	91	2	521	22	543	43	14	0	57	3	60	60	31	3	94	17	111	531	136	5	672	42	714
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	1	2
	PCOD	341	5	1	347	12	359	27	2	0	29	1	30	28	6	1	35	5	40	396	13	2	411	18	429
	PLCK	5	0	0	5	1	6	0	0	0	0	0	0	1	0	0	1	0	1	6	0	0	6	1	7
	SFLT	3	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	1	4
Total Area Endorsements		349	5	1	355	15	370	27	3	0	30	1	31	29	6	1	36	5	41	405	14	2	421	21	442
Total Area Vessels		370	6	1	377	12	389	27	3	0	30	1	31	33	7	1	41	6	47	430	16	2	448	19	467
WG	AMCK	0	0	0	0	6	6	0	1	0	1	1	2	0	7	3	10	10	20	0	8	3	11	17	28
	DFLT	4	2	0	6	6	12	0	2	0	2	1	3	1	11	7	19	20	39	5	15	7	27	27	54
	PCOD	94	17	2	113	11	124	3	4	1	8	3	11	9	28	12	49	30	79	106	49	15	170	44	214
	PLCK	8	1	0	9	7	16	0	2	0	2	2	4	0	11	8	19	16	35	8	14	8	30	25	55
	SFLT	3	1	0	4	6	10	0	2	0	2	2	4	0	11	8	19	15	34	3	14	8	25	23	48
Total Area Endorsements		109	21	2	132	36	168	3	11	1	15	9	24	10	68	38	116	91	207	122	100	41	263	136	399
Total Area Vessels		95	18	2	115	11	126	4	4	1	9	3	12	10	31	12	53	31	84	109	53	15	177	45	222
Total Vessels/All Areas		889	115	4	1,008	50	1,058	76	28	2	106	6	112	94	119	28	241	90	331	1,059	262	34	1,355	146	1,501

3.2.2.6 Regional Distribution of the Explicit Reference Alternative

Explicit

Configuration 716711 Part 1 of 2		Licenses Issued to Current Vessel Owners Based on the Vessels, January 1, 1990 - June 27, 1992, Catch History																							
		Current Owner's Region of Residence																							
		Central Alaska						Eastern Alaska						Western Alaska						Kodiak Alaska					
		CV						CV						CV						CV					
		<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total	<60'	60-124'	125'+	Total	CP	Total
AI	AMCK	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GTRB	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OFLT	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PCOD	2	4	0	6	11	17	9	2	0	11	1	12	1	0	0	1	0	1	4	3	1	8	1	9
	PLCK	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ROCK	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RSOL	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Area Endorsements		2	4	0	6	60	66	9	2	0	11	1	12	1	0	0	1	0	1	4	3	1	8	1	9
Total Area Vessels		2	4	0	6	11	17	9	2	0	11	1	12	1	0	0	1	0	1	4	3	1	8	1	9
BS	AMCK	0	2	0	2	8	10	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
	GTRB	0	2	0	2	12	14	1	1	0	2	2	4	2	0	0	2	0	2	0	3	0	3	0	3
	OFLT	0	2	0	2	12	14	0	0	0	0	2	2	2	1	0	3	0	3	0	3	0	3	0	3
	PCOD	25	14	0	39	15	54	6	5	0	11	2	13	17	3	0	20	0	20	8	10	1	19	2	21
	PLCK	0	2	0	2	12	14	0	0	0	0	2	2	2	1	0	3	0	3	0	3	0	3	0	3
	ROCK	0	2	0	2	13	15	1	1	0	2	2	4	2	1	0	3	0	3	0	3	0	3	0	3
	RSOL	0	2	0	2	12	14	0	0	0	0	2	2	1	1	0	2	0	2	0	3	0	3	0	3
	SQID	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
	YSOL	0	2	0	2	9	11	0	0	0	0	1	1	0	1	0	1	0	1	0	3	0	3	0	3
Total Area Endorsements		25	28	0	53	94	147	8	7	0	15	13	28	26	9	0	35	0	35	8	30	1	39	2	41
Total Area Vessels		25	14	0	39	16	55	6	5	0	11	2	13	17	3	0	20	0	20	8	10	1	19	2	21
CG	AMCK	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
	DFLT	9	1	0	10	2	12	6	2	0	8	0	8	1	0	0	1	0	1	2	21	0	23	1	24
	PCOD	263	35	1	299	15	314	31	7	0	38	4	42	24	1	0	25	0	25	98	45	1	144	2	146
	PLCK	34	5	0	39	4	43	2	0	0	2	0	2	2	0	0	2	0	2	13	25	0	38	1	39
	SFLT	13	2	0	15	3	18	2	1	0	3	0	3	1	0	0	1	0	1	7	24	0	31	1	32
Total Area Endorsements		319	43	1	363	24	387	41	10	0	51	4	55	28	1	0	29	0	29	121	115	1	237	5	242
Total Area Vessels		265	35	1	301	16	317	40	10	0	50	4	54	25	1	0	26	0	26	98	45	1	144	2	146
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PCOD	23	0	1	24	2	26	313	5	0	318	10	328	1	0	0	1	0	1	4	0	0	4	0	4
	PLCK	1	0	0	1	1	2	4	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
	SFLT	1	0	0	1	1	2	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Area Endorsements		25	0	1	26	5	31	319	5	0	324	10	334	1	0	0	1	0	1	4	0	0	4	0	4
Total Area Vessels		24	0	1	25	2	27	341	6	0	347	10	357	1	0	0	1	0	1	4	0	0	4	0	4
WG	AMCK	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	0	1	0	1	6	7	1	1	0	2	0	2	3	0	0	3	0	3	0	0	0	0	0	0
	PCOD	23	4	1	28	10	38	3	3	0	6	0	6	67	5	0	72	1	73	1	5	1	7	0	7
	PLCK	0	0	0	0	7	7	0	0	0	0	0	0	8	1	0	9	0	9	0	0	0	0	0	0
	SFLT	0	0	0	0	6	6	0	0	0	0	0	0	3	1	0	4	0	4	0	0	0	0	0	0
Total Area Endorsements		23	5	1	29	35	64	4	4	0	8	0	8	81	7	0	88	1	89	1	5	1	7	0	7
Total Area Vessels		23	5	1	29	10	39	4	3	0	7	0	7	67	5	0	72	1	73	1	5	1	7	0	7
Total Vessels/All Areas		304	43	3	350	29	379	379	17	0	396	16	412	100	6	0	106	1	107	106	49	1	156	4	160

CRAB

TABLE APPENDIX

This Table Appendix contains a list of the five numbered components and associated options for developing a license system for crab. This list is followed by two series of tables, one series for each of the two reference configurations: CURRENT and CRAB.

CURRENT Reference Configuration - #314X1. This is a baseline configuration that most closely reflects the composition of the fleet in 1993. It is not an alternative per se but does provide a benchmark for comparison of the other alternatives. In the table that corresponds to that unique number will be found fleet composition in numbers of vessels by residence, size, and mode of operation as a catcher or catcher processor in 1993. In the computer runs that were made to produce these tables, options within each main component (Nature of Licenses, License Recipients, License Designations, Qualifying Periods, and Minimum Landings) were changed to assess this effect on the composition of the fleet. The variants of #314X1 are shown in sequential tables. For example, there are two different options under License Recipient, identified by the second number from the left in the configuration number. The corresponding configuration numbers are 3<u>1</u>4X1 and 3<u>2</u>4X1. In the analysis proper, these tables are used to draw inferences about changes that will result from choosing a particular element within a component. The CURRENT Reference Configuration number will show under each of the five main components, but its corresponding table will only be presented once.

CRAB Reference Configuration - #31421. The second set of tables in the series has all the variants of the CRAB Reference Configuration. This configuration would issue licenses for each species/area combination to current vessel owners. Licenses will be designated for use as catcher vessel or catcher/processors and by vessel length. To qualify a vessel must make a single landing in areas and periods as indicated under Qualifying Period #20. The unique reference configuration #31421 table is included once with the variants produced by scrolling down through the options under each of the five components.

Components and Alternative Elements	Numbering Scheme
Nature of License	
Single license for all species and areas	10000
Licenses for species (e.g., *C. opilio*, *C. bairdi*, Red, Blue and Brown King Crab)	20000
‡Licenses for each species/area combination	30000
License Recipients	
‡Current owners	1000
Current owners and permit holders	2000
License Designations	
No restrictions	100
Catcher vessels & Catcher/processors	200
Vessel length	300
‡Catcher vessels & Catcher/processors and vessel length	400
Qualifying Period	
Jan. 1, 1978 - Dec. 31, 1993	10
‡6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for D.H. Red & 6/29/85 - 6/25/1988 for Prib. Blue)	20
Minimum landings	
‡No minimum	1
1 landing for Red & Blue King, 3 landings for Brown King, *C. opilio*, & *C. bairdi*	2

CURRENT 1993 CONFIGURATIONS

*314X1, the "core" configuration, can be found on page 8 only. It is not duplicated even though it appears in several components

3.2.3.1 Nature of Licenses

Current

Configuration 114X1

Single license good for all species and areas issued to Current Owners which made landings (no minimum) between 1/1/93 - 12/31/93.

	Alaska						Other						Total					
	Catcher Vessel						Catcher Vessel						Catcher Vessel					
	0'-59'	60-124'	>125'	CV Total	CP Total	AK. Total	0'-59'	60-124'	>125'	CV Total	CP Total	O.S. Total	0'-59'	60-124'	>125'	CV Total	CP Total	TOTAL
114X1 - Current Owners	23	83	10	116	3	119	20	151	47	218	17	235	43	234	57	334	20	354

3.2.3.1 Nature of Licenses

Current

Configuration 214X1

Single license for each species good for all areas issued to Current Owners which made landings (no minimum) between 1/1/93 - 12/31/93.

	Alaska						Other						Total					
	Catcher Vessel						Catcher Vessel						Catcher Vessel					
	0'-59'	60-124'	>125'	CV Total	CP Total	AK. Total	0'-59'	60-124'	>125'	CV Total	CP Total	O.S. Total	0'-59'	60-124'	>125'	CV Total	CP Total	TOTAL
214X1-KING CRAB																		
Red	20	82	8	110	2	112	19	143	47	209	3	212	39	225	55	319	5	324
Blue	0	39	7	46	2	48	1	96	26	123	4	127	1	135	33	169	6	175
Brown	0	4	0	4	0	4	0	8	11	19	0	19	0	12	11	23	0	23
214X1-TANNER CRAB																		
C. opilio	0	60	10	70	2	72	0	123	42	165	17	182	0	183	52	235	19	254
C. bairdi	3	79	10	92	3	95	1	148	41	190	13	203	4	227	51	282	16	298

Configuration 314X1

Licenses for each species/area combination issued to Current Owners which made landings between 1/1/93 - 12/31/93 (no minimum). This license will be specified for use on catcher vessels within length classes or catcher processors.

		Alaska						Other						Total					
		Catcher Vessel						Catcher Vessel						Catcher Vessel					
		0'-59'	60-124'	>125'	CV Total	CP Total	AK Total	0'-59'	60-124'	>125'	CV Total	CP Total	O.S. Total	0'-59'	60-124'	>125'	CV Total	CP Total	TOTAL
314X1-KING CRAB																			
Norton Sound																			
	Red	15	0	0	15	0	15	19	0	0	19	0	19	34	0	0	34	0	34
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Lawrence/St. Mathew																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	39	7	46	2	48	1	96	28	123	4	127	1	135	33	169	6	175
	Brown	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
Pribilof																			
	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	1	0	1
Adak																			
	Red	0	3	0	3	0	3	0	7	1	8	1	9	0	10	1	11	1	12
	Brown	0	4	0	4	0	4	0	8	10	18	0	18	0	12	10	22	0	22
Dutch Harbor																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	1	0	1	0	1	0	3	7	10	0	10	0	4	7	11	0	11
Bristol Bay																			
	Red	5	79	8	92	2	94	0	138	46	184	2	186	5	217	54	276	4	280
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
314X1-TANNER CRAB																			
Eastern Bering Sea																			
	C.opilio	0	40	6	46	2	48	0	77	36	113	14	127	0	117	42	159	16	175
	C.bairdi	0	75	6	81	2	83	0	125	36	161	9	170	0	200	42	242	11	253
Western Bering Sea																			
	C.opilio	0	54	10	64	2	66	0	117	42	159	17	176	0	171	52	223	19	242
	C.bairdi	0	50	10	60	2	62	0	113	33	146	10	156	0	163	43	206	12	218
Eastern Aleutians																			
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	0	2
Western Aleutians																			
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	3	0	0	3	0	3	1	3	0	4	0	4	4	2	0	6	0	6

Configuration 324X1

License for each species/area combination issued to Current Owners and CFEC Permit Holders which made landings between 1/1/93 - 12/31/93 (no minimum). The license will be specified for use on catcher vessels within length classes or catcher processors

		Alaska						Other						Total					
		Catcher Vessel						Catcher Vessel						Catcher Vessel					
		0'-59'	60'-124'	>125'	CV Total	CP Total	AK Total	0'-59'	59'-124'	>125'	CV Total	CP Total	O.S. Total	0'-59'	60'-124'	>125'	CV Total	CP Total	TOTAL
324X1-KING CRAB																			
Norton Sound																			
	Red	13	0	0	13	0	13	21	0	0	21	0	21	34	0	0	34	0	34
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Lawrence/St. Mathew																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	47	7	54	1	55	1	88	26	115	5	120	1	135	33	169	6	175
	Brown	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
Pribilof																			
	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	1	0	1
Adak																			
	Red	0	2	1	3	0	3	0	9	1	10	1	11	0	11	2	13	1	14
	Brown	0	6	7	13	0	13	0	12	11	23	0	23	0	18	18	36	0	36
Dutch Harbor																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	3	3	6	0	6	0	2	6	8	0	8	0	5	9	14	0	14
Bristol Bay																			
	Red	4	93	12	109	2	111	1	128	42	171	2	173	5	221	54	280	4	284
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
324X1-TANNER CRAB																			
Eastern Bering Sea																			
	C.opilio	0	52	7	59	3	62	0	83	37	120	16	136	0	135	44	179	19	198
	C.bairdi	0	110	10	120	2	122	0	156	45	201	16	217	0	266	55	321	18	339
Western Bering Sea																			
	C.opilio	0	77	13	90	4	94	0	132	49	181	24	205	0	209	62	271	28	299
	C.bairdi	0	77	13	90	4	94	0	126	41	167	16	183	0	203	54	257	20	277
Eastern Aleutians																			
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	0	2	0	2	0	2	0	0	0	0	0	0	0	2	0	2	0	2
Western Aleutians																			
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	4	0	0	4	0	4	0	3	0	3	0	3	4	3	0	7	0	7

3.2.3.3 License Designations Current

Configuration 311X1

Licenses for each species/area combination issued to Current Owners with no restrictions which made landings between 1/1/93 - 12/31/93.

311X1 - KING CRAB		ALASKA	OTHER	TOTAL
Norton Sound				
	Red	15	19	34
	Blue	0	0	0
St. Lawrence/St. Mathew				
	Red	0	0	0
	Blue	48	127	175
	Brown	0	1	1
Pribilof				
	Red	1	0	1
	Blue	0	0	0
	Brown	0	1	1
Adak				
	Red	3	9	12
	Brown	4	18	22
Dutch Harbor				
	Red	0	0	0
	Blue	0	0	0
	Brown	1	10	11
Bristol Bay				
	Red	94	186	280
	Blue	0	0	0
	Brown	0	0	0
311X1-TANNER CRAB				
Eastern Bering Sea				
	C.opilio	48	127	175
	C.bairdi	83	170	253
Western Bering Sea				
	C.opilio	66	176	242
	C.bairdi	62	156	218
Eastern Aleutians				
	C.opilio	0	0	0
	C.bairdi	1	1	2
Western Aleutians				
	C.opilio	0	0	0
	C.bairdi	3	4	7

Configuration 312X1

License for each species/area combination issued to Current Owners which made landings between 1/1/93 - 12/31/93. This licenses will be specified for use on *catcher vessels* or catch processors.

		ALASKA		OTHER		TOTAL		TOTAL
		CV	CP	CV	CP	CV	CP	All
312X1-KING CRAB								
Norton Sound								
	Red	15	0	19	0	34	0	34
	Blue	0	0	0	0	0	0	0
St. Lawrence/St. Mathews								
	Red	0	0	0	0	0	0	0
	Blue	46	2	123	4	169	6	175
	Brown	0	0	1	0	1	0	1
Pribilof								
	Red	1	0	0	0	1	0	1
	Blue	0	0	0	0	0	0	0
	Brown	0	0	1	0	1	0	1
Adak								
	Red	3	0	8	1	11	1	12
	Brown	4	0	18	0	22	0	22
Dutch Harbor								
	Red	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0
	Brown	1	0	10	0	11	0	11
Bristol Bay								
	Red	92	2	184	2	276	4	280
	Blue	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0
312X1-TANNER CRAB								
Eastern Bering Sea								
	C.opilio	46	2	113	14	159	16	175
	C.bairdi	81	2	161	9	242	11	253
Western Bering Sea								
	C.opilio	64	2	159	17	223	19	242
	C.bairdi	60	2	146	10	206	12	218
Eastern Aleutians								
	C.opilio	0	0	0	0	0	0	0
	C.bairdi	1	0	1	0	2	0	2
Western Aleutians								
	C.opilio	0	0	0	0	0	0	0
	C.bairdi	3	0	4	0	7	0	7

Configuration 313X1

Licenses for each species/area combination issued to Current Owners which made landings between 1/1/93 - 12/31/93 (no minimum).
This license will be specified for use within length classes.

		Alaska				Other				Total			
		Catcher Vessel				Catcher Vessel				Catcher Vessel			
		0'-59'	60-124'	>125'	AK Total	0'-59'	60-124'	>125'	O.S. Total	0'-59'	60-124'	>125'	TOTAL
313X1-KING CRAB													
Norton Sound													
	Red	15	0	0	15	19	0	0	19	34	0	0	34
	Blue	0	0	0	0	0	0	0	0	0	0	0	0
St. Lawrence/St. Mathew													
	Red	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	41	7	48	1	97	29	127	1	138	36	175
	Brown	0	0	0	0	0	1	0	1	0	1	0	1
Pribilof													
	Red	0	1	0	1	0	0	0	0	0	1	0	1
	Blue	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	1	0	0	1	1	0	0	1	1
Adak													
	Red	0	3	0	3	0	7	2	9	0	10	2	12
	Brown	0	4	0	4	0	8	10	18	0	12	10	22
Dutch Harbor													
	Red	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	1	0	0	0	3	7	10	0	4	7	11
Bristol Bay													
	Red	5	81	8	94	0	139	47	186	5	220	55	280
	Blue	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	94	0	0	0	0	0	0	0	0
313X1-TANNER CRAB													
Eastern Bering Sea													
	C.opilio	0	42	6	48	0	78	49	127	0	120	55	175
	C.bairdi	0	77	6	83	0	126	44	170	0	203	50	253
Western Bering Sea													
	C.opilio	0	56	10	66	0	119	57	176	0	175	67	242
	C.bairdi	0	52	10	62	0	114	42	156	0	166	52	218
Eastern Aleutians													
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	0	1	0	1	0	1	0	1	0	2	0	2
Western Aleutians													
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	3	0	0	3	1	3	0	4	4	3	0	7

Configuration 314X2

Licenses for each species/area combination issued to Current Owners which made landings between 1/1/93 - 12/31/93 (two landings minimum). This license will be specified for use on catcher vessels within length classes or catcher processors.

		Alaska						Other						Total					
		Catcher Vessel						Catcher Vessel						Catcher Vessel					
		0'-59'	60-124'	>125'	CV Total	CP Total	AK Total	0'-59'	60-124'	>125'	CV Total	CP Total	O.S. Total	0'-59'	60-124'	>125'	CV Total	CP Total	TOTAL
314X2-KING CRAB																			
Norton Sound																			
	Red	15	0	0	15	0	15	19	0	0	19	0	19	34	0	0	34	0	34
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Lawrence/St. Mathew																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	39	7	46	2	48	1	96	26	123	4	127	1	135	33	169	6	175
	Brown	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
Pribilof																			
	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	1	0	1
Adak																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	1	0	1	0	1	0	3	8	11	0	11	0	4	8	12	0	12
Dutch Harbor																			
	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	1	0	1	0	1	0	2	6	8	0	8	0	3	6	9	0	9
Bristol Bay																			
	Red	5	79	8	92	2	94	0	138	46	184	2	186	5	217	54	276	4	280
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
314X2-TANNER CRAB																			
Eastern Bering Sea																			
	C.opilio	0	40	6	46	2	48	0	43	21	64	10	74	0	83	27	110	12	122
	C.bairdi	0	41	6	47	2	49	0	103	27	130	9	139	0	144	33	177	11	188
Western Bering Sea																			
	C.opilio	0	24	3	27	1	28	0	106	42	148	17	165	0	130	45	175	18	193
	C.bairdi	0	50	5	55	2	57	0	91	22	113	10	123	0	141	27	168	12	180
Eastern Aleutians																			
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Western Aleutians																			
	C.opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C.bairdi	2	0	0	2	0	2	1	0	0	1	0	1	3	2	0	5	0	5

CRAB CONFIGURATIONS

*31421, the "core" configuration, can be found on page only. It is not duplicated even though it appears in several components

Configuration 11421

Single License Good for all species and areas issued to Current Owners
The license will be specified for use on catcher vessels within length classes or catcher processors
which made landing (no minimum) between 6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for DH red and 6/29/85 - 6/25/88 for Prib. blue)

	Alaska						Other States						Total					
	Catcher Vessels						Catcher Vessels						Catcher Vessels					
	0'-59'	60'-124'	125' +	CV Total	CP Total	AK Total	0'-59'	60'-124'	125' +	CV Total	CP Total	O.S. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	Total
11421 - Current Owners	42	145	21	208	4	212	37	219	59	315	24	339	79	364	80	523	28	551

3.2.3.1 Nature of Licenses
Crab

Configuration 21421

Single license for each species good for all areas issued to Current Owners (No Minimum)
6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for DH Red & 6/29/85 - 6/25/88 for Prib. Blue)

	Alaska						Other States						Total					
	Catcher Vessels						Catcher Vessels						Catcher Vessels					
	0'-59'	60'-124'	125' +	CV Total	CP Total	AK Total	0'-59'	60'-124'	125' +	CV Total	CP Total	O.S. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	Total
21421 - King Crab																		
Red	36	139	19	194	4	198	24	214	62	290	24	314	60	353	71	484	28	512
Blue	2	26	11	39	2	41	1	70	23	94	15	109	3	96	34	133	17	160
Brown	0	10	3	13	0	13	0	36	19	55	9	64	0	46	22	68	9	77
21421 - Tanner Crab																		
C. opilio	0	74	15	89	3	92	3	125	49	177	19	196	3	199	64	266	22	288
C. bairdi	9	96	16	121	3	124	9	147	49	205	19	224	18	243	65	326	22	348

Configuration 31421

License for each species/area combination issued to Current Owners which made landing between 6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for DH red and 6/29/85 - 6/25/88 for Prib. blue) No Minimum

	Alaska						Other States						Total					
	Catcher Vessels						Catcher Vessels						Catcher Vessels					
	0'-59'	60'-124'	125' +	CV Total	CP Total	AK Total	0'-59'	60'-124'	125' +	CV Total	CP Total	O.S. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	Total
31421 - King Crab																		
Norton Sound																		
Red				0		0	1			1		1	1	0	0	1	0	1
Blue																		
St. Lawrence/St. Mathew																		
Red																		
Blue	1	20	10	31	2	33		55	19	74	14	88	1	75	29	105	16	121
Brown																		
Pribilof																		
Red																		
Blue	1	6	0	7		7	1	33	9	43	6	49	2	39	9	50	6	56
Brown											1	1	0		0	0	1	1
Adak																		
Red		12	2	14	1	15		30	10	40	6	45	0	42	12	54	6	60
Brown		10	3	13		13		36	18	54	6	60	0	46	21	67	6	73
Dutch Harbor																		
Red	30	39	3	72	1	73	21	96	7	124	7	131	51	135	10	196	8	204
Blue																		
Brown		1	1	2		2		7	11	18	3	21	0	8	12	20	3	23
Bristol Bay																		
Red	6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
Blue																		
Brown																		
31421 - Tanner Crab																		
Eastern Bering Sea																		
C. opilio		73	15	88	3	91	2	123	49	174	19	193	2	196	64	262	22	284
C. bairdi	1	94	16	111	3	114	2	146	49	197	19	216	3	240	65	308	22	330
Western Bering Sea																		
C. opilio		50	11	61	3	64	1	98	41	140	18	158	1	148	52	201	21	222
C. bairdi		7	2	9		9		7	12	19	5	24	0	14	14	28	5	33
Eastern Aleutians																		
C. opilio								3		3		3	0	3	0	3	0	3
C. bairdi	8	2		10		10	2	5		7	1	8	10	7	0	17	1	18
Western Aleutians																		
C. opilio		1		1		1		1		1		1	0	2	0	2	0	2
C. bairdi		4		4		4	5	5	2	12	3	15	5	9	2	16	3	19

Configuration 32421

License for each species/area combination issued to CFEC Permit Holders Only which made landings between 6/28/89 - 6/27/92 (6/29/80-6/25/83 for DH red and 6/29/85-6/25/88 for Prib. blue)
No minimum. The license will be specified for use on catcher vessels within length classes or catcher processors.

	Alaska						Other States						Total					
	Catcher Vessels						Catcher Vessels						Catcher Vessels					
	0'-59'	60'-124'	125' +	CV Total	CP Total	AK Total	0'-59'	60'-124'	125' +	CV Total	CP Total	O.S. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	Total
32421 - King Crab																		
Norton Sound																		
Red	19			19		19	4			4		4	23	0	0	23	0	23
Blue																		
St. Lawrence/St. Mathew																		
Red																		
Blue	0	24	10	34	2	36	1	63	22	86	16	102	1	87	32	120	18	138
Brown																		
Pribilof																		
Red																		
Blue	0	12	3	15		15	2	34	11	47	6	53	2	46	14	62	6	68
Brown						0					1	1	0	0	0	0	1	1
Adak																		
Red	0	14	3	17	1	18	0	31	12	43	7	50	0	45	15	60	8	68
Brown	0	18	11	29	1	30	0	60	28	78	10	88	0	68	39	107	11	118
Dutch Harbor																		
Red	38	68	4	110	2	112	16	126	8	150	12	162	54	194	12	260	14	274
Blue																		
Brown	0	3	5	8	5	13	0	10	15	25	5	30	0	13	20	33	10	43
Bristol Bay																		
Red	7	153	21	181	5	186	2	182	60	244	28	272	9	335	81	425	33	458
Blue																		
Brown																		
32421 - Tanner Crab																		
Eastern Bering Sea																		
C. opilio	0	147	28	175	10	185	2	249	106	357	49	406	2	396	134	532	69	591
C. bairdi	1	177	30	208	7	215	2	293	104	399	48	447	3	470	134	607	55	662
Western Bering Sea																		
C. opilio	0	72	20	92	6	98	1	161	80	242	39	281	1	233	100	334	45	379
C. bairdi	0	5	2	7		7	0	9	13	22	6	28	0	14	15	29	6	35
Eastern Aleutians																		
C. opilio							0	3		3		3	0	3	0	3	0	3
C. bairdi	10	3		13		13	1	4		5	1	6	11	7	0	18	1	19
Western Aleutians																		
C. opilio		0		0		0	0	2		2		2	0	2	0	2	0	2
C. bairdi	1	4		5		5	5	5	2	12	3	15	6	9	2	17	3	20

Configuration 31121

Licenses for each species/area combination issued to Current Owners
with no restrictions which made landing between 6/28/89 - 6/27/92
(6/29/80 - 6/25/83 for DH red and 6/29/85 - 6/25/88 for Prib. blue)

	Alaska	Other States	Total
31121 - King Crab			
Norton Sound			
Red	0	1	1
Blue			
St. Lawrence/St. Mathew			
Red			
Blue	33	88	121
Brown			
Pribilof			
Red			
Blue	7	49	56
Brown		1	
Adak			
Red	15	45	60
Blue			
Brown	13	60	73
Dutch Harbor			
Red	73	131	204
Blue			
Brown	2	21	23
Bristol Bay			
Red	135	226	361
Blue			
Brown			
31121 - Tanner Crab			
Eastern Bering Sea			
C. opilio	91	193	284
C. bairdi	114	216	330
Western Bering Sea			
C. opilio	64	158	222
C. bairdi	9	24	33
Eastern Aleutians			
C. opilio	0	3	3
C. bairdi	10	8	18
Western Aleutians			
C. opilio	1	1	2
C. bairdi	4	15	19

Configuration 31221

License for each species/area combination issued to Current Owners which made landing between 6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for DH red & blue and 6/29/85 - 6/25/88 for Prib. blue)

	Alaska			Other States			Total		
	CV	CP	Total	CV	CP	Total	CV	CP	Total
31221 - King Crab									
Norton Sound									
Red				1		1	1		1
Blue									
St. Lawrence/St. Mathew									
Red									
Blue	31	2	33	74	14	88	105	16	121
Brown									
Pribilof									
Red									
Blue	7		7	43	6	49	50	6	56
Brown					1	1		1	1
Adak									
Red	14	1	15	40	5	45	54	6	60
Brown	13		13	54	6	60	67	6	73
Dutch Harbor									
Red	72	1	73	124	7	131	196		204
Blue									
Brown	2		2	18	3	21	20	3	23
Bristol Bay									
Red	132	3	135	206	20	226	338	23	361
Blue									
Brown									
31221 - Tanner Crab									
Eastern Bering Sea									
C. opilio	88	3	91	174	19	193	262	22	284
C. bairdi	111	3	114	197	19	216	308	22	330
Western Bering Sea									
C. opilio	61	3	64	140	18	158	201	21	222
C. bairdi	9		9	19	5	24	28	5	33
Eastern Aleutians									
C. opilio	0		0	3		3	3		3
C. bairdi	10		10	7	1	8	17	1	18
Western Aleutians									
C. opilio	1		1	1		1	2	0	2
C. bairdi	4		4	12	3	15	16	3	19

Configuration 31321

License for each species/area combination issued to Current Owners which made landings 6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for DH red and 6/29/85 - 6/25/88 for Prib. blue) (no minimum). The license will be specified for use within length classes.

	Alaska				Other States				Total			
	0'-59'	60'-124'	125' +	Total	0'-59'	60'-124'	125' +	Total	0'-59'	60'-124'	125' +	Total
31321 - King Crab												
Norton Sound												
Red					1			1	1			1
Blue												
St. Lawrence/St. Mathew												
Red												
Blue	1	22	10	33		56	32	88	1	78	42	121
Brown												
Pribilof												
Red												
Blue	1	6		7	1	33	16	49	2	39	15	66
Brown							1	1	0	0	1	1
Adak												
Red		13	2	15	0	30	15	45	0	43	17	60
Brown		10	3	13		37	23	60	0	47	26	73
Dutch Harbor												
Red	30	40	3	73	21	100	10	131	51	140	13	204
Blue												
Brown		1	1	2		7	14	21	0	8	15	23
Bristol Bay												
Red	6	113	16	135	3	169	64	226	9	272	80	361
Blue												
Brown												
31321 - Tanner Crab												
Eastern Bering Sea												
C. opilio	0	76	15	91	2	125	66	193	2	201	81	284
	1	97	16	114	2	148	66	216	3	245	82	330
Western Bering Sea												
C. opilio		53	11	64	1	100	57	158	1	153	68	222
C. bairdi		7	2	9		8	16	24	0	15	18	33
Eastern Aleutians												
C. opilio				0		3		3	0	3	0	3
C. bairdi	8	2		10	2	5	1	8	10	7	1	18
Western Aleutians												
C. opilio		1		1		1		1	0	2	0	2
C. bairdi		4		4	5	5	5	15	5	9	5	19

Configuration 31411

Licenses for each species/area combination issued to Current Owners which made landing between 1/1/78 - 12/31/93 (No Minimum)

The license will be specified for use on catcher vessles within length classes or catcher processors.

	Alaska						Other States						Total					
	Catcher Vessels						Catcher Vessels						Catcher Vessels					
	0'-59'	60'-124'	125' +	CV Total	CP Total	AK. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	O.S. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	Total
31411- King Crab																		
Norton Sound																		
Red		6	1	6		6	1	7	1	9	4	13	1	12	2	15	4	19
Blue																		
St. Lawrence/St. Mathew																		
Red																		
Blue	4	80	20	104	4	108	2	144	39	185	19	204	6	224	59	289	23	312
Brown		3	3	6		6		6	4	10	3	13	0	9	7	16	3	19
Pribilof																		
Red		26	2	28		28	2	69	13	84	9	93	2	95	15	112	9	121
Blue	4	53	8	65	2	67	6	126	30	162	16	177	10	179	38	227	17	244
Brown		13	3	16	1	17		37	10	47	7	54	0	50	13	63	8	71
Adak																		
Red	1	52	10	63	2	65	3	100	31	134	15	149	4	152	41	197	17	214
Brown	2	49	10	61	3	64	5	114	40	159	18	177	7	163	50	220	21	241
Dutch Harbor																		
Red	32	41	3	76	2	78	18	99	12	129	3	132	50	140	15	205	5	210
Blue																		
Brown		16	6	22	1	23	1	62	20	83	12	96	1	78	26	105	13	118
Bristol Bay																		
Red	17	183	29	229	6	235	10	235	70	316	31	346	27	418	99	544	37	581
Blue		1		1		1		1	2	3		3	0	2	2	4	0	4
Brown																		
31411 - Tanner Crab																		
Eastern Bering Sea																		
C. opilio	7	121	21	149	4	153	10	188	67	266	26	291	17	309	88	414	30	444
C. bairdi	12	161	25	188	5	193	10	220	64	294	28	322	22	371	89	482	33	515
Western Bering Sea																		
C. opilio		70	15	85	3	88	1	111	47	159	18	177	1	181	62	244	21	265
C. bairdi		7	2	9		9		7	12	19	5	24	0	14	14	28	5	33
Eastern Aleutians																		
C. opilio	2			2		2	1	3		4		4	3	3	0	6	0	6
C. bairdi	33	12		45		45	4	31	3	38	4	42	37	43	3	83	4	87
Western Aleutians																		
C. opilio		1		1		1		1		1		1	0	2	0	2	0	2
C. bairdi	1	26	1	28		28	7	60	13	70	9	79	8	76	14	98	9	107
Total Vessels/All Areas	93	183	29	305	6	311	47	249	68	364	32	396	140	432	97	669	38	707

Configuration 31422

Licenses for each species/area combination issued to Current Owner which made landing between 6/28/89 - 6/27/92
(Requires 1 landing for red & blue king, 3 landings for brown king crab, opilio Tanner crab and bairdi Tanner crab)
The license will be specified for use on catcher vessels within length classes or catcher processors.

	Alaska						Other States						Total					
	Catcher Vessels						Catcher Vessels						Catcher Vessels					
	0'-59'	60'-124'	125' +	CV Total	CP Total	AK Total	0'-59'	60'-124'	125' +	CV Total	CP Total	O.S. Total	0'-59'	60'-124'	125' +	CV Total	CP Total	Total
31422 - King Crab																		
Norton Sound																		
Red						0	1			1		1	1	0	0	1	0	1
Blue						0							0	0	0	0	0	0
St. Lawrence/St. Mathew																		
Red																		
Blue	1	20	10	31	2	33		55	19	74	14	88	1	75	29	105	16	121
Brown																		
Pribilof																		
Red																		
Blue	1	6	0	7		7	1	33	9	43	6	49	2	39	9	50	6	56
Brown																		
Adak																		
Red		12	2	14	1	16		30	10	40	6	45	0	42	12	54	6	60
Brown		5	3	8		8		18	14	32	4	36	0	23	17	40	4	44
Dutch Harbor																		
Red	30	39	3	72	1	73	21	96	7	124	7	131	61	135	10	196	8	204
Blue																		
Brown		1	1	2		2		7	11	18	3	21	0	8	12	20	3	23
Bristol Bay																		
Red	6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
Blue																		
Brown																		
31422 - Tanner Crab																		
Eastern Bering Sea																		
C. opilio		67	15	82	3	85	1	119	49	169	19	188	1	186	64	251	22	273
C. bairdi		78	14	92	3	96		131	49	180	19	199	0	209	63	272	22	294
Western Bering Sea																		
C. opilio		34	11	45	3	48		83	11	94	17	111	0	117	22	139	20	159
C. bairdi		1	1	2		2			3	3		3	0	1	4	5	0	5
Eastern Aleutians																		
C. opilio													0	0	0	0	0	0
C. bairdi	6	1		7		7	1			1		1	7	1	0	8	0	8
Western Aleutians																		
C. opilio													0	0	0	0	0	0
C. bairdi							4			4	2	6	4	0	0	4	2	6

APPENDIX VII

Additional Alternatives Receiving Significant Consideration

November 14, 1994

Additional Alternatives for Council Consideration

Discussions held during the September Council meeting in Seattle, regarding license limitation alternatives, generated two additional, specific alternatives to be analyzed and presented at the December meeting. These two specific configurations, which vary only by qualifying period, are analyzed in this appendix and are intended to elicit public comment which will aid the Council in developing the license limitation program's final structure. First we outline the major provisions as they relate to the initial allocation. Second, we describe the highlighted use, ownership and transfer provisions. Then we examine the distribution of licenses and endorsements under the specified configurations. Finally, we examine some of the issues regarding separability and transfer as they relate to the 'Nature of Licenses'.

The structure of the two specific alternatives identified by the Council is outlined below.

- <u>Nature of Licenses</u>
  Licenses for fisheries (see Table 1) by FMP sub-areas

In addition to the target species listed by FMP sub-area in Table 1, BSAI trawl sablefish (as well as any other species which does not fall into a specific category listed below) would be classified as a bycatch only fishery and arrowtooth could be targeted by anyone licensed to fish a particular FMP sub-area.

Table 1. List of target species by FMP sub-area

Bering Sea and Aleutian Islands		Eastern, Central, and Western Gulf	
Pollock	Other Flatfish	Pollock	Shallow Water Flatfish
Pacific Cod	Rock sole	Pacific Cod	Deep Water Flatfish
Rockfish	Squid (fixed gear)	Rockfish	Flathead Sole
Atka Mackerel	Turbots	Atka Mackerel	
Yellowfin Sole			

- <u>License Recipient</u>
  Current owners of vessels at the time of final Council action
  - Option A: Current owner must be a U.S. citizen pursuant to Title 46 (i.e., 50% U.S. ownership).
  - Option B: Current owner must be a U.S. citizen defined by Title 46, Sec. 802 (the Shipping Act of 1916), i.e., 75% U.S. ownership/control.

- <u>License Designation</u>
  Catcher vessels & Catcher/processors and vessel length.

- <u>Qualifying Period</u>
  Option A: June 28, 1989 - June 27, 1992.
  Option B: January 1, 1990 - December 31, 1993.

- <u>Landings Requirement For General License Qualification</u>
  One landing in qualifying period.

- <u>Landings Requirement for Endorsement Qualification</u>
  One landing in qualifying period.

List of Components and Alternative Elements Affecting Initial License Assignment

The main body of the EA/RIR presented an analysis structure and numbering scheme for the license limitation alternatives. The numbering scheme is shown on page E-1 of the Executive Summary and repeated on page 87 of the EA/RIR. That structure divided the license limitation allocation alternatives into six components with various elements within each component. To form a complete license allocation alternative the Council will need to choose one element from each of the six components. The specific alternatives identified by the Council at the September meeting are for the most part contained within the original numbering scheme. Only the species definitions are changed. In order to keep the original numbering scheme and the main document intact, we have chosen to identify these additional alternatives by adding a new element (Option 900000) in the Nature of Licenses component. The amended numbering scheme is shown below. The specific elements of the configuration identified by the Council are shown in shaded text. Specifically the two highlighted configurations are # 915211 and # 915411.

Nature of Licenses	Numbering Scheme
Single license for all species and areas	100000
Licenses for FMP areas (i.e., GOA and BSAI)	200000
Licenses for FMP sub-areas (i.e., EG, CG, WG, BS, AI)	300000
Licenses for Pollock, P.cod, Flatfish, Rockfish, and Other fisheries	400000
Licenses for Pollock, P.cod, Flatfish, Rockfish, and Other fisheries by FMP areas	500000
Licenses for Pollock, P.cod, Flatfish, Rockfish, and Other fisheries by FMP sub-areas	600000
Licenses for fisheries (see Box 1) by FMP sub-areas	700000
Licenses for fisheries (see Box 1) by the following areas: EG, CG, WG, BSAI	800000
Licenses for fisheries (see Box 2) by FMP sub-areas	**900000**

Box 1	Fisheries Specified Under Options 700,000 and 800,000
BSAI Fishery Licenses:	GOA Fishery Licenses:
Pollock, Pacific Cod, Atka Mackerel, Yellowfin Sole, Other Flatfish, Rockfish, Squid (Fixed Gear), Rock sole, Turbots	Pollock, Pacific Cod, Deep Water Flatfish, Shallow Water Flatfish, Atka Mackerel

Box 2	Fisheries Specified Under Options 900,000
BSAI Fishery Licenses:	GOA Fishery Licenses:
Pollock, Pacific Cod, Atka Mackerel, Yellowfin Sole, Other Flatfish, Rockfish, Squid (Fixed Gear), Rock sole, Turbots	Pollock, Pacific Cod, Deep Water Flatfish, Shallow Water Flatfish, Atka Mackerel, Flathead Sole, Rockfish

Additionally, BSAI trawl sablefish will be bycatch only for any BSAI licensed vessel and Arrowtooth in any sub-area is open to any vessel holding a sub-area license.

License Recipients	
Current owners	**10000**
Current owner, then owner at the time of landing, then permit holders (no duplicate)	20000
Current owners, then permit holders (no duplicates)	30000
Current owners, owners at the time of landing, and permit holders (duplicates allowed)	40000

License Designations	
No restrictions	1000
Catcher vessels & Catcher/processors	2000
Vessel length	3000
Inshore & Offshore	4000
Catcher vessels & Catcher/processors and vessel length	**5000**
Catcher vessels & Catcher/processors and Inshore & Offshore	6000
Inshore & Offshore and vessel length	7000
Catcher vessels & Catcher/processors, Inshore & Offshore, and vessel length	8000

Qualifying Periods	
Jan. 1, 1978 - Dec. 31, 1993	100
Jun. 28, 1989 - Jun. 27, 1992	**200**

Jun. 28, 1989 - date of final action 300
Jan. 1, 1990 - Dec. 31, 1993 .... **400**
The three years prior to the date of final action 500
Jun. 28, 1989 - Jun. 27, 1992 & the three years prior to the date of final action 600
Each of the three calendar years from 1/1/90 - 6/27/92 & the 365 days prior to final action, except for fixed gear P. cod use 6/23/91 - 6/27/92 rather than 1/1/90 - 6/27/92 700

Landings Requirements For General License Qualification
One Landing **10**
Two landings 20
5,000 pounds 30
10,000 pounds 40
20,000 pounds 50

Landings Requirements for Endorsement Qualification
One landing in qualifying period **1**
Two landings in qualifying period 2
Three landings in qualifying period 3
Four landings in qualifying period 4
One landing in year prior to council action 5
Two landings in year prior to council action 6
Three landings in year prior to council action 7
Four landings in year prior to council action 8

Use and Transferability Provisions of the Highlighted Configurations

The two configurations highlighted by the Council incorporate some specific elements from the original list of options for the ownership, use and transfer of licenses, as well as Community Development Quota allocations. The original list is found on pages 146-147 of the EA/RIR. This list of element and options is reproduced on the next two pages. Options specifically highlighted by the Council are shown in shaded text (**this is shaded**). Struck-out elements indicate that the highlighted configuration would not include these options (~~this is stricken text~~). Components without shaded or stricken elements indicate that the Council did not specify a particular option. None of these options alters the number or distribution of licenses issued initially. These provisions may, however, impact a fisher's behavior under the license limitation program by restricting the number of licenses that may be purchased (reducing the number of fishing opportunities available to an individual/firm), limiting changes in vessel size, or by reducing the TAC available to all license recipients.

Components and Alternative Elements Affecting the Ownership, Use and Transfer of Licenses

Who May Purchase Licenses
1. Licenses could be transferred only to "persons" defined under Title 46 U.S.C.
2. Licenses could be transferred to "persons" with 76% or more U.S. ownership, with "grandfather" rights for license recipients with 75% or less U.S. ownership (Title 46 U.S.C.).

Vessel/License Linkages
1. Vessel must be transferred with license.
2. **Licenses may be transferred without a vessel, i.e., licenses may be applied to vessels other than the one to which the license initially was issued.**

Options Regarding the Separability of Species and/or Area Designations
1. Species and/or Area designations are not separable, and shall remain as a single license with those initial designations.
2. Species and/or Area designations shall be treated as separable licenses and may be transferred as such.
3. **Species and/or Area designations shall be regarded as separable endorsements which require the owner to also own a general license before use or purchase.**

Vessel Replacement and Upgrades

1. No restrictions on vessel replacement or upgrades, except that the vessel must meet the "Use Restrictions" (License Designations) defined by the initial allocation.
2. ~~Vessel may not be replaced or upgraded.~~
3. Vessel may be replaced or upgraded within the bounds of the 20% Rule defined in the moratorium proposed rule.

License Ownership Caps

1. ~~No limit on the number of licenses or endorsements which may be owned by a "person."~~
2. No more than 5 area licenses per person with grandfather provisions.
3. No more than 10 area licenses per person with grandfather provisions.
4. No more than 15 area licenses per person with grandfather provisions.
5. No more than 5 fishery/area endorsements per person with grandfather provisions.
6. No more than 10 fishery/area endorsements per person with grandfather provisions.
7. No more than 15 fishery/area endorsements per person with grandfather provisions.

~~Vessel License Use Caps~~

1. ~~No limit on the number of licenses (or endorsements) which may be used on a vessel.~~
2. ~~No more than 1 area license (endorsement) may be used on a vessel in a given year.~~
3. ~~No more than 2 area licenses (endorsements) may be used on a vessel in a given year.~~
4. ~~No more than 3 area licenses (endorsements) may be used on a vessel in a given year.~~
5. ~~No more than 4 area licenses (endorsements) may be used on a vessel in a given year.~~
6. ~~No more than 5 area licenses (endorsements) may be used on a vessel in a given year.~~

Vessel Designation Limits

1. **A vessel which qualifies for multiple designations (i.e., both as a CV and as a CP or as both inshore and offshore) under the use restriction component will be able to participate under any designation for which it qualifies.**
2. A vessel which qualifies for multiple designations under the use restriction component must choose a single designation.

Buy-back/Retirement Program

1. No buy-back/retirement program.
2. Fractional license system. (Fractional licenses may be issued to vessel owners at the time of landing and/or permit holders.)
3. Industry Funded Buy-back Program with right of first refusal on all transfers of licenses.

Two-Tiered Skipper License Program

1. Do not implement a Two-Tiered Skipper License Program.
2. Implement a Two-Tiered Skipper License Program.

Community Development Quotas.

1. ~~No CDQ allocations~~
2. 3% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
3. 7.5% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
4. 10% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.
5. 15% of any or all groundfish TACs for CDQs patterned after current program w/o sunset provision.

~~Community Development Licenses.~~

1. ~~No Community Development Licenses.~~
2. ~~Grant an additional 3% non-transferable licenses to CDQs communities.~~
3. ~~Grant an additional 7.5% non-transferable licenses to CDQs communities.~~
4. ~~Grant an additional 10% non-transferable licenses to CDQs communities.~~
5. ~~Grant an additional 15% non-transferable licenses to CDQs communities.~~

Other Provisions (Choose any or none of the following)

1. Licenses represent a use privilege. The Council may convert the license program to an IFQ program or otherwise alter or rescind the program without compensation to license holders.
2. Severe penalties may be invoked for failure to comply with conditions of the license.
3. Licenses may be suspended or revoked for multiple violations.

4. Implement a Skipper Reporting System which requires groundfish license holders to report skipper names, address, and service records to NMFS.
5. Develop and implement mechanisms to collect management, enforcement costs and/or rents from the industry, including taxes and fees on the industry.

Distributions of Licenses and Endorsements

Configuration #915211: This alternative closely resembles alternatives #715211 and #615211 presented in the September 18, 1994 draft of the license limitation EA/RIR. The only change is the addition of a rockfish species group and flathead sole to the Gulf of Alaska (GOA) target species list of configuration #715211. The new options differ from #615211 in that they break out the flatfish category into deep water flatfish, shallow water flatfish, and flathead sole in the GOA, yellowfin sole, other flatfish, rock sole, and turbots in the BSAI, and issue a target license for Atka mackerel (and squid for fixed gear in the BSAI). Configuration #615211 would grant a single endorsement for all flatfish and "other species." Grouping similar species into general categories, (i.e., rockfish, flatfish, and other species) by FMP sub-area may affect enforcement and fleet mobility under the license limitation system.

Table 2 on page 6 shows that 2,954 vessels were issued a total of 10,131 endorsements by target species and FMP sub-area. This is the same number of vessels receiving endorsements under configuration #715211 (Sept. 18, 1994, EA/RIR, Groundfish Table Appendix, page 30). This is because all vessels that made legal landings of Council managed groundfish species are granted licenses under both configurations. However, the number of endorsements issued to these 2,954 vessels increased from 7,638 in configuration #715211 to 10,131 in configuration #915211. Each of the 2,493 additional endorsements were granted for targeting rockfish or flathead sole in the GOA.

Closer examination of the distribution of endorsements between rockfish and flathead sole indicates that 236 of the endorsements were issued to target flathead sole while the remaining 2,257 endorsements were for rockfish in the GOA. The small boat fleet would receive most of these endorsements. Catcher vessels less than 60' accounted for over 72% (1,634) of the rockfish endorsements that would be issued in the GOA.

Configuration #915411: This option only differs from configuration #915211 in the qualification period selected for the eligibility requirement. Under this configuration, fishers were required to have made a legal groundfish landing between Jan. 1, 1990 and Dec. 31, 1993 as opposed to the June 28, 1989 - June 27, 1992 in configuration #915211.

Configuration #915411 would grant a total of 11,837 species/FMP sub-area endorsements to 3,382 vessels (Table 3, page 7). Configuration #715411 indicated that 8,837 endorsements would be issued to these same vessels. The 3,000 additional endorsements are issued to GOA vessels that have historically landed rockfish and/or flathead sole. Fishers that landed rockfish would receive 2,679 of the additional endorsements while 321 endorsements would go to the flathead sole fishers. Catcher vessels less than 60' accounted for 73% of the total GOA rockfish and 18% of the flathead sole endorsements. Catcher processors, on the other hand, accounted for 10% of the rockfish and 31% of the flathead sole endorsements in the GOA.

Configuration #915X11: Table 4 (page 8) represents those vessels that made a groundfish landing in 1993. Comparing the total number of vessels licensed under configuration #915211 and #915411 to #915X11 indicates a 76% and 101% increase respectively. The alternatives studied in this appendix would also approximately double the number of species endorsements available to fishers. Small vessel class licenses and endorsements, those under 60', had the greatest increase in numbers. This is expected because smaller vessels have historically entered and exited fisheries more frequently than larger vessels. This is probably due to the capital expenditure required to bring a large vessel into a fishery versus a small vessel.

Table 2

Configuration 915211		Licenses Issued to Current Owners Based on the Vessels, June 28, 1989 - June 27, 1992, Catch History																										
		Current Owner's State of Residence																										
		Alaska									Other									Total								
		CV				CP				Alaska	CV				CP				Other	CV				CP				
Area	Species	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Total	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Total	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Licenses
AI	AMCK	0	2	1	3	1	0	9	10	13	1	20	6	27	3	6	39	48	75	1	22	7	30	4	6	48	58	88
	GTRB	8	9	1	18	1	3	9	13	31	16	24	3	43	6	14	42	62	105	24	33	4	61	7	17	51	75	136
	OFLT	0	2	0	2	0	0	9	9	11	3	15	6	23	6	9	35	50	73	3	17	5	25	6	9	44	59	84
	PCOD	19	13	2	34	2	4	10	16	50	23	46	13	82	6	16	56	78	160	42	59	15	116	8	20	66	94	210
	PLCK	0	0	1	1	0	0	10	10	11	3	33	13	49	7	7	46	60	109	3	33	14	50	7	7	56	70	120
	ROCK	9	14	2	25	2	4	9	15	40	16	47	7	70	7	15	53	75	145	25	61	9	95	9	19	62	90	185
	RSOL	0	1	0	1	0	0	8	8	9	3	5	4	12	4	4	37	45	57	3	6	4	13	4	4	45	53	66
	SQID	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2	0	2	0	0	0	0	2
	YSOL	0	0	0	0	0	0	3	3	3	0	0	0	0	2	0	10	12	12	0	0	0	0	2	0	13	15	15
AI Species Endorsements		36	41	7	84	6	11	67	84	168	65	192	51	308	41	71	318	430	738	101	233	58	392	47	82	385	514	906
AI Vessels		23	18	2	43	2	4	10	16	59	31	60	18	109	7	16	61	84	193	54	78	20	152	9	20	71	100	252
BS	AMCK	1	12	1	14	0	1	8	9	23	2	74	18	94	5	7	46	58	152	3	86	19	108	5	8	54	67	175
	GTRB	25	24	1	50	1	4	11	16	66	20	99	25	144	7	20	56	83	227	45	123	26	194	8	24	67	99	293
	OFLT	24	38	2	64	0	4	11	15	79	22	105	28	155	7	20	59	86	241	46	143	30	219	7	24	70	101	320
	PCOD	204	82	3	289	7	8	12	27	316	80	172	39	291	7	23	68	98	389	284	254	42	580	14	31	80	125	705
	PLCK	42	43	2	87	2	4	11	17	104	31	109	31	171	7	20	61	88	259	73	152	33	258	9	24	72	105	363
	ROCK	54	41	2	97	4	5	11	20	117	32	110	26	168	7	18	56	81	249	86	151	28	265	11	23	67	101	366
	RSOL	14	37	1	52	0	5	11	16	68	17	100	28	145	7	17	53	77	222	31	137	29	197	7	22	64	93	290
	SQID	0	1	0	1	0	0	1	1	2	0	4	2	6	0	2	2	4	10	0	5	2	7	0	2	3	6	12
	YSOL	8	27	1	36	0	1	10	11	47	15	90	25	130	7	12	53	72	202	23	117	26	166	7	13	63	83	249
BS Species Endorsements		372	305	13	690	14	32	86	132	822	219	863	222	1,304	54	139	454	647	1,951	591	1,168	235	1,994	68	171	540	779	2,773
BS Vessels		223	88	3	314	8	9	12	29	343	94	179	40	313	7	24	68	99	412	317	267	43	627	15	33	80	128	755
CG	AMCK	2	0	0	2	0	0	2	2	4	0	1	0	1	0	0	10	10	11	2	1	0	3	0	0	12	12	16
	DFLT	44	33	1	78	1	3	5	9	87	14	42	2	58	1	11	30	42	100	58	75	3	136	2	14	35	51	187
	FSOL	22	27	0	49	2	2	3	7	56	4	40	2	46	0	3	21	24	70	26	67	2	95	2	5	24	31	126
	PCOD	675	117	3	795	28	11	6	43	838	102	103	13	218	1	20	35	56	274	777	220	16	1,013	27	31	41	99	1,112
	PLCK	187	46	1	234	7	3	6	16	250	19	67	10	96	2	11	33	46	142	206	113	11	330	9	14	39	62	392
	ROCK	573	93	1	667	27	8	6	41	708	140	104	9	253	2	20	37	59	312	713	197	10	920	29	28	43	100	1,020
	SFLT	74	39	0	113	2	2	4	8	121	14	55	7	76	0	9	29	38	114	88	94	7	189	2	11	33	46	235
CG Species Endorsements		1,577	355	6	1,938	65	29	32	126	2,064	293	412	43	748	6	74	195	275	1,023	1,870	767	49	2,686	71	103	227	401	3,087
CG Vessels		861	128	3	992	33	13	6	52	1,044	175	142	15	332	3	23	41	67	399	1,036	270	18	1,324	36	38	47	119	1,443
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	1	0	4	0	1	4	5	9	4	1	0	5	0	4	11	15	20	7	2	0	9	0	5	15	20	29
	FSOL	1	1	0	2	0	0	4	4	6	1	0	1	2	0	1	4	5	7	2	1	1	4	0	1	8	9	13
	PCOD	741	10	1	752	16	0	4	20	772	94	9	1	104	3	4	10	17	121	835	19	2	856	19	4	14	37	893
	PLCK	12	2	0	14	0	0	4	4	18	5	0	0	5	0	3	9	12	17	17	2	0	19	0	3	13	16	35
	ROCK	662	21	0	683	26	5	4	35	718	159	35	1	195	4	12	11	27	222	821	56	1	878	30	17	16	62	940
	SFLT	10	2	0	12	0	0	3	3	15	2	3	0	5	0	2	7	9	14	12	5	0	17	0	2	10	12	29
EG Species Endorsements		1,429	37	1	1,467	42	6	23	71	1,538	265	48	3	316	7	26	52	85	401	1,694	85	4	1,783	49	32	76	158	1,939
EG Vessels		1,030	25	1	1,056	29	5	4	38	1,094	203	41	3	247	5	13	14	32	279	1,233	66	4	1,303	34	18	18	70	1,373
WG	AMCK	0	0	1	1	0	1	8	9	10	0	17	6	23	1	1	26	28	51	0	17	7	24	1	2	34	37	61
	DFLT	15	15	1	31	1	4	8	13	44	12	43	15	70	1	13	41	55	125	27	58	16	101	2	17	49	68	169
	FSOL	2	4	0	6	0	1	6	7	13	2	40	10	52	1	3	28	32	84	4	44	10	58	1	4	34	39	97
	PCOD	153	38	3	194	5	6	8	19	213	32	90	27	149	3	19	52	74	223	185	128	30	343	8	25	60	93	436
	PLCK	22	11	0	33	0	4	8	12	45	7	64	20	91	5	10	48	63	154	29	75	20	124	5	14	56	75	199
	ROCK	59	21	2	82	4	3	8	15	97	41	72	17	130	4	16	50	70	200	100	93	19	212	8	19	58	85	297
	SFLT	13	10	0	23	0	4	8	12	35	6	51	20	77	3	9	43	55	132	19	61	20	100	3	13	51	67	167
WG Species Endorsements		264	99	7	370	10	23	54	87	457	100	377	115	592	18	71	288	377	969	364	476	122	962	28	94	342	464	1,426
WG Vessels		183	44	3	230	8	6	8	22	252	61	105	28	194	5	20	58	83	277	244	149	31	424	13	26	66	105	629
Total Endorsements		3,678	837	34	4,549	137	101	262	500	5,049	942	1,892	434	3,268	126	381	1,307	1,814	5,082	4,620	2,729	468	7,817	263	482	1,569	2,314	10,131
BSAI Vessels		231	88	3	322	8	9	12	29	351	102	182	41	325	7	24	70	101	426	333	270	44	647	15	33	82	130	777
GOA Vessels		1,836	148	5	1,989	53	14	9	76	2,065	321	175	30	526	11	25	59	95	621	2,157	323	35	2,516	64	39	68	171	2,686
Total Vessels		1,940	159	6	2,105	53	15	12	80	2,185	401	216	45	662	12	25	70	107	769	2,341	375	51	2,767	65	40	82	187	2,954

Table 3

Configuration 915411		Licenses Issued to Current Vessel Owners Based on the Vessel's, January 1, 1990 - December 31, 1993, Catch History																									
		Current Owner's State of Residence																									
		Alaska									Other										Total								
		CV				CP				Alaska	CV				CP				Other	CV				CP				
Area	Species	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Total	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Total	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Licenses
AI	AMCK	1	3	2	6	1	0	9	10	16	3	15	8	26	3	9	48	60	86	4	18	10	32	4	9	57	70	102
	GTRB	8	8	1	17	1	2	9	12	29	18	30	14	62	6	16	45	67	129	26	38	15	79	7	18	54	79	158
	OFLT	0	2	1	3	0	1	10	11	14	4	18	12	34	6	9	40	55	89	4	20	13	37	6	10	50	66	103
	PCOD	20	11	2	33	2	4	10	16	49	28	56	23	107	7	17	64	88	195	48	67	25	140	9	21	74	104	244
	PLCK	0	1	2	3	0	0	10	10	13	3	40	20	63	7	7	51	65	128	3	41	22	66	7	7	61	75	141
	ROCK	5	12	2	19	2	3	10	15	34	21	51	15	87	7	17	57	81	168	26	63	17	106	9	20	67	96	202
	RSOL	0	2	0	2	0	0	9	9	11	2	4	8	14	5	6	41	52	66	2	6	8	16	5	6	50	61	77
	SQID	0	0	0	0	0	0	2	2	2	0	2	0	2	6	0	13	19	21	0	2	0	2	6	0	15	21	23
	YSOL	0	0	0	0	0	0	3	3	3	0	1	1	2	2	0	13	15	17	0	1	1	2	2	0	16	18	20
AI Species Endorsements		34	39	10	83	6	10	72	88	171	79	217	101	397	49	81	372	502	899	113	256	111	480	55	91	444	590	1,070
AI Vessels		23	16	2	41	2	4	10	16	57	36	69	29	134	7	18	66	91	225	59	85	31	175	9	22	76	107	282
BS	AMCK	4	13	1	18	0	1	8	9	27	0	64	20	84	5	7	46	58	142	4	77	21	102	5	8	54	67	169
	GTRB	40	25	2	67	1	3	11	15	82	34	103	30	167	7	20	57	84	251	74	128	32	234	8	23	68	99	333
	OFLT	36	35	2	73	0	5	11	16	89	32	109	30	171	7	21	61	89	260	68	144	32	244	7	26	72	105	349
	PCOD	236	83	3	322	7	9	12	28	350	90	188	46	324	7	24	67	98	422	326	271	49	646	14	33	79	126	772
	PLCK	62	42	2	106	2	5	11	18	124	37	118	32	187	7	21	61	89	276	99	160	34	293	9	28	72	107	400
	ROCK	79	44	2	125	4	5	11	20	145	42	116	28	186	7	21	58	86	272	121	160	30	311	11	26	69	106	417
	RSOL	20	34	1	55	0	5	11	16	71	20	103	27	150	7	18	56	81	231	40	137	28	205	7	23	67	97	302
	SQID	0	1	1	2	0	0	2	2	4	1	4	3	8	6	1	22	29	37	1	5	4	10	6	1	24	31	41
	YSOL	13	23	1	37	0	1	11	12	49	16	94	29	139	7	14	55	76	215	29	117	30	176	7	15	66	88	264
BS Species Endorsements		490	300	15	805	14	34	88	136	941	272	899	245	1,416	60	147	483	690	2,106	762	1,199	260	2,221	74	181	571	826	3,047
BS Vessels		266	89	3	358	8	9	12	29	387	110	194	47	351	7	24	67	98	449	376	283	50	709	15	33	79	127	836
CG	AMCK	3	2	0	5	0	0	2	2	7	0	2	0	2	0	0	12	12	14	3	4	0	7	0	0	14	14	21
	DFLT	54	37	1	92	2	6	9	17	109	22	53	5	80	1	13	36	50	130	76	90	6	172	3	19	45	67	239
	FSOL	27	29	0	56	2	2	8	12	68	9	56	6	71	0	7	25	32	103	36	85	6	127	2	9	33	44	171
	PCOD	764	130	4	898	28	12	10	50	948	128	127	17	272	1	22	40	63	335	892	257	21	1,170	29	34	50	113	1,283
	PLCK	222	48	1	271	8	5	8	21	292	31	88	14	133	2	15	35	52	185	253	136	15	404	10	20	43	73	477
	ROCK	656	110	1	767	30	8	10	48	815	173	117	14	304	3	20	41	64	368	829	227	15	1,071	33	28	51	112	1,183
	SFLT	86	43	0	129	2	3	8	13	142	24	66	9	99	0	11	30	41	140	110	109	9	228	2	14	38	54	282
CG Species Endorsements		1,812	399	7	2,218	72	36	55	163	2,381	387	509	65	961	7	88	219	314	1,275	2,199	908	72	3,179	79	124	274	477	3,656
CG Vessels		959	146	4	1,109	34	13	10	57	1,166	217	165	21	403	4	23	45	72	475	1,176	311	25	1,512	38	36	55	129	1,641
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	7	3	0	10	1	1	4	6	16	5	3	0	8	0	6	15	21	29	12	6	0	18	1	7	19	27	45
	FSOL	2	2	0	4	0	0	4	4	8	1	0	0	1	0	1	8	9	10	3	2	0	5	0	1	12	13	18
	PCOD	875	20	3	898	20	2	4	26	924	126	16	1	143	2	6	17	25	168	1,001	36	4	1,041	22	8	21	51	1,092
	PLCK	15	4	1	20	1	0	4	5	25	5	3	1	9	0	3	14	17	26	20	7	2	29	1	3	18	22	51
	ROCK	792	36	1	829	29	6	4	39	868	208	47	3	258	4	12	17	33	291	1,000	83	4	1,087	33	18	21	72	1,159
	SFLT	11	2	0	13	2	0	3	5	18	4	3	0	7	0	2	9	11	18	15	5	0	20	2	2	12	16	36
EG Species Endorsements		1,702	67	5	1,774	53	9	23	85	1,859	349	72	5	426	6	30	80	116	542	2,051	139	10	2,200	59	39	103	201	2,401
EG Vessels		1,182	43	3	1,228	30	6	4	40	1,268	261	56	5	322	5	14	21	40	362	1,443	99	8	1,550	35	20	25	80	1,630
WG	AMCK	6	2	1	9	0	1	7	8	17	1	23	8	32	1	3	24	28	60	7	25	9	41	1	4	31	36	77
	DFLT	28	16	1	45	1	3	11	15	60	17	51	18	86	1	14	41	56	142	45	67	19	131	2	17	52	71	202
	FSOL	13	5	1	19	0	1	6	7	26	7	50	12	69	1	8	28	37	106	20	55	13	88	1	9	34	44	132
	PCOD	162	43	3	208	7	5	10	22	230	40	97	31	168	3	20	52	75	243	202	140	34	376	10	25	62	97	473
	PLCK	37	16	1	54	0	4	9	13	67	12	70	22	104	5	13	50	68	172	49	86	23	158	5	17	59	81	239
	ROCK	68	26	2	96	4	4	11	19	115	51	81	19	151	4	18	49	71	222	119	107	21	247	8	22	60	90	337
	SFLT	27	13	1	41	0	3	9	12	53	12	59	22	93	3	10	44	57	150	39	72	23	134	3	13	53	69	203
WG Species Endorsements		341	121	10	472	12	21	63	96	568	140	431	132	703	18	86	288	392	1,095	481	552	142	1,175	30	107	351	488	1,663
WG Vessels		191	50	3	244	10	6	11	27	271	72	116	32	220	5	21	56	82	302	263	166	35	464	15	27	67	109	573
Total Endorsements		4,379	926	47	5,352	157	110	301	568	5,920	1,227	2,128	548	3,903	140	432	1,442	2,014	5,917	5,606	3,054	595	9,255	297	542	1,743	2,582	11,837
BSAI Vessels		271	90	3	364	8	9	12	29	393	117	196	47	360	7	24	68	99	459	388	286	60	724	15	33	80	128	862
GOA Vessels		2,105	165	7	2,277	53	14	11	78	2,355	424	192	38	654	13	25	58	96	750	2,629	357	45	2,931	66	39	69	174	3,105
Total Vessels		2,103	175	8	2,278	53	15	12	80	2,456	535	232	82	819	14	25	68	107	926	2,728	407	60	3,195	67	40	80	187	3,382

Table 4

Configuration 915X11

Licenses Issued to Current Vessel Owners Based on the Vessels, January 1, 1993 - December 31, 1993, Catch History

Current Owner's State of Residence

Area	Species	Alaska									Other									Total								
		CV				CP				Alaska Total	CV				CP				Other Total	CV				CP				Licenses
		< 60	60-125	>125	Total	< 60	60-125	>125	Total		< 60	60-126	>125	Total	< 60	60-125	>125	Total		< 60	60-125	>125	Total	< 60	60-125	>126	Total	
AI	AMCK	0	0	0	0	0	0	7	7	7	0	3	0	3	0	4	30	34	37	0	3	0	3	0	4	37	41	44
	GTRB	1	1	0	2	1	1	8	10	12	7	11	6	24	4	16	27	47	71	8	12	6	26	5	17	35	57	83
	OFLT	0	0	0	0	0	1	6	7	7	0	8	5	13	2	2	22	26	39	0	8	5	13	2	3	28	33	46
	PCOD	2	0	0	2	0	0	8	8	10	1	15	10	26	5	17	44	66	92	3	15	10	28	5	17	62	74	102
	PLCK	0	0	0	0	0	0	8	8	8	0	17	13	30	7	3	37	47	77	0	17	13	30	7	3	45	55	85
	ROCK	2	1	0	3	1	1	9	11	14	8	17	4	29	5	19	44	68	97	10	18	4	32	6	20	53	79	111
	RSOL	0	0	0	0	0	0	6	6	6	0	3	1	4	1	3	26	30	34	0	3	1	4	1	3	32	36	40
	SQID	0	0	0	0	0	0	2	2	2	0	0	0	0	6	0	13	19	19	0	0	0	0	6	0	15	21	21
	YSOL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	0	0	0	0	0	0	3	3	3
AI Species Endorsements		6	2	0	7	2	3	54	59	66	16	74	39	129	30	64	246	340	469	21	76	39	136	32	67	300	399	535
AI Vessels		3	1	0	4	1	1	9	11	15	8	32	13	53	7	20	51	78	131	11	33	13	57	8	21	60	89	146
BS	AMCK	2	3	0	5	0	0	5	5	10	0	24	6	30	3	3	17	23	53	2	27	6	35	3	3	22	28	63
	GTRB	13	6	0	19	2	3	10	15	34	12	37	12	61	6	26	45	77	138	25	43	12	80	8	29	65	92	172
	OFLT	7	12	0	19	0	4	12	16	35	5	65	20	90	7	20	56	83	173	12	77	20	109	7	24	68	99	208
	PCOD	24	19	0	43	2	5	13	20	63	6	82	23	111	7	29	63	99	210	30	101	23	154	9	34	76	119	273
	PLCK	15	14	0	29	0	3	12	15	44	5	70	20	95	7	23	60	90	185	20	84	20	124	7	26	72	105	229
	ROCK	19	11	0	30	2	3	12	17	47	11	57	13	81	7	28	60	85	166	30	68	13	111	9	31	62	102	213
	RSOL	4	10	0	14	0	2	9	11	25	1	57	13	71	7	16	51	74	145	5	67	13	85	7	18	60	85	170
	SQID	0	0	0	0	0	0	2	2	2	0	0	0	0	6	0	22	28	28	0	0	0	0	6	0	24	30	30
	YSOL	3	8	0	11	0	1	10	11	22	2	60	11	63	6	11	47	64	127	5	68	11	74	6	12	67	76	149
BS Species Endorsements		87	83	0	170	6	21	85	112	282	42	442	118	602	56	156	411	623	1,225	129	525	118	772	62	177	496	735	1,507
BS Vessels		38	23	0	61	3	6	13	22	83	15	88	23	126	7	33	63	103	229	53	111	23	187	10	39	76	125	312
CG	AMCK	1	2	0	3	0	0	0	0	3	0	0	0	0	0	1	3	4	4	1	2	0	3	0	1	3	4	7
	DFLT	16	26	0	42	3	4	6	13	55	3	24	0	27	0	10	18	28	55	19	50	0	69	3	14	24	41	110
	FSOL	11	24	0	35	1	2	5	8	43	2	34	3	39	0	6	13	19	58	13	58	3	74	1	8	18	27	101
	PCOD	302	65	0	367	13	5	8	26	393	37	55	6	98	0	17	21	38	136	339	120	6	465	13	22	29	64	529
	PLCK	81	29	0	110	2	2	5	9	119	8	47	7	62	0	6	12	18	80	89	76	7	172	2	8	17	27	199
	ROCK	256	67	0	323	14	5	8	27	350	65	57	2	124	0	25	24	49	173	321	124	2	447	14	30	32	76	523
	SFLT	27	29	0	56	1	2	5	8	64	10	33	3	46	0	5	12	17	63	37	62	3	102	1	7	17	25	127
CG Species Endorsements		694	242	0	936	34	20	37	91	1,027	125	250	21	396	0	70	103	173	569	819	492	21	1,332	34	90	140	264	1,596
CG Vessels		398	86	0	484	16	6	8	30	514	80	78	7	165	0	28	25	53	218	478	164	7	649	16	34	33	83	732
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	2	0	5	0	0	0	0	5	1	0	0	1	0	4	6	10	11	4	2	0	6	0	4	6	10	16
	FSOL	1	1	0	2	0	0	0	0	2	0	0	0	0	0	0	3	3	3	1	1	0	2	0	0	3	3	5
	PCOD	366	15	1	382	8	2	0	10	392	40	5	0	45	1	7	8	16	61	406	20	1	427	9	9	8	26	453
	PLCK	9	3	0	12	1	0	0	1	13	0	3	1	4	0	0	4	4	8	9	6	1	16	1	0	4	5	21
	ROCK	411	25	0	436	16	2	0	18	454	96	17	1	114	2	11	9	22	136	507	42	1	550	18	13	9	40	590
	SFLT	3	1	0	4	0	0	0	0	4	0	0	0	0	0	0	1	1	1	3	1	0	4	0	0	1	1	5
EG Species Endorsements		793	47	1	841	25	4	0	29	870	137	25	2	164	3	22	31	56	220	930	72	3	1,005	28	26	31	85	1,090
EG Vessels		594	34	1	629	17	2	0	19	648	109	22	2	133	2	12	10	24	157	703	56	3	762	19	14	10	43	805
WG	AMCK	6	2	0	8	0	0	1	1	9	1	7	2	10	0	4	3	7	17	7	9	2	18	0	4	4	8	26
	DFLT	10	4	0	14	0	2	4	6	20	3	5	0	8	0	5	11	16	24	13	9	0	22	0	7	16	22	44
	FSOL	12	3	0	15	0	0	1	1	16	5	14	2	21	0	7	7	14	35	17	17	2	36	0	7	8	16	51
	PCOD	56	16	0	72	2	3	10	15	87	15	25	6	46	0	14	16	30	76	71	41	6	118	2	17	26	45	163
	PLCK	21	7	0	28	0	3	4	7	35	9	18	6	33	0	10	11	21	54	30	25	6	61	0	13	15	28	89
	ROCK	14	6	0	20	0	3	11	14	34	16	13	1	30	0	9	19	28	58	30	19	1	50	0	12	30	42	92
	SFLT	20	5	0	25	0	0	6	6	31	9	19	4	32	0	6	11	17	49	29	24	4	57	0	6	17	23	80
WG Species Endorsements		139	43	0	182	2	11	37	50	232	58	101	21	180	0	55	78	133	313	197	144	21	362	2	66	115	183	545
WG Vessels		61	18	0	79	2	4	11	17	96	23	31	6	60	0	17	23	40	100	84	49	6	139	2	21	34	57	196
Total Endorsements		1,718	417	1	2,136	69	59	213	341	2,477	378	892	201	1,471	89	367	869	1,325	2,796	2,096	1,309	202	3,607	158	428	1,082	1,666	6,273
BSAI Vessels		40	23	1	64	3	6	13	22	86	20	108	24	160	7	33	63	103	253	60	129	25	214	10	39	76	128	339
GOA Vessels		1,030	108	1	1,139	30	8	12	50	1,189	187	103	13	303	2	32	44	78	381	1,217	211	14	1,442	32	40	56	128	1,570
Total Vessels		1,052	110	1	1,163	31	8	13	52	1,215	191	140	24	355	12	34	63	109	464	1,243	250	26	1,618	43	42	76	161	1,679

License and Endorsement Structure

Within the 900000 alternative there are two separate structures which have significant implications for flexibility, transferability, and capacity increase after the licenses are initially issued. The first structure consists of an FMP area license with endorsements for each FMP sub-area and species. This option is portrayed in Figure 1a (also in Figure 3.7E on page 102 of the EA/RIR). Figure 1b is an example allocation received by a fisher that is discussed in the example below. Also selected for consideration are licenses issued for FMP sub-areas with species endorsements. Figure 2a (Figure 3.7G on page 103 of the EA/RIR) provides graphical representation of this license structure. Figure 2b shows the same hypothetical allocation as in Figure 1b.

The salient differences between these figures and how they might affect the fishery can be pointed out using an example. We will look at some decisions facing a fisher and compare how his decisions could change depending on the license structure the Council selects.

FMP Licenses

Assume that Fisher A landed rockfish in the Central Gulf during 1990, Pacific cod in the Western Gulf in 1991, and Pacific cod in the Bering Sea during early 1992. Based on the two specific license limitation configurations specified in this appendix and an FMP umbrella license structure (Figure 1b), this fisher will receive endorsements to fish Central Gulf rockfish and Western Gulf Pacific cod under a GOA license and Bering Sea Pacific cod under a BSAI license.

After receiving his license and endorsements from NMFS, Fisher A decides to sell his GOA license, Central Gulf endorsement, Western Gulf endorsement, rockfish (Central Gulf) endorsement, and Pacific cod (Western Gulf) endorsement and focus his energies on fishing Pacific cod in the Bering Sea. Two people are interested in purchasing his license and endorsements. The first person has not previously been involved in the groundfish fishery and currently holds no licenses. To enter the Central Gulf rockfish and Western Gulf Pacific cod fishery he must purchase Fisher A's GOA license and at least his attendant endorsements. Fisher A can continue to fish Pacific cod in the Bering Sea at the same time the individual who purchased his GOA license and endorsements fishes Pacific cod in the Western Gulf or rockfish in the Central Gulf.

This brings up an important point. Under an FMP umbrella license system, the number of vessels fishing groundfish in the North Pacific could increase, over the number of vessels initially licensed, by the number of people initially receiving both BSAI and GOA licenses. Given the license distribution in configuration #915211 and an FMP umbrella license, we can determine the maximum number of vessels that could fish in the North Pacific groundfish fishery at any one time. Given that 509 fishers hold licenses for both the GOA and BSAI the maximum number of vessels that could fish would be 3,463 versus the 2,954 vessels that were initially issued licenses.

The second interested buyer already holds a GOA license and a Central Gulf endorsement (he qualified through his landings history for a Central Gulf Pacific cod endorsement). This person would only need to purchase fisher A's rockfish endorsement (without the Central Gulf endorsement) to be eligible to fish rockfish in the Central Gulf. He would then need to purchase both the Western Gulf endorsement and the Pacific cod (Western Gulf) endorsement to be eligible to fish Pacific cod in the Western Gulf. Because Fisher A feels there is value in holding the Central Gulf endorsement, he offers to sell just the rockfish endorsement to the second buyer for 75% of the price he is offering the Central Gulf and rockfish (Central Gulf) endorsements to the first buyer. Holding the Central Gulf endorsement would allow Fisher A to purchase species endorsements for any target species licensed in the Central Gulf should he decide to re-enter that fishery.

Figure 1a

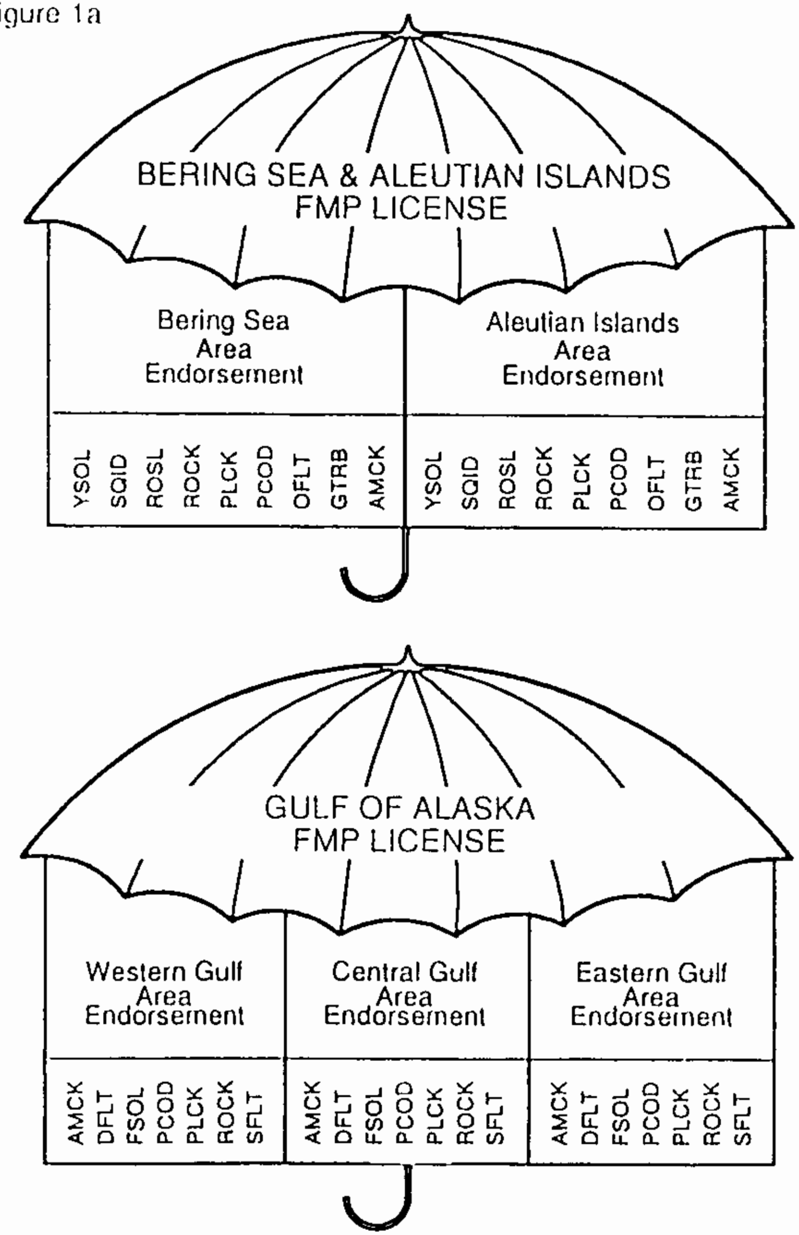


Figure 1b

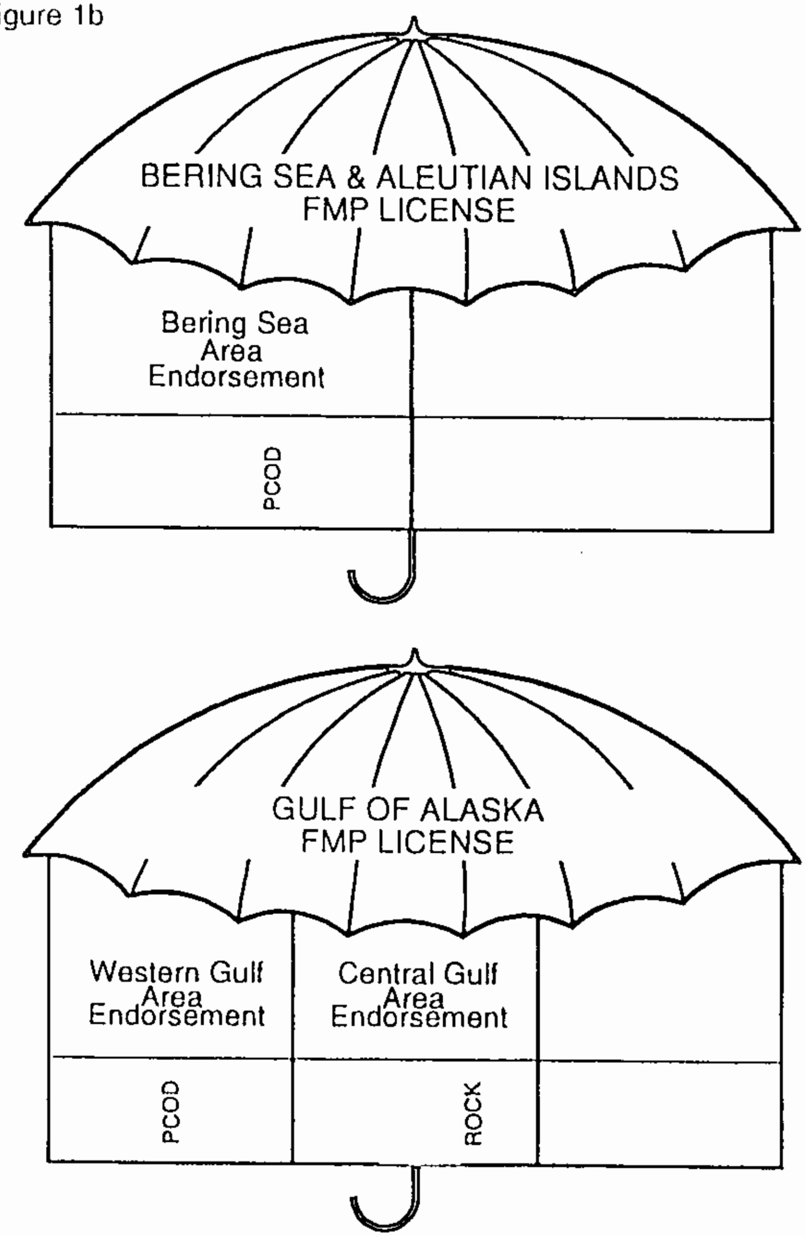


Figure 2a

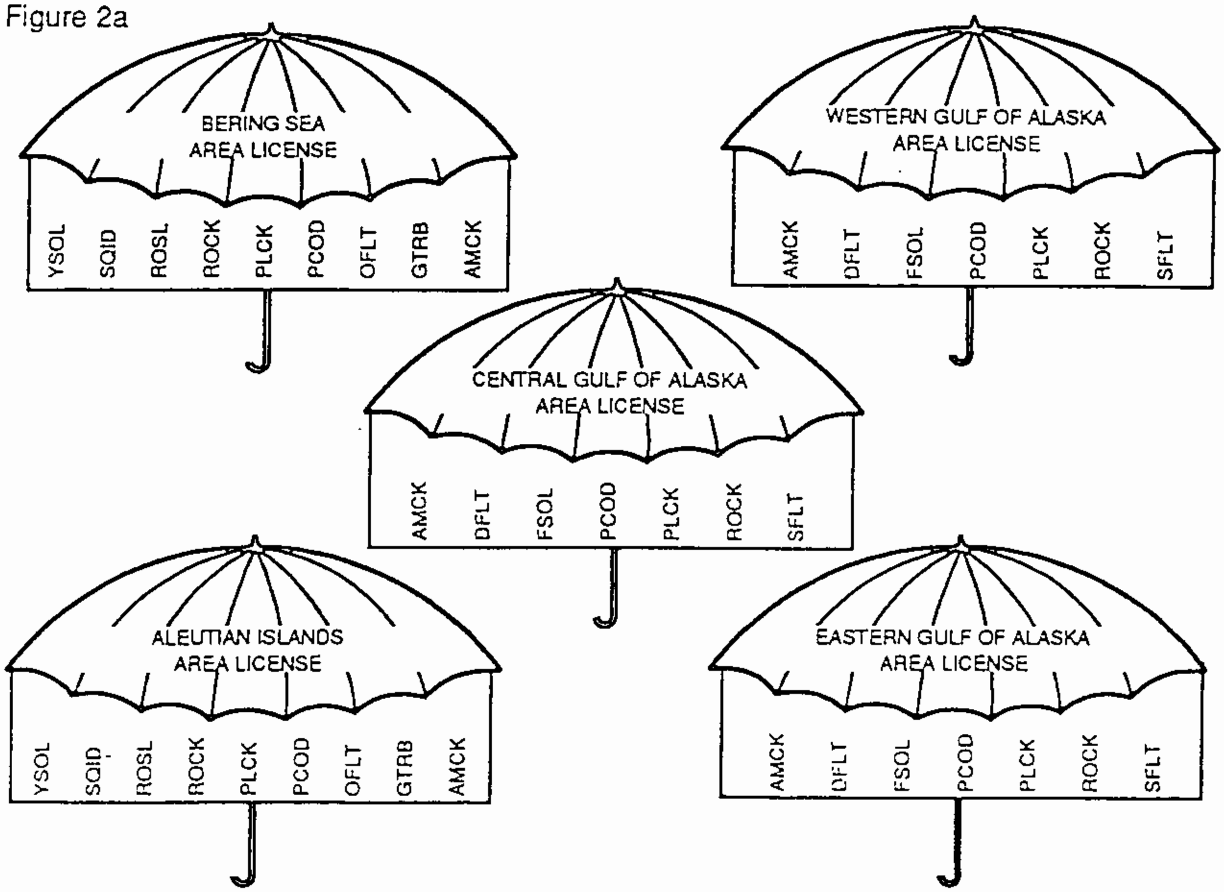
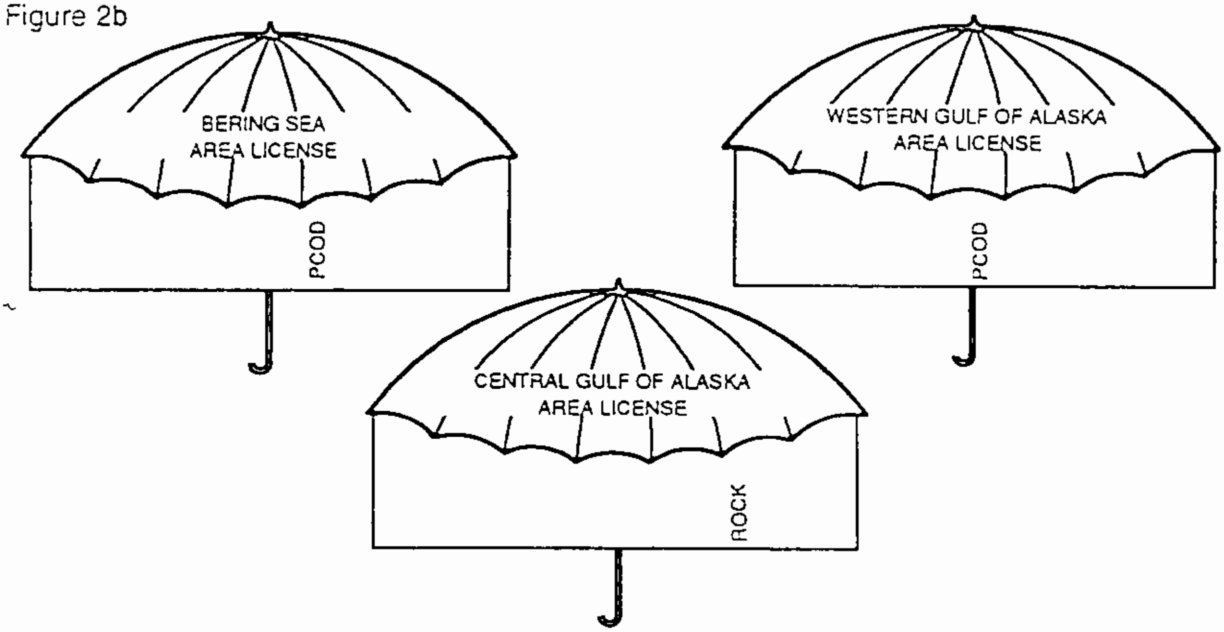


Figure 2b



FMP Sub-Area Licenses

Now consider the same situation under a system with FMP sub-area umbrella licenses as in Figure 2b. Fisher A would have received the licenses and endorsements shown in Figure 2b. Fisher A would now have the option of selling the Central Gulf license, Western Gulf license, rockfish (Central Gulf) endorsement, and Pacific cod (Western Gulf) endorsement to the first buyer. The first buyer purchases the Western Gulf sub-area license and the Pacific cod endorsement, as well as the Central Gulf sub-area license. (He hopes to purchase a CG Pacific cod endorsement elsewhere.) The second buyer purchases the Central Gulf rockfish endorsement. The net effect is that three vessels can now fish in the North Pacific when only one vessel was originally licensed.

Looking at the potential increase in vessels fishing groundfish in the North Pacific under configuration #915211 and an FMP sub-area umbrella license, compared to the number of vessels initially issued licenses, we see that the number could swell to 4,352 vessels from 2,954. This number is calculated by summing the number of FMP sub-area vessel licenses (i.e., BS Vessels, AI Vessels, etc.) that would be issued initially. The 4,352 vessels represents a theoretical maximum, and is not necessarily an expected eventuality.

Neither the FMP umbrella license structure nor the FMP sub-area umbrella license structure allows more vessels to fish in a licensed area than were initially issued. However, an additional vessel could be used to fish each license at the same time if a fisher were granted more than one umbrella license. Adding vessels to fish specific umbrella license areas, instead of having only one vessel licensed to fish all the areas (i.e. the North Pacific) would potentially add capital and effort to a fishery the Council has indicated is already over-capitalized.

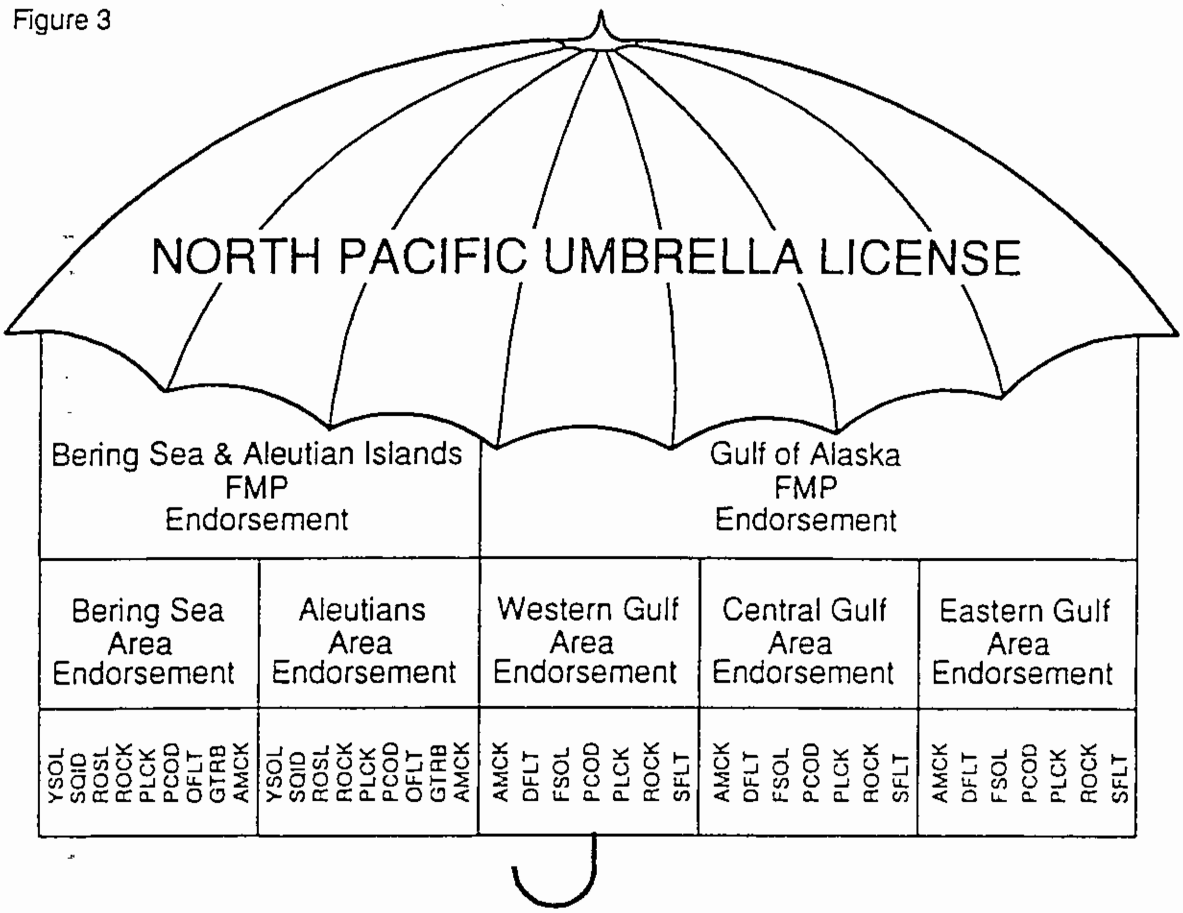
North Pacific Umbrella License

For comparison purposes a North Pacific umbrella license is discussed in this section. This umbrella license, Figure 3, was not explicitly selected as a license structure to be studied in this appendix. It is, however, the only option that caps the number of vessels that can fish for North Pacific groundfish at the number initially issued licenses, and is discussed here for comparison purposes.

If Fisher A were operating under this license structure, only the second buyer would be eligible to fish after purchasing Fisher A's GOA endorsements. The second buyer in our example, would have qualified for a North Pacific umbrella license through his Central Gulf Pacific cod landings. He would only need to purchase Fisher A's Central Gulf rockfish endorsement to fish rockfish in the Central Gulf. The other buyers didn't hold an umbrella license and while they could still purchase the endorsements from Fisher A they would still need to find someone willing to sell them a North Pacific license and leave the North Pacific groundfish fishery to be eligible to fish.

From the perspective of a fishery manager trying to limit the capacity of the fleet with an effective License Limitation Program, the separability structure shown in Figure 3 may be more desirable than either structure shown in the previous figures. Under this structure the number of vessels which may participate is strictly limited to the number of vessels receiving a license in the initial allocation. This structure is more onerous on new entrants wishing to enter the fisheries, and reduces flexibility somewhat for initial recipients.

Figure 3



Stacking Licenses and Endorsements

Stacking licenses or endorsements on a vessel would allow fishers on that vessel to target a wider variety of species, and depending on the completeness of the suite of species, may make enforcement of the program easier. Fishers may also be able to reduce their operating expenses by using fewer vessels. However, fishers may decide that stacking endorsements for several areas on a single vessel wouldn't be an optimal business decision. Under a limited access system that is driven by the race for fish, such as license limitation, the firm would more likely try to maximize its catch as opposed to minimizing cost. This would be especially true if the catch were expected to count toward allocation of individual harvest rights in the future.

Assume for example that a firm owns five vessels that qualify for Pacific cod licenses in both the Bering Sea and Aleutian Islands, and that FMP sub-area licenses were issued (as in Figure 2a). This firm would have three options for their general operational philosophy:

1. They could continue to operate as they did before the limited entry system was implemented. Each vessel would fish the same suite of species it did under open access.

2. The firm could stack its licenses on a single vessel and retire four of their vessels.

3. The firm could lease/purchase additional vessels and have five vessels fishing Pacific cod in the Aleutian Islands and five vessels fishing Pacific cod in the Bering Sea at the same time.

Given these conditions the firm may be very likely to maximize its catch by leasing/purchasing vessels and fishing more than one area at a time or by operating as they had in the past. It is unlikely they would reduce their catching capacity especially if they felt individual harvest rights based on catch history would be allocated in the future.

Summary and Conclusions

The addition of rockfish and flathead sole to the target species list in the GOA will not license any additional vessels. However, vessels that do receive licenses in the GOA and have reported rockfish (except DSR) or flathead sole landings, in the selected time period, will have the option to target these species. There will be approximately 3,000 more endorsements issued when rockfish and flathead sole are added to the GOA target species list.

Expanding the list of target species may increase the complexity of enforcement in the limited entry program. However, cohesiveness in species categories between the proposed license limitation alternatives and any future IFQ programs may be desired, and any increase in enforcement which is required may be outweighed by having more cohesive species groups.

Neither the FMP umbrella license system nor the FMP sub-area umbrella license system allows more vessels to fish in the licensed areas than were initially issued. However, because some fishers will be allocated more than one area license, additional vessels could be used up to the number of area licenses initially issued. Adding vessels to fish a specific area umbrella license may be an optimal solution for individuals, this would however add capital and effort to a fishery the Council has indicated is already over-capitalized. Limiting the total number of vessels licensed to fish in the North Pacific to those licenses which were initially issued could be accomplished by issuing North Pacific umbrella licenses as opposed to FMP or FMP sub-area umbrella licenses.

Part Two

Assessment of Class B Permits in the Groundfish and Crab Fisheries

Discussion Issues Regarding Class B Permits

The Midwater Trawlers Cooperative has proposed that the Council create Class A and B permits within the Groundfish and Crab License Limitation Programs ultimately chosen by the Council. Several issues regarding this proposal need clarification in order to ensure a consistent interpretation by reviewers. The issues fall within the following components of the license limitation systems.

1. Nature of Class B permits.
2. Recipients of Class B permits.
3. License designations for Class B permits.
4. Qualification period for Class B permits.
5. Landings requirements for Class B permits.
6. Transferability of Class B permits.

1. The Nature of Class B Permits

It appears that the concept of Class B permits was modelled after the license limitation system adopted by the Pacific Fishery Management Council, wherein a single license for all areas and species was created. The proposal makes no mention of species or area licenses, which are currently proposed by the North Pacific Fishery Management Council. There are at least two possible interpretations of the intent of the MTC with regard to the nature of Class B permits: 1) Class B permits would be defined at the same level of precision as the licenses (Class A permits) ultimately adopted by the Council, i.e., if the Council adopted sub-area licenses with species endorsements, then B permits would be issued in terms of sub-areas and species. 2) Class B permits would be a single license good for all areas and species. The latter interpretation would clearly grant greater fishing privileges to Class B permits than to Class A permits, and therefore will be disregarded. This leaves only the interpretation that Class B permits will be defined at the same level of precision as Class A permits.

2. Recipients of Class B Permits

The proposal states that Class B permits would be awarded to "recent participants in a fishery that do not qualify for an A permit." The License Limitation Program under consideration by the Council could grant licenses to any combination of the following groups: a) current vessel owners, b) owners at the time of landing, or c) permit holders. The Council has not yet made a final decision on this point. Again, because the MTC proposal does not define participants in the same manner at least two interpretations are possible: 1) Define the Class B permit recipient pool the same as the eventual recipients of Class A permits, or 2) Define the Class B permit recipient pool as any current vessel owner, landings owner or permit holder. Assuming for the moment that the Council chose to allocate licenses only to current vessel owners, then the latter interpretation (2) would allocate Class B permits to non-qualifying current vessels owners, and to all landings owners and permit holders with a record of participation. The former interpretation (1) would only allocate Class B permits to non-qualifying current owners. For purpose of analysis and discussion, we will use the former interpretation (1) and assume that the Class B permits will be issued only to the same class of recipients as would Class A permits.

Another, perhaps more important issue arises from the words "do not qualify" in the MTC proposal. Assuming that the Council is intent on issuing sub-area licenses with species endorsements, then a given individual may qualify for one endorsement, two endorsements, or up to thirty-nine endorsements. If a person qualifies for a single Class A endorsement, that person could be ineligible to receive any other Class B endorsements. Assuming that it is not the intent of the proposers to make the Class A permit recipient worse off than Class B permit recipients, we will assume that qualification for a specific Class A endorsement does not eliminate the person from receiving Class B endorsements for other species and area. The following example will clarify this point.

Assume a vessel owner has the participation history described in the table below. Further, assume for the moment that participation is required in 1990 or later to qualify for Class A endorsement; Class B endorsements would be issued for participants who "do not qualify" for Class A endorsements.. The first interpretation of "do not qualify" would mean that the receipt of any 'A' endorsement leaves the recipient ineligible for any 'B' endorsements. This is shown in the table in the row labeled 'Interpretation 1'. The vessel owner would receive an 'A' endorsement for the Bering Sea squid fishery and would not receive any 'B' permits. If on the other hand the words "do not qualify" are interpreted to be applied to specific species/area endorsements, then the receipt of an 'A' endorsement for one species area does not disqualify the fisher from receiving 'B' endorsements for other species/area combinations. This is shown in the row labeled 'Interpretation 2'. In this case the vessel owner would receive a mix of A and B licenses. The vessel owner would be clearly better off under the second assumption. Under the first interpretation, the recipient appears to fare better not to have fished at all in 1990, because the fisher would be allocated Class B permits for everything except Bering Sea squid.

Table 1 Example Showing results of Two Interpretations of "do not qualify"

AREA	Central Gulf		Western Gulf		Bering Sea	
SPECIES	Pacific Cod	Pollock	Pacific Cod	Pollock	Squid	Pollock
Year of Participation	1987-89	1987-89	1988-89	1988-89	1990	1988-89
Interpretation 1:					A	
Interpretation 2:	B	B	B	B	A	B

3. License Designations for Class B permits

The MTC proposal does not specifically mention license designations. Therefore for purposes of analysis we assume that Class B permits or endorsements would use the same license designations as issued for Class A permits or endorsements in terms of inshore/offshore of catcher vessel/catcher process. The proposal does discuss a length restriction in item 4a, which would allow the owner of a Class B permit to replace a vessel as long as it was no longer than the original qualifying vessel. Therefore the vessel length class designations of Class A permits, would be replaced with "Maximum LOA" designations for Class B permits. The "Maximum LOA" would be equal to the LOA in the most recent vessel documentation available.

4. Qualifying Period For Class B Permits

The proposal as drafted argues that some vessels and owners which qualified under the Council's moratorium may not receive licenses in the Groundfish and Crab License Limitation Program in the event one is adopted. At the time the proposal was written the qualifying period for the moratorium was 1/1/80-2/9/92. However the original moratorium was disapproved by the Secretary of Commerce, and the Council will be resubmitting a revised moratorium with a shorter qualifying period: 1/1/88-2/9/92. It is not clear whether the proposer's concern was for vessel owners which fished in the early years i.e., from 1980-1987, or whether their concern was for vessels which were "moratorium" qualified. The revised moratorium results in a much smaller number of vessel owners. Because of this uncertainty the analysis will examine Class B permits using both the original moratorium qualifying period and the revised moratorium qualifying period.

Additionally, the proposal notes that vessels which have entered the fisheries after the license limitation qualifying period would not receive Class A permits, and therefore would be eligible for Class B permits. The analysis will use data through 12/31/93 which is the most recent complete year available.

In addition to the two Class B permit qualifying periods, the Council currently has seven alternative groundfish license qualifying periods, and two crab qualifying periods before them. At its September 1994 meeting the Council expressed an interest to focus further study on two alternative groundfish qualifying periods: June 28, 1989 - June 27, 1992 (Option 200) and January 1, 1990 - December 31, 1993 (Option 400). Therefore the analysis of Class B permits in the groundfish fishery will use these two alternatives as reference periods. The analysis of Class B permits in the crab fishery will be limited to the shorter of the two alternative qualifying periods. (Qualifying period Option 10 under the Crab License Limitation Program spans a longer period than either of the Class B permit qualifying periods.)

In summary, the analysis of Class B permits will look at four different combinations with respect to groundfish qualifying periods and two with respect to crab qualifying periods as shown in Table 2.

Table 2 Combinations of Class B Permit qualifying periods with groundfish and crab qualifying periods.

Combination	Class B Permits	Class A Permits
Groundfish 1	January 1, 1980 - December 31, 1993	June 28, 1989 - June 27, 1992
Groundfish 2	January 1, 1980 - December 31, 1993	January 1, 1990 - December 31, 1993
Groundfish 3	January 1, 1988 - December 31, 1993	June 28, 1989 - June 27, 1992
Groundfish 4	January 1, 1988 - December 31, 1993	January 1, 1990 - December 31, 1993
Crab 1	January 1, 1980 - December 31, 1993	6/28/89 - 6/27/92 for all but Dutch Harbor Red King Crab (6/29/80-6/25/83) and Pribilof Blue King Crab (6/29/85-6/25/88)
Crab 2	January 1, 1988 - December 31, 1993	

5. Landings Requirements For Qualification

The proposal for Class B permits arose because some "participants" would not qualify for regular licenses or "Class A permits". In the Groundfish and Crab License Limitation Program under evaluation by the Council, non-qualification may result from the qualifying period or from a failure of the vessel to meet the minimum landings requirements. Alternatives under consideration for "Class A permits" vary from a minimum of one landing up to a requirement that 20,000 lbs. be landed. (The Council has indicated continued interest in using a single landing for qualification for Class A permits.) In order for the Class B permit to act as a safety net for non-qualifiers it makes logical sense to set the Class B permit landings requirement at the minimum level of participation. Specifically this means that a single landing will qualify a vessel for a Class B permit.

6. Transferability of Class B Permits

The proposers indicate that the primary difference between Class B permits and Class A permits will be transferability. Class B permits will not be transferable and will be terminated upon the death of the recipient.

or recipients in the case of multiple owners. Class A permits on the other hand would be fully transferable within license designations and separability limits.

The Groundfish and Crab License Limitation Programs have been proposed by the Council as preliminary steps toward eventual IFQ programs. Once the hard job of defining the players is accomplished with license limitation, the Council believes it can get on with the task of allocating shares of the harvest to individuals. Regardless of the relative ease or difficulty of this final process, the Council has stated its intent to implement IFQs in the near future. With this in mind, it seems to be at least a possibility that persons holding licenses, if such a system is implemented, would be the initial recipients of IFQs. This possibility appears to greatly reduce the likelihood that licenses will be transferred during the interim period. If this is the case, (i.e., that owners of Class A permits will have little incentive to transfer their licenses) then there is little difference between Class A permits and Class B permits.

In conjunction with non-transferability, the proposed Class B permits would terminate upon the death of the recipient. This as stated would bring about an eventual reduction in capacity. In the interim however, it appears that the capacity to fish under a Class B permit is no less than under a Class A permit. Non-transferability does nothing to lessen a given vessel's harvest capacity in a 'race for fish' allocation system under license limitation.

The Council could if it chose, create a more significant difference between Class A permits and Class B permits. One way to accomplish this would be to indicate that Class B permits, or landings under a Class B permit, would not lead to IFQ allocations. A second approach would be to make it more likely that Class A permits would be transferred. This could be done by indicating that the possession of Class A permits, or landings under a Class A permit, would have little bearing on an eventual IFQ allocation, or that the transition to an IFQ system was more than a few years away.

The License Limitation Numbering Scheme and Class B Permits

Groundfish. Class B permits can be applied to any of the 76,000+ groundfish configurations described in the main document as well as those described in the previous appendix and therefore represent a new, seventh component. Because there are two qualifying periods under the Class B Permit alternative we have constructed two separate elements one for each period, and added a third element which allows the Council to choose not to allocate Class B permits. Adding the additional component with its three elements has the effect of tripling the number of possible configurations from which the Council may choose. The following table reflects the new components and elements. For simplicity we have added the Class B Permit Component to the top of the numbering scheme, thereby eliminating the need to re-number the original components and elements. With the additional Nature of License element described in the previous appendix the total number of alternative configurations has increased to 241,920. This number does not include the set of components regarding use and transferability, which do not directly affect the initial allocation of licenses.

	Numbering Scheme
License Classes	
A single class of licenses	1000000
Two license classes with Class B Permits For Participants From 1/1/80 - 12/31/93	2000000
Two license classes with Class B Permits For Participants From 1/1/88 - 12/31/93	3000000
Nature of Licenses	
Single license for all species and areas	100000
Licenses for FMP areas (i.e., GOA and BSAI)	200000
Licenses for FMP sub-areas (i.e., EG, CG, WG, BS, AI)	300000
Licenses for Pollock, P.cod, Flatfish, Rockfish, and Other fisheries	400000
Licenses for Pollock, P.cod, Flatfish, Rockfish, and Other fisheries by FMP areas	500000

Licenses for Pollock, P.cod, Flatfish, Rockfish, and Other fisheries by FMP sub-areas 600000
Licenses for fisheries (see Box 1) by FMP sub-areas 700000
Licenses for fisheries (see Box 1) by the following areas: EG, CG, WG, BSAI 800000
Licenses for fisheries (see Box 2) by FMP sub-areas 900000

Box 1	Fisheries Specified Under Options 700,000 and 800,000
BSAI Fishery Licenses:	GOA Fishery Licenses:
Pollock, Pacific Cod, Atka Mackerel, Yellowfin Sole, Other Flatfish, Rockfish, Squid (Fixed Gear), Rocksole, Turbots	Pollock, Pacific Cod, Deep Water Flats, Shallow Water Flatfish, Atka Mackerel

Box 2	Fisheries Specified Under Options 900,000
BSAI Fishery Licenses:	GOA Fishery Licenses:
Pollock, Pacific Cod, Atka Mackerel, Yellowfin Sole, Other Flatfish, Rockfish, Squid (Fixed Gear), Rocksole, Turbots	Pollock, Pacific Cod, Deep Water Flats, Shallow Water Flatfish , Atka Mackerel, Flathead Sole, Rockfish

Additionally, BSAI trawl sablefish will be bycatch only for any BSAI licensed vessel and Arrowtooth in any sub-area is open to any vessel holding a sub-area license.

License Recipients

Current owners 10000
Current owner, then owner at the time of landing, then permit holders (no duplicate) 20000
Current owners, then permit holders (no duplicates) 30000
Current owners, owners at the time of landing, and permit holders (duplicates allowed) 40000

License Designations

No restrictions 1000
Catcher vessels & Catcher/processors 2000
Vessel length 3000
Inshore & Offshore 4000
Catcher vessels & Catcher/processors and vessel length 5000
Catcher vessels & Catcher/processors and Inshore & Offshore 6000
Inshore & Offshore and vessel length 7000
Catcher vessels & Catcher/processors, Inshore & Offshore, and vessel length 8000

Qualifying Periods

Jan. 1, 1978 - Dec. 31, 1993 100
Jun. 28, 1989 - Jun. 27, 1992 200
Jun. 28, 1989 - date of final action 300
Jan. 1, 1990 - Dec. 31, 1993 400
The three years prior to the date of final action 500
Jun. 28, 1989 - Jun. 27, 1992 & the three years prior to the date of final action 600
Each of the three calendar years from 1/1/90 - 6/27/92 & the 365 days prior to final action,
except for fixed gear P. cod use 6/23/91 - 6/27/92 rather than 1/1/90 - 6/27/92 700

Landings Requirements For General License Qualification

One Landing 10
Two landings 20
5,000 pounds 30
10,000 pounds 40
20,000 pounds 50

Landings Requirements for Endorsement Qualification

One landing in qualifying period 1
Two landings in qualifying period 2
Three landings in qualifying period 3
Four landings in qualifying period 4
One landing in year prior to council action 5
Two landings in year prior to council action 6
Three landings in year prior to council action 7
Four landings in year prior to council action 8

Using the numbering scheme above, a system with Class B Permits For Participants From 1/1/80-12/31/93 in conjunction with, for example, the Universal Configuration would be identified as 2115211. (This is combination 'Groundfish 1' in Table 2 above.) Class B Permits For Participants From 1/1/88 - 12/31/93 in conjunction with the Explicit Configuration would be identified as configuration # 3715711.

Crab. Class B permits can be applied to only 48 of the 96 original crab license configurations because the proposed Class B permit qualifying period is shorter than one of the original crab qualifying periods (Option 10, from 1/1/78-1/1/93). With the addition of Class B permits as an option, the total number of possible crab license configurations increases to 192. As with groundfish Class B permits can be incorporated by introducing a new component with three elements. The amended crab license numbering scheme is shown below.

Numbering Scheme

License Classes

A single class of licenses 100000
Two license classes with Class B Permits for participants from 1/1/80 - 12/31/93 200000
Two license classes with Class B Permits for participants from 1/1/88 - 12/31/93 300000

Nature of Licenses

Single license for all species and areas 10000
Licenses for species (e.g., *C. opilio*, *C. bairdi*, Red, Blue and Brown King Crab) 20000
Licenses for each species/area combination 30000

License Recipients

Current owners 1000
Current owners and permit holders 2000

License Designations

No restrictions 100
Catcher vessels & Catcher/processors 200
Vessel length 300
Catcher vessels & Catcher/processors and vessel length 400

Qualifying Period

Jan. 1, 1978 - Dec. 31, 1993 10
6/28/89 - 6/27/92 (6/29/80 - 6/25/83 for D.H. Red & 6/29/85 - 6/25/1988 for Prib. Blue) 20

Minimum landings

No minimum 1
1 landing for Red & Blue King, 3 landings for Brown King, *C. opilio*, & *C. bairdi* 2

Distribution of Groundfish Class B Permits

The distributions of Class B permits are based on the discussion of the definitional issues above, and the two alternative groundfish configurations in which the Council has indicated a specific interest (discussed in Appendix VII). These alternatives would allocate sub-area licenses with species endorsements to current vessel owners with catcher vessel/catcher processor designations and length classes for catcher vessels. Licenses would be allocated to the owners of those vessels which made one landing of a species in an area from June 28, 1989-June 27, 1992 or alternatively from January 1, 1990-December 31, 1993. Using the amended numbering scheme, the configurations examined in Appendix VII would be identified as 1915211 and 1915411, i.e. only Class A permits would be issued. The tables below show the configurations wherein Class B permits would be issued, i.e. 2915211, 2915411, 3915211, and 3915411.

Table 3 shows the number of A and B permits under configuration 2915211. The table is broken into three parts: A) shows the numbers of Class A permits which would be issued, (i.e. landings between 6/28/89 and 6/27/92) and is identical to Table 2 in the previous appendix. B) shows the number of Class B permits (i.e. landings between 1/1/80 and 12/31/93 excluding Class A permits). C) shows the Total number of permits by adding A and B permits together. Table 4 depicts configuration 2915411 in the same manner. Tables 5 and 6 show the allocations under 3915211 and 3915411 respectively.

Under 2915211, 7341 total Class B permits will be issued to over 4010 vessels. Obviously the potential for increased effort under this configuration is substantial, and the resulting License Limitation Program would not effectively limit actual effort in the fisheries. Under 2915411, 5682 total Class B permits will be issued to over 3356 vessels. Because the only difference between the two is a 5 month slippage for the Class A permit qualifying period, i.e. from 6/28/89 to 1/1/90, the allocations in Tables 3 and 4 are remarkably similar. For the same reason configurations 3915211 and 3915411 are remarkably similar. The latter configurations would however dramatically reduce the number of B permits when compared to options using the longer Class B permit qualifying period.

Distribution of Crab Class B Permits

Table 7 and 8 show the distribution of crab Class B permits under configurations 231421 and 331421. (Recall that configuration 31421 was the reference configuration used in the main document.) Not surprisingly, many more Class B permits would be distributed under 231421 than under 331421.

Conclusions

Class B permits will reduce the effectiveness of any License Limitation Program because virtually any vessel with a fishing history during the Class B permit qualifying period will receive fishing privileges. For the same reason, Class B permits could eliminate the need for a lengthy and costly appeals process. Given the Council's indication that the License Limitation Program is a stepping stone to an IFQ program, the transferability restrictions on Class B permits would not seem to differentiate the two types of licenses substantially.

Table 3A

Configuration 915211

Licenses Issued to Current Owners Based on the Vessels, June 28, 1989 - June 27, 1992, Catch History

Current Owner's State of Residence

		Alaska									Other									Total								
		CV				CP				Alaska	CV				CP				Other	CV				CP				
Area	Species	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Total	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Total	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Licenses
AI	AMCK	0	2	1	3	1	0	9	10	13	1	20	6	27	3	6	39	48	75	1	22	7	30	4	6	48	58	88
	GTRB	8	9	1	18	1	3	9	13	31	16	24	3	43	6	14	42	62	105	24	33	4	61	7	17	51	75	136
	OFLT	0	2	0	2	0	0	9	9	11	3	15	5	23	6	9	35	50	73	3	17	5	25	6	9	44	59	84
	PCOD	19	13	2	34	2	4	10	16	50	23	46	13	82	4	18	56	78	160	42	59	15	116	8	20	66	94	210
	PLCK	0	0	1	1	0	0	10	10	11	3	33	13	49	7	7	46	60	109	3	33	14	50	7	7	56	70	120
	ROCK	9	14	2	25	2	4	9	15	40	16	47	7	70	7	15	53	75	145	25	61	9	95	9	19	62	90	185
	RSOL	0	1	0	1	0	0	8	8	9	3	5	4	12	4	4	37	45	57	3	6	4	13	4	4	45	53	66
	SQID	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2	0	2	0	0	0	0	2
	YSOL	0	0	0	0	0	0	3	3	3	0	0	0	0	2	0	10	12	12	0	0	0	0	2	0	13	15	15
AI Species Endorsements		36	41	7	84	6	11	67	84	168	65	192	51	308	41	71	318	430	738	101	233	58	392	47	82	385	514	906
AI Vessels		23	18	2	43	2	4	10	16	59	31	60	18	109	7	16	61	84	193	54	78	20	152	9	20	71	100	252
BS	AMCK	1	12	1	14	0	1	8	9	23	2	74	18	94	5	7	46	58	152	3	86	19	108	5	8	54	67	175
	GTRB	25	24	1	50	1	4	11	16	66	20	99	25	144	7	20	56	83	227	45	123	26	194	8	24	67	99	293
	OFLT	24	38	2	64	0	4	11	15	79	22	105	28	155	7	20	59	86	241	46	143	30	219	7	24	70	101	320
	PCOD	204	82	3	289	7	8	12	27	316	80	172	39	291	7	23	68	98	389	284	254	42	580	14	31	80	125	705
	PLCK	42	43	2	87	2	4	11	17	104	31	109	31	171	7	20	61	88	259	73	152	33	258	9	24	72	105	363
	ROCK	54	41	2	97	4	5	11	20	117	32	110	26	168	7	18	56	81	249	86	151	28	265	11	23	67	101	366
	RSOL	14	37	1	52	0	5	11	16	68	17	100	28	145	7	17	53	77	222	31	137	29	197	7	22	64	93	290
	SQID	0	1	0	1	0	0	1	1	2	0	4	2	6	0	2	2	4	10	0	5	2	7	0	2	3	5	12
	YSOL	8	27	1	36	0	1	10	11	47	15	90	25	130	7	12	53	72	202	23	117	26	166	7	13	63	83	249
BS Species Endorsements		372	305	13	690	14	32	86	132	822	219	863	222	1,304	54	139	454	647	1,951	591	1,168	235	1,994	68	171	540	779	2,773
BS Vessels		223	88	3	314	8	9	12	29	343	94	179	40	313	7	24	68	99	412	317	267	43	627	15	33	80	128	755
CG	AMCK	2	0	0	2	0	0	2	2	4	0	1	0	1	0	0	10	10	11	2	1	0	3	0	0	12	12	15
	DFLT	44	33	1	78	1	3	5	9	87	14	42	2	58	1	11	30	42	100	58	75	3	136	2	14	35	51	187
	FSOL	22	27	0	49	2	2	3	7	56	4	40	2	46	0	3	21	24	70	26	67	2	95	2	5	24	31	126
	PCOD	675	117	3	795	26	11	6	43	838	102	103	13	218	1	20	35	56	274	777	220	16	1,013	27	31	41	99	1,112
	PLCK	187	46	1	234	7	3	6	16	250	19	67	10	96	2	11	33	46	142	206	113	11	330	9	14	39	62	392
	ROCK	573	93	1	667	27	8	6	41	708	140	104	9	253	2	20	37	59	312	713	197	10	920	29	28	43	100	1,020
	SFLT	74	39	0	113	2	2	4	8	121	14	55	7	76	0	9	29	38	114	88	94	7	189	2	11	33	46	235
CG Species Endorsements		1,577	355	6	1,938	65	29	32	126	2,064	293	412	43	748	6	74	195	275	1,023	1,870	767	49	2,686	71	103	227	401	3,087
CG Vessels		861	128	3	992	33	13	6	52	1,044	175	142	15	332	3	23	41	67	399	1,036	270	18	1,324	36	36	47	119	1,443
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	1	0	4	0	1	4	5	9	4	1	0	5	0	4	11	15	20	7	2	0	9	0	5	15	20	29
	FSOL	1	1	0	2	0	0	4	4	6	1	0	1	2	0	1	4	5	7	2	1	1	4	0	1	8	9	13
	PCOD	741	10	1	752	16	0	4	20	772	94	9	1	104	3	4	10	17	121	835	19	2	856	19	4	14	37	893
	PLCK	12	2	0	14	0	0	4	4	18	5	0	0	5	0	3	9	12	17	17	2	0	19	0	3	13	16	35
	ROCK	662	21	0	683	26	5	4	35	718	159	35	1	195	4	12	11	27	222	821	56	1	878	30	17	15	62	940
	SFLT	10	2	0	12	0	0	3	3	15	2	3	0	5	0	2	7	9	14	12	5	0	17	0	2	10	12	29
EG Species Endorsements		1,429	37	1	1,467	42	6	23	71	1,538	265	48	3	316	7	26	52	85	401	1,694	85	4	1,783	49	32	75	156	1,939
EG Vessels		1,030	25	1	1,056	29	5	4	38	1,094	203	41	3	247	6	13	14	32	279	1,233	66	4	1,303	34	18	18	70	1,373
WG	AMCK	0	0	1	1	0	1	8	9	10	0	17	6	23	1	1	26	28	51	0	17	7	24	1	2	34	37	61
	DFLT	15	15	1	31	1	4	8	13	44	12	43	15	70	1	13	41	55	125	27	58	16	101	2	17	49	68	169
	FSOL	2	4	0	6	0	1	6	7	13	2	40	10	52	1	3	28	32	84	4	44	10	58	1	4	34	39	97
	PCOD	153	38	3	194	5	8	6	19	213	32	90	27	149	3	19	52	74	223	185	128	30	343	8	25	60	93	436
	PLCK	22	11	0	33	0	4	8	12	45	7	64	20	91	5	10	48	63	154	29	75	20	124	6	14	56	76	199
	ROCK	59	21	2	82	4	3	8	15	97	41	72	17	130	4	16	50	70	200	100	93	19	212	8	19	58	85	297
	SFLT	13	10	0	23	0	4	8	12	35	6	51	20	77	3	9	43	55	132	19	61	20	100	3	13	51	67	167
WG Species Endorsements		264	99	7	370	10	23	54	87	457	100	377	115	592	18	71	288	377	969	384	476	122	962	28	94	342	464	1,426
WG Vessels		183	44	3	230	8	6	8	22	252	61	105	28	194	5	20	58	83	277	244	149	31	424	13	26	66	105	529
Total Endorsements		3,678	837	34	4,549	137	101	262	500	5,049	942	1,892	434	3,268	126	381	1,307	1,814	5,082	4,620	2,729	468	7,817	283	462	1,569	2,314	10,131
BSAI Vessels		231	88	3	322	8	9	12	29	351	102	187	41	328	7	24	70	101	428	333	270	44	647	15	33	82	130	777
GOA Vessels		1,833	148	8	1,989	53	14	9	76	2,065	321	178	30	529	11	26	61	98	627	2,157	323	38	2,518	64	39	68	171	2,689
Total Vessels		1,940	159	4	2,103	53	15	12	80	2,183	401	216	46	663	12	25	70	107	769	2,341	378	61	2,777	65	40	82	187	2,964

Table 3B

Configuration 2815211		B Licenses Issued to Current Owners Based on the Vessels, January 1, 1980 - December 31, 1993, Catch History and did not Receive a License Under Configuration 915211																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Licenses
AI	AMCK	2	11	1	14	0	14	10	34	11	55	18	73	12	45	12	69	18	87
	GTRB	22	13	2	37	2	39	17	41	16	74	15	89	39	54	18	111	17	128
	DFLT	2	10	1	13	2	15	6	26	12	44	12	56	8	36	13	57	14	71
	PCOD	15	14	0	29	1	30	16	44	15	75	16	91	31	58	15	104	17	121
	PLCK	2	14	1	17	1	18	8	32	15	55	10	65	10	46	16	72	11	83
	ROCK	24	16	1	41	3	44	26	43	19	88	13	101	50	59	20	129	16	145
	RSOL	1	12	1	14	1	15	7	43	13	63	12	75	8	55	14	77	13	90
	SQID	0	0	0	0	2	2	0	0	0	0	19	19	0	0	0	0	21	21
	YSOL	0	2	0	2	0	2	1	7	3	11	6	17	1	9	3	13	6	19
AI Species Endorsements		68	92	7	167	12	179	91	270	104	465	121	586	159	362	111	632	133	765
AI Vessels		34	25	3	62	8	70	30	89	27	146	58	204	64	114	30	208	66	274
BS	AMCK	4	11	0	15	1	16	11	20	8	39	7	46	15	31	8	54	8	62
	GTRB	29	27	2	58	0	58	29	40	11	80	9	89	58	67	13	138	9	147
	DFLT	21	11	0	32	1	33	23	26	8	57	5	62	44	37	8	89	6	95
	PCOD	69	14	0	83	2	85	28	39	15	82	4	86	97	53	15	165	6	171
	PLCK	28	7	0	35	1	36	21	34	9	64	2	66	49	41	9	99	3	102
	ROCK	50	21	1	72	0	72	28	31	10	69	11	80	78	52	11	141	11	152
	RSOL	10	8	0	18	0	18	13	26	8	47	5	52	23	34	8	65	5	70
	SQID	0	0	1	1	1	2	1	0	1	2	26	28	1	0	2	3	27	30
	YSOL	8	9	0	17	1	18	13	28	9	50	5	55	21	37	9	67	6	73
BS Species Endorsements		219	108	4	331	7	338	167	244	79	490	74	564	386	352	83	821	81	902
BS Vessels		123	45	2	170	6	176	57	86	26	169	52	221	180	131	28	339	57	396
CG	AMCK	3	10	0	13	0	13	0	7	2	9	5	14	3	17	2	22	5	27
	DFLT	19	14	0	33	8	41	13	44	9	66	15	81	32	58	9	99	23	122
	FSOL	25	10	0	35	6	41	14	54	8	76	12	88	39	64	8	111	18	129
	PCOD	491	47	2	540	14	554	87	72	12	171	15	186	578	119	14	711	29	740
	PLCK	118	25	0	143	9	152	24	60	11	95	13	108	142	85	11	238	22	260
	ROCK	267	39	1	307	10	317	67	53	10	130	12	142	334	92	11	437	22	459
	SFLT	55	18	0	73	8	81	25	53	8	86	9	95	80	71	8	159	17	176
CG Species Endorsements		978	163	3	1,144	55	1,199	230	343	60	633	81	714	1,208	506	63	1,777	136	1,913
CG Vessels		795	109	3	807	32	839	147	130	23	300	40	340	942	239	26	1,207	72	1,279
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	13	3	0	16	2	18	5	4	0	9	13	22	18	7	0	26	15	40
	FSOL	4	1	0	5	1	6	2	0	0	2	6	8	6	1	0	7	7	14
	PCOD	801	30	2	833	16	849	155	22	1	178	19	197	956	52	3	1,011	35	1,046
	PLCK	40	5	1	46	3	49	3	4	2	9	8	17	43	9	3	55	11	66
	ROCK	1,252	50	1	1,303	20	1,323	263	36	4	303	18	321	1,515	86	5	1,606	38	1,644
	SFLT	62	4	0	66	5	71	17	6	1	24	12	36	79	10	1	90	17	107
EG Species Endorsements		2,172	93	4	2,269	47	2,316	445	72	8	525	77	602	2,617	165	12	2,794	124	2,918
EG Vessels		1,906	77	2	1,985	35	2,020	303	67	5	445	32	477	2,289	134	7	2,430	67	2,497
WG	AMCK	7	6	0	13	0	13	2	32	4	38	7	45	9	38	4	51	7	58
	DFLT	35	16	0	51	5	56	15	46	6	67	8	75	50	62	6	118	13	131
	FSOL	13	12	1	26	1	27	9	31	6	46	8	54	22	43	7	72	9	81
	PCOD	101	28	0	129	7	136	28	48	7	83	13	96	129	76	7	212	20	232
	PLCK	20	12	1	33	1	34	12	27	4	43	6	49	32	39	5	76	7	83
	ROCK	53	23	1	77	7	84	25	47	6	78	12	90	78	70	7	155	19	174
	SFLT	21	12	1	34	2	36	10	29	4	43	5	48	31	41	5	77	7	84
WG Species Endorsements		250	109	4	363	23	386	101	260	37	398	59	457	351	369	41	761	82	843
WG Vessels		174	53	2	229	13	242	54	111	19	184	30	214	228	164	21	413	43	456
Total Endorsements		3,687	565	22	4,274	144	4,418	1,034	1,189	288	2,511	412	2,923	4,721	1,754	310	6,785	556	7,341
BSAI Vessels		139	68	3	188	11	209	66	144	39	249	73	322	205	200	42	447	84	531
GOA Vessels		2,613	178	6	2,877	61	2,938	497	197	32	726	70	796	3,190	375	38	3,603	131	3,734
Total Vessels		2,823	191	6	3,020	65	3,085	535	239	49	823	102	926	3,358	430	55	3,843	167	4,010

Table 3C

Configuration 2915211		Total A and B Licenses Issued to Current Owners Based on the Vessels, January 1, 1980 - December 31, 1993, Catch History and License Configuration 915211																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Licenses
AI	AMCK	2	13	2	17	10	27	11	54	17	82	66	148	13	67	19	99	76	175
	GTRB	30	22	3	55	15	70	33	65	19	117	77	194	63	87	22	172	92	264
	OFLT	2	12	1	15	11	26	9	41	17	67	62	129	11	53	18	82	73	155
	PCOD	34	27	2	63	17	80	39	90	28	157	94	251	73	117	30	220	111	331
	PLCK	2	14	2	18	11	29	11	65	28	104	70	174	13	79	30	122	81	203
	ROCK	33	30	3	66	18	84	42	90	26	158	88	246	75	120	29	224	106	330
	RSOL	1	13	1	15	9	24	10	48	17	76	57	132	11	61	18	90	66	156
	SQID	0	0	0	0	2	2	0	2	0	2	19	21	0	2	0	2	21	23
	YSOL	0	2	0	2	3	5	1	7	3	11	18	29	1	9	3	13	21	34
AI Species Endorsements		104	133	14	251	96	347	156	462	155	773	551	1,324	260	595	169	1,024	647	1,671
AI Vessels		67	43	6	105	24	129	61	149	45	255	142	397	118	192	50	360	166	526
BS	AMCK	5	23	1	29	10	39	13	94	26	133	65	198	18	117	27	162	75	237
	GTRB	54	51	3	108	16	124	49	139	36	224	92	316	103	190	39	332	108	440
	OFLT	45	49	2	96	16	112	45	131	36	212	91	303	90	180	38	308	107	415
	PCOD	273	96	3	372	29	401	108	211	54	373	102	475	381	307	57	745	131	876
	PLCK	70	50	2	122	18	140	52	143	40	235	90	325	122	193	42	357	108	465
	ROCK	104	62	3	169	20	189	60	141	36	237	92	329	164	203	39	406	112	518
	RSOL	24	45	1	70	16	86	30	126	36	192	82	274	54	171	37	262	98	360
	SQID	0	1	1	2	2	4	1	4	3	8	30	38	1	5	4	10	32	42
	YSOL	16	36	1	53	12	65	28	118	34	180	77	257	44	154	35	233	89	322
BS Species Endorsements		591	413	17	1,021	139	1,160	386	1,107	301	1,794	721	2,515	977	1,520	318	2,815	860	3,675
BS Vessels		346	133	5	484	34	518	151	265	66	482	151	633	497	398	71	966	185	1,151
CG	AMCK	5	10	0	15	2	17	0	8	2	10	15	25	5	18	2	25	17	42
	DFLT	63	47	1	111	17	128	27	86	11	124	57	181	90	133	12	235	74	309
	FSOL	47	37	0	84	13	97	18	94	10	122	36	158	65	131	10	206	49	255
	PCOD	1,166	164	5	1,335	57	1,392	189	175	25	389	71	460	1,355	339	30	1,724	128	1,852
	PLCK	305	71	1	377	25	402	43	127	21	191	59	250	348	198	22	568	84	652
	ROCK	840	132	2	974	51	1,025	207	157	19	383	71	454	1,047	289	21	1,357	122	1,479
	SFLT	129	57	0	186	16	202	39	108	15	162	47	209	168	165	15	348	63	411
CG Species Endorsements		2,555	518	9	3,082	181	3,263	523	755	103	1,381	356	1,737	3,078	1,273	112	4,463	537	6,000
CG Vessels		1,656	237	6	1,899	84	1,983	322	272	38	632	107	739	1,978	509	44	2,531	191	2,722
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	16	4	0	20	7	27	9	5	0	14	28	42	25	9	0	34	35	69
	FSOL	5	2	0	7	5	12	3	0	1	4	11	15	8	2	1	11	16	27
	PCOD	1,542	40	3	1,585	36	1,621	249	31	2	282	36	318	1,791	71	5	1,867	72	1,939
	PLCK	52	7	1	60	7	67	8	4	2	14	20	34	60	11	3	74	27	101
	ROCK	1,914	71	1	1,986	55	2,041	422	71	5	498	45	543	2,336	142	6	2,484	100	2,584
	SFLT	72	6	0	78	8	86	19	9	1	29	21	50	91	15	1	107	29	136
EG Species Endorsements		3,601	130	5	3,736	118	3,854	710	120	11	841	162	1,003	4,311	250	16	4,577	280	4,857
EG Vessels		2,936	102	3	3,041	73	3,114	686	98	8	692	64	756	3,622	200	11	3,733	137	3,870
WG	AMCK	7	6	1	14	9	23	2	49	10	61	35	96	9	55	11	75	44	119
	DFLT	50	31	1	82	18	100	27	89	21	137	63	200	77	120	22	219	81	300
	FSOL	15	16	1	32	8	40	11	71	16	98	40	138	26	87	17	130	48	178
	PCOD	254	66	3	323	26	349	60	138	34	232	87	319	314	204	37	555	113	668
	PLCK	42	23	1	66	13	79	19	91	24	134	69	203	61	114	25	200	82	282
	ROCK	112	44	3	159	22	181	66	119	23	208	82	290	178	163	26	367	104	471
	SFLT	34	22	1	57	14	71	16	80	24	120	60	180	50	102	25	177	74	251
WG Species Endorsements		514	208	11	733	110	843	201	637	152	990	436	1,426	715	845	163	1,723	546	2,269
WG Vessels		357	97	5	459	35	494	115	216	47	378	113	491	472	313	52	837	148	985
Total Endorsements		7,365	1,402	56	8,823	644	9,467	1,976	3,081	722	5,779	2,226	8,005	9,341	4,483	778	14,602	2,870	17,472
BSAI Vessels		370	144	6	520	40	560	168	326	80	574	174	748	538	470	86	1,094	214	1,308
GOA Vessels		4,529	326	11	4,866	137	5,003	818	372	62	1,252	165	1,417	5,347	698	73	6,118	302	6,420
Total Vessels		4,763	350	12	5,125	145	5,270	936	455	94	1,485	209	1,694	5,699	805	106	6,610	354	6,964

Table 4B

Configuration 2915411		B Licenses Issued to Current Owners Based on the Vessels, January 1, 1980 - December 31, 1993, Catch History and did not Receive a License Under Configuration 918411																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	License
AI	AMCK	1	10	0	11	0	11	7	39	8	54	6	60	8	49	8	65	6	71
	GTRB	22	14	2	38	3	41	14	35	5	54	10	64	36	49	7	92	13	105
	OFLT	2	10	0	12	0	12	4	23	5	32	7	39	6	33	5	44	7	51
	PCOD	14	16	0	30	1	31	11	35	6	52	6	58	25	51	6	82	7	89
	PLCK	2	13	0	15	1	16	7	25	7	39	5	44	9	38	7	54	6	60
	ROCK	27	18	1	46	3	49	21	40	11	72	7	79	48	58	12	118	10	128
	RSOL	1	11	1	13	0	13	7	44	8	59	5	64	8	55	9	72	5	77
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	2	0	2	0	2	1	6	2	9	3	12	1	8	2	11	3	14
AI Species Endorsements		69	94	4	167	8	175	72	247	52	371	49	420	141	341	56	538	57	595
AI Vessels		36	25	2	63	5	68	22	76	12	110	20	130	58	101	14	173	25	198
BS	AMCK	1	10	0	11	1	12	13	30	5	48	7	55	14	40	5	59	8	67
	GTRB	14	26	1	41	1	42	17	38	7	62	8	70	31	64	8	103	9	112
	OFLT	9	14	0	23	0	23	12	24	7	43	2	45	21	38	7	66	2	68
	PCOD	37	13	0	50	1	51	18	26	9	53	4	57	55	39	9	103	5	108
	PLCK	8	8	0	16	0	16	13	27	8	48	1	49	21	35	8	64	1	65
	ROCK	25	18	1	44	0	44	21	26	8	55	6	61	46	44	9	99	6	105
	RSOL	4	11	0	15	0	15	10	25	8	43	1	44	14	36	8	58	1	59
	SQID	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	YSOL	3	13	0	16	0	16	10	25	4	39	1	40	13	38	4	55	1	56
BS Species Endorsements		101	113	2	216	3	219	114	221	56	391	31	422	215	334	58	607	34	641
BS Vessels		65	45	1	111	3	114	34	67	12	113	16	129	99	112	13	224	19	243
CG	AMCK	2	8	0	10	0	10	0	6	2	8	3	11	2	14	2	18	3	21
	DFLT	9	10	0	19	0	19	7	35	6	48	7	55	16	45	6	67	7	74
	FSOL	20	8	0	28	1	29	10	40	4	54	4	58	30	48	4	82	5	87
	PCOD	402	34	1	437	7	444	63	52	8	123	8	131	465	86	9	560	15	575
	PLCK	83	23	0	106	4	110	15	41	7	63	7	70	98	64	7	169	11	180
	ROCK	184	22	1	207	3	210	40	42	5	87	7	94	224	64	6	294	10	304
	SFLT	43	14	0	57	3	60	16	44	6	66	6	72	59	58	6	123	9	132
CG Species Endorsements		743	119	2	864	18	882	151	260	38	449	42	491	894	379	40	1,313	60	1,373
CG Vessels		608	82	2	692	15	707	97	88	15	200	20	220	705	170	17	892	35	927
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	9	1	0	10	1	11	4	2	0	6	7	13	13	3	0	16	8	24
	FSOL	3	0	0	3	1	4	2	0	1	3	2	5	5	0	1	6	3	9
	PCOD	667	20	0	687	10	697	129	15	1	145	11	156	796	35	1	832	21	853
	PLCK	37	3	0	40	2	42	3	1	1	5	3	8	40	4	1	45	5	50
	ROCK	1,122	35	0	1,157	16	1,173	223	24	2	249	12	261	1,345	59	2	1,406	28	1,434
	SFLT	61	4	0	65	3	68	15	6	1	22	10	32	76	10	1	87	13	100
EG Species Endorsements		1,899	63	0	1,962	33	1,995	376	48	6	430	46	476	2,275	111	6	2,392	79	2,471
EG Vessels		1,720	58	0	1,778	28	1,806	326	39	3	368	26	394	2,046	97	3	2,146	54	2,200
WG	AMCK	1	4	0	5	1	6	1	26	2	29	7	36	2	30	2	34	8	42
	DFLT	22	15	0	37	3	40	9	38	3	50	7	57	31	53	3	87	10	97
	FSOL	2	11	0	13	1	14	4	21	4	29	3	32	6	32	4	42	4	46
	PCOD	92	23	0	115	4	119	20	41	2	63	12	75	112	64	2	178	16	194
	PLCK	5	7	0	12	0	12	7	21	2	30	1	31	12	28	2	42	1	43
	ROCK	43	18	1	62	3	65	15	38	3	56	11	67	58	56	4	118	14	132
	SFLT	7	9	0	16	2	18	4	21	2	27	3	30	11	30	2	43	5	48
WG Species Endorsements		172	87	1	260	14	274	60	206	18	284	44	328	232	293	19	544	58	602
WG Vessels		142	42	1	185	9	194	30	87	8	125	25	150	172	129	9	310	34	344
Total Endorsements		2,984	476	9	3,469	76	3,545	773	982	170	1,925	212	2,137	3,757	1,458	179	5,394	288	5,682
BSAI Vessels		88	85	2	175	7	182	42	115	19	176	28	204	130	200	21	351	35	386
GOA Vessels		2,362	141	2	2,505	43	2,548	406	153	17	576	51	627	2,768	294	19	3,081	94	3,175
Total Vessels		2,430	161	3	2,594	46	2,640	425	196	32	653	63	716	2,855	357	35	3,247	109	3,356

Table 4A

Configuration 015411		Licenses Issued to Current Vessel Owners Based on the Vessel's January 1, 1990 - December 31, 1993, Catch History																										
		Current Owner's State of Residence																										
		Alaska									Other									Total								
		CV				CP				Alaska	CV				CP				Other	CV				CP				
Area	Species	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Total	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Total	< 60	60-125	>125	Total	< 60	60-125	>125	Total	Licenses
AI	AMCK	1	3	2	6	1	0	9	10	16	3	15	8	26	3	9	48	60	86	4	18	10	32	4	9	57	70	102
	GTFB	8	8	1	17	1	2	9	12	29	18	30	14	62	6	16	45	67	129	26	38	15	79	7	18	54	79	158
	OFLT	0	2	1	3	0	1	10	11	14	4	18	12	34	6	9	40	55	89	4	20	13	37	6	10	50	66	103
	PCOD	20	11	2	33	2	4	10	16	49	28	56	23	107	7	17	64	88	195	48	67	25	140	9	21	74	104	244
	PLCK	0	1	2	3	0	0	10	10	13	3	40	20	63	7	7	51	65	128	3	41	22	66	7	7	61	75	141
	ROCK	5	12	2	19	2	3	10	15	34	21	51	15	87	7	17	57	81	168	26	63	17	106	9	20	67	96	202
	RSOL	0	2	0	2	0	0	9	9	11	2	4	8	14	5	6	41	52	66	2	6	8	16	5	6	50	61	77
	SQID	0	0	0	0	0	0	2	2	2	0	2	0	2	6	0	13	19	21	0	2	0	2	6	0	15	21	23
	YSOL	0	0	0	0	0	0	3	3	3	0	1	1	2	2	0	13	15	17	0	1	1	2	2	0	16	18	20
AI Species Endorsements		34	39	10	83	6	10	72	88	171	79	217	101	397	49	81	372	502	899	113	256	111	480	55	91	444	590	1,070
AI Vessels		23	16	2	41	2	4	10	16	57	36	69	29	134	7	18	66	91	225	59	85	31	175	9	22	76	107	282
BS	AMCK	4	13	1	18	0	1	8	9	27	0	64	20	84	5	7	46	58	142	4	77	21	102	5	8	54	67	169
	GTRB	40	25	2	67	1	3	11	15	82	34	103	30	167	7	20	57	84	251	74	128	32	234	8	23	68	99	333
	OFLT	36	35	2	73	0	5	11	16	89	32	109	30	171	7	21	61	89	260	68	144	32	244	7	26	72	105	349
	PCOD	236	83	3	322	7	9	12	28	350	90	188	46	324	7	24	67	98	422	326	271	49	646	14	33	79	126	772
	PLCK	62	42	2	106	2	5	11	18	124	37	118	32	187	7	21	61	89	276	99	160	34	293	9	26	72	107	400
	ROCK	79	44	2	125	4	5	11	20	145	42	116	28	186	7	21	58	86	272	121	160	30	311	11	26	69	106	417
	HSOL	20	34	1	55	0	5	11	16	71	20	103	27	150	7	18	56	81	231	40	137	28	205	7	23	67	97	302
	SQID	0	1	1	2	0	0	2	2	4	1	4	3	8	6	1	22	29	37	1	5	4	10	6	1	24	31	41
	YSOL	13	23	1	37	0	1	11	12	49	16	94	29	139	7	14	55	76	215	29	117	30	176	7	15	66	88	264
BS Species Endorsements		490	300	15	805	14	34	88	136	941	272	899	245	1,416	60	147	483	690	2,106	762	1,199	260	2,221	74	181	571	826	3,047
BS Vessels		266	89	3	358	8	9	12	29	387	110	194	47	351	7	24	67	98	449	376	283	50	709	15	33	79	127	836
CG	AMCK	3	2	0	5	0	0	2	2	7	0	2	0	2	0	0	12	12	14	3	4	0	7	0	0	14	14	21
	DFLT	54	37	1	92	2	6	9	17	109	22	53	5	80	1	13	36	50	130	76	90	6	172	3	19	45	67	239
	FSOL	27	29	0	56	2	2	8	12	68	9	58	4	71	0	7	25	32	103	36	87	4	127	2	9	33	44	171
	PCOD	764	130	4	898	28	12	10	50	948	128	127	17	272	1	22	40	63	335	892	257	21	1,170	29	34	50	113	1,283
	PLCK	222	48	1	271	8	5	8	21	292	31	88	14	133	2	15	35	52	185	253	136	15	404	10	20	43	73	477
	ROCK	656	110	1	767	30	8	10	48	815	173	117	14	304	3	20	41	64	368	829	227	15	1,071	33	28	51	112	1,183
	SFLT	86	43	0	129	2	3	8	13	142	24	66	9	99	0	11	30	41	140	110	109	9	228	2	14	38	54	282
CG Species Endorsements		1,812	399	7	2,218	72	36	55	163	2,381	387	509	65	961	7	88	219	314	1,275	2,199	908	72	3,179	79	124	274	477	3,656
CG Vessels		959	146	4	1,109	34	13	10	57	1,166	217	165	21	403	4	23	45	72	475	1,176	311	25	1,512	38	36	55	129	1,641
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	7	3	0	10	1	1	4	6	16	5	3	0	8	0	6	15	21	29	12	6	0	18	1	7	19	27	45
	FSOL	2	2	0	4	0	0	4	4	8	1	0	0	1	0	1	8	9	10	3	2	0	5	0	1	12	13	18
	PCOD	875	20	3	898	20	2	4	26	924	126	16	1	143	2	6	17	25	168	1,001	36	4	1,041	22	8	21	51	1,092
	PLCK	15	4	1	20	1	0	4	5	25	5	3	1	9	0	3	14	17	26	20	7	2	29	1	3	18	22	51
	ROCK	792	36	1	829	29	6	4	39	868	208	47	3	258	4	12	17	33	291	1,000	83	4	1,087	33	18	21	72	1,159
	SFLT	11	2	0	13	2	0	3	5	18	4	3	0	7	0	2	9	11	18	15	5	0	20	2	2	12	16	36
EG Species Endorsements		1,702	67	5	1,774	53	9	23	85	1,859	349	72	5	426	6	30	80	116	542	2,051	139	10	2,200	59	39	103	201	2,401
EG Vessels		1,182	43	3	1,228	30	6	4	40	1,268	261	56	5	322	5	14	21	40	362	1,443	99	8	1,550	35	20	25	80	1,630
WG	AMCK	6	2	1	9	0	1	7	8	17	1	23	8	32	1	3	24	28	60	7	25	9	41	1	4	31	36	77
	DFLT	28	16	1	45	1	3	11	15	60	17	51	18	86	1	14	41	56	142	45	67	19	131	2	17	52	71	202
	FSOL	13	5	1	19	0	1	6	7	26	7	50	12	69	1	8	28	37	106	20	55	13	88	1	9	34	44	132
	PCOD	162	43	3	208	7	5	10	22	230	40	97	31	168	3	20	52	75	243	202	140	34	376	10	25	62	97	473
	PLCK	37	16	1	54	0	4	9	13	67	12	70	22	104	5	13	50	68	172	49	86	23	158	5	17	59	81	239
	ROCK	68	26	2	96	4	4	11	19	115	51	81	19	151	4	18	49	71	222	119	107	21	247	8	22	60	90	337
	SFLT	27	13	1	41	0	3	9	12	53	12	59	22	93	3	10	44	57	150	39	72	23	134	3	13	53	69	203
WG Species Endorsements		341	121	10	472	12	21	63	96	568	140	431	132	703	18	88	286	392	1,095	481	552	142	1,175	30	107	351	488	1,663
WG Vessels		191	50	3	244	10	6	11	27	271	72	116	32	220	5	21	56	82	302	263	166	35	464	15	27	67	109	573
Total Endorsements		4,379	926	47	5,352	157	110	301	568	5,920	1,227	2,128	548	3,903	140	432	1,442	2,014	5,917	5,606	3,054	595	9,255	297	542	1,743	2,582	11,837
BSAI Vessels		271	90	3	364	8	9	12	29	393	117	196	47	360	7	24	68	99	459	388	286	50	724	15	33	80	128	852
GOA Vessels		2,105	165	7	2,277	53	14	11	78	2,355	424	192	38	654	13	25	58	96	750	2,529	357	45	2,931	66	39	69	174	3,105
Total Vessels		2,193	175	8	2,376	53	15	12	80	2,456	535	232	52	819	14	25	68	107	926	2,728	407	60	3,195	67	40	80	187	3,382

Table 5A

Configuration 915211

Licenses Issued to Current Owners Based on the Vessels, June 28, 1988 - June 27, 1992 Catch History

Current Owner's State of Residence

		Alaska									Other									Total								
		CV				CP				Alaska	CV				CP				Other	CV				CP				
Area	Species	< 60	60-125	> 125	Total	< 60	60-125	> 125	Total	Total	< 60	60-125	> 125	Total	< 60	60-125	> 125	Total	Total	< 60	60-125	> 125	Total	< 60	60-125	> 125	Total	Licenses
AI	AMCK	0	2	1	3	1	0	9	10	13	1	20	6	27	3	6	39	48	75	1	22	7	30	4	6	48	58	88
	GTFB	8	9	1	18	1	3	9	13	31	16	24	3	43	6	14	42	62	105	24	33	4	61	7	17	51	75	136
	OFLT	0	2	0	2	0	0	9	9	11	3	15	5	23	6	9	35	50	73	3	17	5	25	6	9	44	59	84
	PCOD	19	13	2	34	2	4	10	16	50	23	46	13	82	6	16	56	78	160	42	59	15	116	8	20	66	94	210
	PLCK	0	0	1	1	0	0	10	10	11	3	33	13	49	7	7	46	60	109	3	33	14	50	7	7	56	70	120
	ROCK	9	14	2	25	2	4	9	15	40	16	47	7	70	7	15	53	75	145	25	61	9	95	9	19	62	90	185
	HSOL	0	1	0	1	0	0	8	8	9	3	5	4	12	4	4	37	45	57	3	6	4	13	4	4	45	53	66
	SQID	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2	0	2	0	0	0	0	2
	YSOL	0	0	0	0	0	0	3	3	3	0	0	0	0	2	0	10	12	12	0	0	0	0	2	0	13	15	15
AI Species Endorsements		36	41	7	84	6	11	67	84	168	65	192	51	308	41	71	318	430	738	101	233	58	392	47	82	385	514	906
AI Vessels		23	18	2	43	2	4	10	16	59	31	60	18	109	7	16	61	84	193	54	78	20	152	9	20	71	100	252
BS	AMCK	1	12	1	14	0	1	8	9	23	2	74	18	94	5	7	46	58	152	3	86	19	108	5	8	54	67	175
	GTFB	25	24	1	50	1	4	11	16	66	20	99	25	144	7	20	56	83	227	45	123	26	194	8	24	67	99	293
	OFLT	24	38	2	64	0	4	11	15	79	22	105	28	155	7	20	59	86	241	46	143	30	219	7	24	70	101	320
	PCOD	204	82	3	289	7	8	12	27	316	80	172	39	291	7	23	68	98	389	284	254	42	580	14	31	80	125	705
	PLCK	42	43	2	87	2	4	11	17	104	31	109	31	171	7	20	61	88	259	73	152	33	258	9	24	72	105	363
	ROCK	54	41	2	97	4	5	11	20	117	32	110	26	168	7	18	56	81	249	86	151	28	265	11	23	67	101	366
	HSOL	14	37	1	52	0	5	11	16	68	17	100	28	145	7	17	53	77	222	31	137	29	197	7	22	64	93	290
	SQID	0	1	0	1	0	0	1	1	2	0	4	2	6	0	2	2	4	10	0	5	2	7	0	2	3	5	12
	YSOL	8	27	1	36	0	1	10	11	47	15	90	25	130	7	12	53	72	202	23	117	26	166	7	13	63	83	249
BS Species Endorsements		372	305	13	690	14	32	86	132	822	219	863	222	1,304	54	139	454	647	1,951	591	1,168	235	1,994	68	171	540	779	2,773
BS Vessels		223	88	3	314	8	9	12	29	343	94	179	40	313	7	24	68	99	412	317	267	43	627	16	33	80	128	755
CG	AMCK	2	0	0	2	0	0	2	2	4	0	1	0	1	0	0	10	10	11	2	1	0	3	0	0	12	12	15
	DFLT	44	33	1	78	1	3	5	9	87	14	42	2	58	1	11	30	42	100	58	75	3	136	2	14	35	51	187
	FSOL	22	27	0	49	2	2	3	7	56	4	40	2	46	0	3	21	24	70	26	67	2	95	2	5	24	31	126
	PCOD	675	117	3	795	28	11	4	43	838	102	103	13	218	1	20	35	56	274	777	220	16	1,013	27	31	41	99	1,112
	PLCK	187	46	1	234	7	3	6	16	250	19	67	10	96	2	11	33	46	142	206	113	11	330	9	14	39	62	392
	ROCK	573	93	1	667	27	8	6	41	708	140	104	9	253	2	20	37	59	312	713	197	10	920	29	28	43	100	1,020
	SFLT	74	39	0	113	2	2	4	8	121	14	55	7	76	0	9	29	38	114	88	94	7	189	2	11	33	46	235
CG Species Endorsements		1,577	355	6	1,938	65	29	32	126	2,064	293	412	43	748	8	74	193	275	1,023	1,870	767	49	2,686	71	103	227	401	3,087
CG Vessels		861	128	3	992	33	13	6	52	1,044	175	142	15	332	3	23	41	67	399	1,036	270	18	1,324	36	36	47	119	1,443
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	3	1	0	4	0	1	4	5	9	4	1	0	5	0	4	11	15	20	7	2	0	9	0	5	15	20	29
	FSOL	1	1	0	2	0	0	4	4	6	1	0	1	2	0	1	4	5	7	2	1	1	4	0	1	8	9	13
	PCOD	741	10	1	752	16	0	4	20	772	94	9	1	104	3	4	10	17	121	835	19	2	856	19	4	14	37	893
	PLCK	12	2	0	14	0	0	4	4	18	5	0	0	5	0	3	9	12	17	17	2	0	19	0	3	13	16	35
	ROCK	662	21	0	683	26	5	4	35	718	159	35	1	195	4	12	11	27	222	821	56	1	878	30	17	15	62	940
	SFLT	10	2	0	12	0	0	3	3	15	2	3	0	5	0	2	7	9	14	12	5	0	17	0	2	10	12	29
EG Species Endorsements		1,429	37	1	1,467	42	6	23	71	1,538	265	48	3	316	7	26	52	85	401	1,694	85	4	1,783	49	32	75	156	1,939
EG Vessels		1,030	25	1	1,056	29	5	4	38	1,094	203	41	3	247	5	13	14	32	278	1,233	66	4	1,303	34	18	18	70	1,373
WG	AMCK	0	0	1	1	0	1	8	9	10	0	17	6	23	1	1	26	28	51	0	17	7	24	1	2	34	37	61
	DFLT	15	15	1	31	1	4	8	13	44	12	43	15	70	1	13	41	55	125	27	58	16	101	2	17	49	68	169
	FSOL	7	1	0	6	0	1	6	7	13	2	40	10	52	1	3	28	32	84	4	44	10	58	1	4	34	39	97
	PCOD	153	38	3	194	5	6	8	19	213	32	90	27	149	3	19	52	74	223	185	128	30	343	8	25	60	93	436
	PLCK	22	11	0	33	0	4	8	12	45	7	64	20	91	6	10	46	63	154	29	75	20	124	6	14	56	76	199
	ROCK	59	21	2	82	4	3	8	15	97	41	72	17	130	4	16	50	70	200	100	93	19	212	8	19	58	86	297
	SFLT	13	10	0	23	0	4	8	12	35	6	51	20	77	3	9	43	55	132	19	61	20	100	3	13	51	67	167
WG Species Endorsements		264	99	7	370	10	23	54	87	457	100	377	115	592	18	71	288	377	969	364	476	122	962	28	94	342	464	1,426
WG Vessels		183	44	3	230	8	6	8	22	252	61	105	28	194	5	20	58	83	277	244	149	31	424	13	26	66	105	529
Total Endorsements		3,678	837	34	4,549	137	106	262	500	5,049	942	1,892	434	3,268	128	381	1,307	1,814	5,082	4,620	2,729	468	7,817	263	482	1,569	2,314	10,131
93AI Vessels		231	88	3	322	8	9	12	29	351	102	183	41	326	7	24	70	101	426	333	270	44	647	18	33	82	130	777
GOA Vessels		1,836	148	5	1,989	53	14	9	76	2,065	321	176	30	526	11	38	69	95	621	2,157	323	35	2,616	64	39	68	171	2,866
Total Vessels		1,940	159	6	2,105	53	16	13	80	2,185	401	216	46	663	12	28	70	107	769	2,341	375	81	2,787	66	40	82	187	2,954

Table 4C

Configuration 2915411		Total A and B Licenses Issued to Current Owners Based on the Vessels, January 1, 1983 - December 31, 1993, Catch History and License Configuration 915411																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	License
AI	AMCK	2	13	2	17	10	27	10	54	16	80	66	146	12	67	18	97	76	173
	GTRB	30	22	3	55	15	70	32	65	19	116	77	193	62	87	22	171	92	263
	OFLT	2	12	1	15	11	26	8	41	17	66	62	128	10	53	18	81	73	154
	PCOD	34	27	2	63	17	80	39	91	29	159	94	253	73	118	31	222	111	333
	PLCK	2	14	2	18	11	29	10	65	27	102	70	172	12	79	29	120	81	201
	ROCK	32	30	3	65	18	83	42	91	26	159	88	247	74	121	29	224	106	330
	RSOL	1	13	1	15	9	24	9	48	16	73	57	130	10	61	17	88	66	154
	SQID	0	0	0	0	2	2	0	2	0	2	19	21	0	2	0	2	21	23
	YSOL	0	2	0	2	3	5	1	7	3	11	18	29	1	9	3	13	21	34
AI Species Endorsements		103	133	14	250	96	346	151	464	153	768	551	1,319	254	597	167	1,018	647	1,665
AI Vessels		58	41	4	104	21	125	58	145	41	244	111	355	117	186	45	348	132	480
BS	AMCK	5	23	1	29	10	39	13	94	25	132	65	197	18	117	26	161	75	236
	GTRB	54	51	3	108	16	124	61	141	37	229	92	321	105	192	40	337	108	445
	OFLT	45	49	2	96	16	112	44	133	37	214	91	305	89	182	39	310	107	417
	PCOD	273	96	3	372	29	401	108	214	55	377	102	479	381	310	58	749	131	880
	PLCK	70	50	2	122	18	140	50	145	40	235	90	325	120	195	42	357	108	465
	ROCK	104	62	3	169	20	189	63	142	36	241	92	333	167	204	39	410	112	522
	RSOL	24	45	1	70	16	86	30	128	35	193	82	275	54	173	36	263	98	361
	SQID	0	1	1	2	2	4	1	4	3	8	30	38	1	5	4	10	32	42
	YSOL	16	36	1	53	12	65	26	119	33	178	77	255	42	155	34	231	89	320
BS Species Endorsements		591	413	17	1,021	139	1,160	386	1,120	301	1,807	721	2,528	977	1,533	318	2,828	860	3,688
BS Vessels		331	134	4	469	32	501	144	251	69	464	114	578	475	385	73	933	146	1,079
CG	AMCK	5	10	0	15	2	17	0	8	2	10	15	25	5	18	2	25	17	42
	OFLT	63	47	1	111	17	128	29	88	11	128	57	185	92	135	12	239	74	313
	FSOL	47	37	0	84	13	97	19	96	10	125	36	161	66	133	10	209	49	258
	PCOD	1,166	164	5	1,335	57	1,392	191	179	25	395	71	466	1,357	343	30	1,730	128	1,858
	PLCK	305	71	1	377	25	402	46	129	21	196	59	255	351	200	22	573	84	657
	ROCK	840	132	2	974	51	1,025	213	159	19	391	71	462	1,053	291	21	1,365	122	1,487
	SFLT	129	57	0	186	16	202	40	110	15	165	47	212	169	167	15	351	63	414
CG Species Endorsements		2,555	518	9	3,082	181	3,263	538	769	103	1,410	356	1,766	3,093	1,287	112	4,492	537	5,029
CG Vessels		1,567	228	6	1,801	72	1,873	314	253	36	603	92	695	1,881	481	42	2,404	164	2,568
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	OFLT	16	4	0	20	7	27	9	5	0	14	28	42	25	9	0	34	35	69
	FSOL	5	2	0	7	5	12	3	0	1	4	11	15	8	2	1	11	16	27
	PCOD	1,542	40	3	1,585	36	1,621	255	31	2	288	36	324	1,797	71	5	1,873	72	1,946
	PLCK	52	7	1	60	7	67	8	4	2	14	20	34	60	11	3	74	27	101
	ROCK	1,914	71	1	1,986	55	2,041	431	71	5	507	45	552	2,345	142	6	2,493	100	2,593
	SFLT	72	6	0	78	8	86	19	9	1	29	21	50	91	15	1	107	29	136
EG Species Endorsements		3,601	130	5	3,736	118	3,854	725	120	11	856	162	1,018	4,326	250	16	4,592	280	4,872
EG Vessels		2,902	101	3	3,006	68	3,074	587	95	8	690	66	756	3,489	196	11	3,696	134	3,830
WG	AMCK	7	6	1	14	9	23	2	49	10	61	35	96	9	55	11	75	44	119
	OFLT	50	31	1	82	18	100	26	89	21	136	63	199	76	120	22	218	81	299
	FSOL	15	16	1	32	8	40	11	71	16	98	40	138	26	87	17	130	48	178
	PCOD	254	68	3	323	26	349	60	138	33	231	87	318	314	204	36	554	113	667
	PLCK	42	23	1	66	13	79	19	91	24	134	69	203	61	114	25	200	82	282
	ROCK	111	44	3	158	22	180	66	119	22	207	82	289	177	163	25	365	104	469
	SFLT	34	22	1	57	14	71	16	80	24	120	60	180	50	102	25	177	74	251
WG Species Endorsements		513	208	11	732	110	842	200	637	150	987	436	1,423	713	845	161	1,719	546	2,265
WG Vessels		333	92	4	429	36	465	102	203	40	345	107	452	435	295	44	774	143	917
Total Endorsements		7,363	1,402	56	8,821	644	9,465	2,000	3,110	718	5,828	2,226	8,054	9,363	4,512	774	14,649	2,870	17,519
BSAI Vessels		359	176	6	539	36	575	159	311	66	536	127	663	518	486	71	1,076	163	1,238
GOA Vessels		4,467	306	9	4,782	121	4,903	830	345	65	1,230	147	1,377	5,297	651	64	6,012	268	6,280
Total Vessels		4,623	336	11	4,970	126	5,096	960	428	84	1,472	170	1,642	5,583	764	95	6,442	296	6,738

Table 5B

Configuration 3915211		B Licenses Issued to Current Owners Based on the Vessels, January 1, 1988 - December 31, 1993, Catch History and did not Receive a License Under Configuration 915211																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Licenses
AI	AMCK	2	3	1	6	0	6	4	17	9	30	16	46	6	20	10	36	16	52
	GTRB	9	2	1	12	1	13	12	26	16	54	13	67	21	28	17	66	14	80
	OFLT	0	2	1	3	2	5	2	9	9	20	9	29	2	11	10	23	11	34
	PCOD	3	1	0	4	1	5	9	29	16	54	14	68	12	30	16	58	15	73
	PLCK	1	5	1	7	1	8	2	21	14	37	8	45	3	26	15	44	9	53
	ROCK	11	3	1	15	2	17	16	29	18	63	11	74	27	32	19	78	13	91
	RSOL	1	4	0	5	1	6	1	18	10	29	9	38	2	22	10	34	10	44
	SQID	0	0	0	0	2	2	0	0	0	0	19	19	0	0	0	0	21	21
	YSOL	0	0	0	0	0	0	0	2	2	4	5	9	0	2	2	4	5	9
AI Species Endorsements		27	20	5	52	10	62	46	151	94	291	104	395	73	171	99	343	114	457
AI Vessels		14	7	3	24	7	31	21	59	28	108	56	164	35	66	31	132	63	195
BS	AMCK	3	5	0	8	1	9	0	12	6	18	6	24	3	17	6	26	7	33
	GTRB	20	8	2	30	0	30	21	22	11	54	7	61	41	30	13	84	7	91
	OFLT	14	2	0	16	1	17	17	14	8	39	4	43	31	16	8	55	5	60
	PCOD	45	4	0	49	1	50	23	27	14	64	2	66	68	31	14	113	3	116
	PLCK	22	2	0	24	1	25	17	23	8	48	1	49	39	25	8	72	2	74
	ROCK	33	6	1	40	0	40	17	19	8	44	9	53	50	25	9	84	9	93
	RSOL	7	3	0	10	0	10	8	15	6	29	4	33	15	18	6	39	4	43
	SQID	0	0	1	1	1	2	1	0	1	2	26	28	1	0	2	3	27	30
	YSOL	6	2	0	8	1	9	6	15	9	30	4	34	12	17	9	38	5	43
BS Species Endorsements		150	32	4	186	6	192	110	147	71	328	63	391	260	179	75	514	69	583
BS Vessels		77	19	2	98	4	102	45	61	23	129	49	178	122	80	25	227	53	280
CG	AMCK	2	3	0	5	0	5	0	2	0	2	5	7	2	5	0	7	5	12
	DFLT	16	8	0	24	8	32	9	18	4	31	13	44	25	26	4	55	21	76
	FSOL	18	6	0	24	6	30	6	25	4	35	10	45	24	31	4	59	16	75
	PCOD	209	22	1	232	12	244	51	37	6	94	13	107	260	59	7	326	25	351
	PLCK	71	9	0	80	7	87	16	34	5	55	11	66	87	43	5	135	18	153
	ROCK	145	25	1	171	9	180	48	24	7	79	11	90	193	49	8	250	20	270
	SFLT	25	7	0	32	6	38	12	20	4	36	7	43	37	27	4	68	13	81
CG Species Endorsements		486	80	2	568	48	616	142	160	30	332	70	402	628	240	32	900	118	1,018
CG Vessels		367	56	2	425	27	452	98	75	11	184	36	220	465	131	13	609	63	672
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	7	2	0	9	2	11	3	3	0	6	13	19	10	5	0	15	15	30
	FSOL	2	1	0	3	1	4	2	0	0	2	6	7	4	1	0	5	6	11
	PCOD	409	14	2	425	11	436	87	9	1	97	15	112	496	23	3	522	26	548
	PLCK	14	3	1	18	2	20	3	3	2	8	7	15	17	6	3	26	9	35
	ROCK	408	30	1	439	11	450	111	15	4	130	12	142	519	45	5	569	23	592
	SFLT	9	1	0	10	3	13	5	0	1	6	11	17	14	1	1	16	14	30
EG Species Endorsements		849	51	4	904	30	934	211	30	8	249	64	313	1,060	81	12	1,153	94	1,247
EG Vessels		962	49	2	1,013	23	1,036	204	29	5	238	24	262	1,166	78	7	1,251	47	1,298
WG	AMCK	6	2	0	8	0	8	1	8	3	12	3	15	7	10	3	20	3	23
	DFLT	18	3	0	21	4	25	7	11	4	22	4	26	25	14	4	43	8	51
	FSOL	11	3	1	15	1	16	5	10	2	17	6	23	16	13	3	32	7	39
	PCOD	62	9	0	71	6	77	14	13	5	32	9	41	76	22	5	103	15	118
	PLCK	16	7	1	24	1	25	7	9	2	18	5	23	23	16	3	42	6	48
	ROCK	29	9	0	38	7	45	17	14	4	35	8	43	46	23	4	73	16	88
	SFLT	18	4	1	23	2	25	6	9	2	17	4	21	24	13	3	40	6	46
WG Species Endorsements		160	37	3	200	21	221	57	74	22	153	39	192	217	111	25	353	60	413
WG Vessels		116	22	1	139	12	161	37	60	15	102	23	125	153	72	16	241	35	276
Total Endorsements		1,672	220	18	1,910	115	2,025	566	562	225	1,353	340	1,693	2,238	782	243	3,263	455	3,718
BSAI Vessels		85	21	3	109	9	118	55	105	36	186	70	266	140	126	39	305	79	384
GOA Vessels		1,345	108	5	1,458	48	1,502	285	109	21	415	57	472	1,630	216	26	1,871	103	1,974
Total Vessels		1,452	115	6	1,582	51	1,633	374	173	42	589	94	683	1,836	288	47	2,171	145	2,316

Table 5C

Configuration 3915211		Total A and B Licenses Issued to Current Owners Based on the Vessels, January 1, 1988 - December 31, 1993, Catch History and License Configuration 915211																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	License
AI	AMCK	2	5	2	9	10	19	5	37	15	57	64	121	7	42	17	66	74	140
	GTRB	17	11	2	30	14	44	28	50	19	97	75	172	45	61	21	127	89	216
	OFLT	0	4	1	5	11	16	5	24	14	43	59	102	5	28	15	48	70	118
	PCOD	22	14	2	38	17	55	32	75	29	136	92	228	54	89	31	174	109	283
	PLCK	1	5	2	8	11	19	5	54	27	86	68	154	6	59	29	94	79	173
	ROCK	20	17	3	40	17	57	32	76	25	133	86	219	52	93	28	173	103	276
	RSOL	1	5	0	6	9	15	4	23	14	41	54	95	5	28	14	47	63	110
	SQID	0	0	0	0	2	2	0	2	0	2	19	21	0	2	0	2	21	23
	YSOL	0	0	0	0	3	3	0	2	2	4	17	21	0	2	2	4	20	24
AI Species Endorsements		63	81	12	136	94	230	111	343	145	599	534	1,133	174	404	157	735	628	1,363
AI Vessels		37	26	5	67	23	90	52	119	46	217	140	357	89	144	51	284	163	447
BS	AMCK	4	17	1	22	10	32	2	86	24	112	64	176	6	103	25	134	74	208
	GTRB	45	32	3	80	16	96	41	121	36	198	90	288	86	153	39	278	106	384
	OFLT	38	40	2	80	16	96	39	119	36	194	90	284	77	159	38	274	106	380
	PCOD	249	86	3	338	28	366	103	199	53	355	100	455	352	285	56	693	128	821
	PLCK	64	45	2	111	18	129	48	132	39	219	89	308	112	177	41	330	107	437
	ROCK	87	47	3	137	20	157	49	129	34	212	90	302	136	176	37	349	110	459
	RSOL	21	40	1	62	16	78	25	115	34	174	81	255	46	155	35	236	97	333
	SQID	0	1	1	2	2	4	1	4	3	8	30	38	1	5	4	10	32	42
	YSOL	14	29	1	44	12	56	21	105	34	160	76	236	35	134	35	204	88	292
BS Species Endorsements		522	337	17	876	138	1,014	329	1,010	293	1,632	710	2,342	851	1,347	310	2,508	848	3,356
BS Vessels		300	107	5	412	33	445	139	240	63	442	148	590	439	347	68	854	181	1,035
CG	AMCK	4	3	0	7	2	9	0	3	0	3	15	18	4	6	0	10	17	27
	DFLT	60	41	1	102	17	119	23	60	6	89	55	144	83	101	7	191	72	263
	FSOL	40	33	0	73	13	86	10	65	6	81	34	115	50	98	6	154	47	201
	PCOD	884	139	4	1,027	55	1,082	153	140	19	312	69	381	1,037	279	23	1,339	124	1,463
	PLCK	258	55	1	314	23	337	35	101	15	151	57	208	293	156	16	465	80	545
	ROCK	718	118	2	838	50	888	188	128	16	332	70	402	906	246	18	1,170	120	1,290
	SFLT	99	46	0	145	14	159	26	75	11	112	45	157	125	121	11	257	59	316
CG Species Endorsements		2,063	435	8	2,506	174	2,680	435	572	73	1,080	345	1,425	2,498	1,007	81	3,586	519	4,105
CG Vessels		1,228	184	5	1,417	79	1,496	273	217	28	518	103	619	1,501	401	31	1,933	182	2,115
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	10	3	0	13	7	20	7	4	0	11	28	39	17	7	0	24	35	59
	FSOL	3	2	0	5	5	10	3	0	1	4	10	14	6	2	1	9	15	24
	PCOD	1,150	24	3	1,177	31	1,208	181	18	2	201	32	233	1,331	42	5	1,378	63	1,441
	PLCK	26	5	1	32	6	38	8	3	2	13	19	32	34	8	3	45	25	70
	ROCK	1,070	51	1	1,122	46	1,168	270	50	5	325	39	364	1,340	101	6	1,447	85	1,532
	SFLT	19	3	0	22	6	28	7	3	1	11	20	31	26	6	1	33	26	59
EG Species Endorsements		2,278	88	5	2,371	101	2,472	476	78	11	565	149	714	2,754	168	16	2,936	250	3,186
EG Vessels		1,892	74	3	2,069	61	2,130	407	70	8	485	56	541	2,399	144	11	2,554	117	2,671
WG	AMCK	6	2	1	9	9	18	1	25	9	35	31	66	7	27	10	44	40	84
	DFLT	33	18	1	52	17	69	19	54	19	92	69	161	52	72	20	144	76	220
	FSOL	13	7	1	21	8	29	7	50	12	69	38	107	20	57	13	90	46	136
	PCOD	215	47	3	265	25	290	46	103	32	181	83	264	261	150	35	446	108	554
	PLCK	38	18	1	57	13	70	14	73	22	109	68	177	52	91	23	166	81	247
	ROCK	88	30	2	120	22	142	58	86	21	165	78	243	146	116	23	285	100	385
	SFLT	31	14	1	46	14	60	12	60	22	94	59	153	43	74	23	140	73	213
WG Species Endorsements		424	136	10	570	108	678	157	451	137	745	416	1,161	581	587	147	1,315	524	1,839
WG Vessels		298	66	4	369	34	403	98	165	43	296	106	402	397	221	47	665	140	805
Total Endorsements		5,350	1,057	52	6,459	615	7,074	1,508	2,454	659	4,621	2,154	6,775	6,858	3,511	711	11,080	2,769	13,849
BSAI Vessels		316	109	6	431	38	469	167	287	77	521	171	692	473	398	83	952	209	1,161
GOA Vessels		3,161	264	10	3,445	122	3,567	606	284	51	941	152	1,093	3,787	538	61	4,386	274	4,660
Total Vessels		3,402	274	11	3,687	131	3,818	775	389	87	1,251	201	1,452	4,177	663	98	4,938	332	5,270

Table 6A

Configuration 015411

Licenses Issued to Current Vessel Owners
Based on the Vessel's, January 1, 1990 - December 31, 1993, Catch History
Current Owner's State of Residence

Area	Species	Alaska CV < 60	Alaska CV 60-125	Alaska CV >125	Alaska CV Total	Alaska CP < 60	Alaska CP 60-125	Alaska CP >125	Alaska CP Total	Alaska Total	Other CV < 60	Other CV 60-125	Other CV >125	Other CV Total	Other CP < 60	Other CP 60-125	Other CP >125	Other CP Total	Other Total	Total CV < 60	Total CV 60-125	Total CV >125	Total CV Total	Total CP < 60	Total CP 60-125	Total CP >125	Total CP Total	Licenses
AI	AMCK	1	3	2	6	1	0	9	10	16	3	15	8	26	3	9	48	60	86	4	18	10	32	4	9	57	70	102
	GTHB	8	8	1	17	1	2	9	12	29	18	30	14	62	6	16	45	67	129	26	38	15	79	7	18	54	79	158
	OFLT	0	2	1	3	0	1	10	11	14	4	18	12	34	6	9	40	55	89	4	20	13	37	6	10	50	66	103
	PCOD	20	11	2	33	2	4	10	16	49	28	56	23	107	7	17	64	88	195	48	67	25	140	9	21	74	104	244
	PLCK	0	1	2	3	0	0	10	10	13	3	40	20	63	7	7	51	65	128	3	41	22	66	7	7	61	75	141
	ROCK	5	12	2	19	2	3	10	15	34	21	51	15	87	7	17	57	81	168	26	63	17	106	9	20	67	96	202
	RSOL	0	2	0	2	0	0	9	9	11	2	4	8	14	5	6	41	52	66	2	6	8	16	5	6	50	61	77
	SQID	0	0	0	0	0	0	2	2	2	0	2	0	2	6	0	13	19	21	0	2	0	2	6	0	15	21	23
	YSOL	0	0	0	0	0	0	3	3	3	0	1	1	2	2	0	13	15	17	0	1	1	2	2	0	16	18	20
AI Species Endorsements		34	39	10	83	6	10	72	88	171	79	217	101	397	49	81	372	502	899	113	256	111	480	55	91	444	590	1,070
AI Vessels		23	16	2	41	2	4	10	16	57	38	68	28	134	7	18	66	91	225	59	85	31	175	9	22	76	107	282
BS	AMCK	4	13	1	18	0	1	8	9	27	0	64	20	84	5	7	46	58	142	4	77	21	102	5	8	54	67	169
	GTHB	40	25	2	67	1	3	11	15	82	34	103	30	167	7	20	57	84	251	74	128	32	234	8	23	68	99	333
	OFLT	36	35	2	73	0	5	11	16	89	32	109	30	171	7	21	61	89	260	68	144	32	244	7	26	72	105	349
	PCOD	236	83	3	322	7	9	12	28	350	90	188	46	324	7	24	67	98	422	326	271	49	646	14	33	79	126	772
	PLCK	62	42	2	106	2	5	11	18	124	37	118	32	187	7	21	61	89	276	99	160	34	293	9	26	72	107	400
	ROCK	79	44	2	125	4	5	11	20	145	42	116	28	186	7	21	58	86	272	121	160	30	311	11	26	69	106	417
	RSOL	20	34	1	55	0	5	11	16	71	20	103	27	150	7	18	56	81	231	40	137	28	205	7	23	67	97	302
	SQID	0	1	1	2	0	0	2	2	4	1	4	3	8	6	1	22	29	37	1	5	4	10	6	1	24	31	41
	YSOL	13	23	1	37	0	1	11	12	49	16	94	29	139	7	14	55	76	215	29	117	30	176	7	15	66	88	264
BS Species Endorsements		490	300	15	805	14	34	88	136	941	272	899	245	1,416	60	147	483	690	2,106	762	1,199	260	2,221	74	181	671	826	3,047
BS Vessels		266	89	3	358	8	9	12	29	387	110	194	47	351	7	24	67	98	449	378	283	50	709	15	33	79	127	836
CG	AMCK	3	2	0	5	0	0	2	2	7	0	2	0	2	0	0	12	12	14	3	4	0	7	0	0	14	14	21
	DFLT	54	37	1	92	2	6	9	17	109	22	53	5	80	1	13	36	50	130	76	90	6	172	3	19	45	67	239
	FSOL	27	29	0	56	2	2	8	12	68	9	56	6	71	0	7	25	32	103	36	85	6	127	2	9	33	44	171
	PCOD	764	130	4	898	28	12	10	50	948	128	127	17	272	1	22	40	63	335	892	257	21	1,170	29	34	50	113	1,283
	PLCK	222	48	1	271	8	5	8	21	292	31	88	14	133	2	15	35	52	185	253	136	15	404	10	20	43	73	477
	ROCK	656	110	1	767	30	8	10	48	815	173	117	14	304	3	20	41	64	368	829	227	15	1,071	33	28	51	112	1,183
	SFLT	86	43	0	129	2	3	8	13	142	24	66	9	99	0	11	30	41	140	110	109	9	228	2	14	38	54	282
CG Species Endorsements		1,812	399	7	2,218	72	36	55	163	2,381	387	509	65	961	7	88	219	314	1,275	2,199	908	72	3,179	79	124	274	477	3,656
CG Vessels		959	146	4	1,109	34	13	10	57	1,166	217	165	21	403	4	23	45	72	475	1,176	311	25	1,512	38	36	55	129	1,641
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	7	3	0	10	1	1	4	6	16	5	3	0	8	0	6	15	21	29	12	6	0	18	1	7	19	27	45
	FSOL	2	2	0	4	0	0	4	4	8	1	0	0	1	0	1	8	9	10	3	2	0	5	0	1	12	13	18
	PCOD	875	20	3	898	20	2	4	26	924	126	16	1	143	2	6	17	25	168	1,001	36	4	1,041	22	8	21	51	1,092
	PLCK	15	4	1	20	1	0	4	5	25	5	3	1	9	0	3	14	17	26	20	7	2	29	1	3	18	22	51
	ROCK	792	36	1	829	28	8	4	36	866	208	47	3	258	4	12	17	33	291	1,000	83	4	1,087	33	16	21	72	1,159
	SFLT	11	2	0	13	2	0	3	5	18	4	3	0	7	0	2	9	11	18	15	5	0	20	2	2	12	16	36
EG Species Endorsements		1,702	67	5	1,774	53	9	23	85	1,859	349	72	5	426	6	30	80	116	542	2,051	139	10	2,200	59	39	103	201	2,401
EG Vessels		1,182	43	3	1,228	30	6	4	40	1,268	261	56	5	322	5	14	21	40	362	1,443	99	8	1,550	35	20	25	80	1,630
WG	AMCK	6	2	1	9	0	1	7	8	17	1	23	8	32	1	3	24	28	60	7	25	9	41	1	4	31	36	77
	DFLT	28	16	1	45	1	3	11	15	60	17	51	18	86	1	14	41	56	142	45	67	19	131	2	17	52	71	202
	FSOL	13	5	1	19	0	1	6	7	26	7	50	12	69	1	8	28	37	106	20	55	13	88	1	9	34	44	132
	PCOD	162	43	3	208	7	5	10	22	230	40	97	31	168	3	20	52	75	243	202	140	34	376	10	25	62	97	473
	PLCK	37	16	1	54	0	4	9	13	67	12	70	22	104	5	13	50	68	172	49	86	23	158	5	17	59	81	239
	ROCK	68	26	2	96	4	4	11	19	115	51	81	19	151	4	18	49	71	222	119	107	21	247	8	22	60	90	337
	SFLT	27	13	1	41	0	3	9	12	53	12	59	22	93	3	10	44	57	150	39	72	23	134	3	13	53	69	203
WG Species Endorsements		341	121	10	472	12	21	63	96	568	140	431	132	703	18	88	288	392	1,095	481	552	142	1,175	30	107	351	488	1,663
WG Vessels		191	50	3	244	10	6	11	27	271	72	116	32	220	5	21	56	82	302	263	166	35	464	15	27	67	109	573
Total Endorsements		4,379	926	47	5,352	157	110	301	568	5,920	1,227	2,128	548	3,903	140	432	1,442	2,014	5,917	5,606	3,054	595	9,255	297	542	1,743	2,582	11,837
BSAI Vessels		271	90	3	364	8	8	12	28	392	117	196	47	360	7	24	68	99	459	388	286	50	724	18	33	80	128	852
GOA Vessels		2,105	165	7	2,277	53	14	11	78	2,355	424	192	38	654	13	25	58	96	750	2,529	357	45	2,931	66	39	69	174	3,105
Total Vessels		2,193	176	8	2,376	53	15	12	80	2,456	535	232	52	819	14	25	68	107	926	2,728	407	60	3,195	67	40	80	187	3,382

Table 6B

Configuration 3915411		B Licenses Issued to Current Owners Based on the Vessels, January 1, 1988 - December 31, 1993, Catch History and did not Receive a License Under Configuration 915411																			
		Current Owner's State of Residence																			
		Alaska						Other						Total							
		CV						CV						CV							
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	License
AI	AMCK	1	2	0	3	0	3	1	22	6	29	4	33	2	24	6	32	4	36
	GIRB	9	3	1	13	2	15	8	20	4	32	8	40	17	23	5	45	10	55
	OFLT	0	2	0	2	0	2	0	6	2	8	4	12	0	8	2	10	4	14
	PCOD	2	3	0	5	1	6	3	19	5	27	4	31	5	22	5	32	5	37
	PLCK	1	4	0	5	1	6	1	14	6	21	3	24	2	18	6	26	4	30
	ROCK	14	5	1	20	2	22	10	25	9	44	5	49	24	30	10	64	7	71
	RSOL	1	3	0	4	0	4	1	19	5	25	2	27	2	22	5	29	2	31
	SQID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	YSOL	0	0	0	0	0	0	0	1	1	2	2	4	0	1	1	2	2	4
AI Species Endorsements		28	22	2	52	6	58	24	126	38	188	32	220	52	148	40	240	38	278
AI Vessels		15	7	1	23	4	27	11	47	10	68	15	83	26	54	11	91	19	110
BS	AMCK	0	4	0	4	1	5	2	22	3	27	6	33	2	26	3	31	7	38
	GIRB	5	7	1	13	1	14	6	18	6	30	6	36	11	25	7	43	7	50
	OFLT	2	5	0	7	0	7	4	10	6	20	1	21	6	15	6	27	1	28
	PCOD	13	3	0	16	0	16	7	11	6	24	2	26	20	14	6	40	2	42
	PLCK	2	3	0	5	0	5	5	14	6	25	0	25	7	17	6	30	0	30
	ROCK	8	3	1	12	0	12	6	13	6	25	4	29	14	16	7	37	4	41
	RSOL	1	6	0	7	0	7	3	12	6	21	0	21	4	18	6	28	0	28
	SQID	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	YSOL	1	6	0	7	0	7	3	11	4	18	0	18	4	17	4	25	0	25
BS Species Endorsements		32	37	2	71	2	73	36	111	43	190	20	210	68	148	45	261	22	283
BS Vessels		18	17	1	36	2	38	13	42	8	63	13	76	31	59	9	99	15	114
CG	AMCK	1	1	0	2	0	2	0	1	0	1	3	4	1	2	0	3	3	6
	DFLT	6	4	0	10	0	10	1	7	1	9	5	14	7	11	1	19	5	24
	FSOL	13	4	0	17	1	18	1	9	0	10	2	12	14	13	0	27	3	30
	PCOD	120	9	0	129	5	134	25	13	2	40	6	46	145	22	2	169	11	180
	PLCK	36	7	0	43	2	45	4	13	1	18	5	23	40	20	1	61	7	68
	ROCK	62	8	1	71	2	73	15	11	2	28	6	34	77	19	3	99	8	107
	SFLT	13	3	0	16	1	17	2	9	2	13	4	17	15	12	2	29	5	34
CG Species Endorsements		251	36	1	288	11	299	48	63	8	119	31	150	299	99	9	407	42	449
CG Vessels		175	23	1	199	10	209	39	25	3	67	16	83	214	48	4	266	26	292
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	3	0	0	3	1	4	2	1	0	3	7	10	5	1	0	6	8	14
	FSOL	1	0	0	1	1	2	2	0	1	3	1	4	3	0	1	4	2	6
	PCOD	275	4	0	279	5	284	55	2	1	58	7	65	330	6	1	337	12	349
	PLCK	11	1	0	12	1	13	3	0	1	4	2	6	14	1	1	16	3	19
	ROCK	278	15	0	293	7	300	62	3	2	67	6	73	340	18	2	360	13	373
	SFLT	8	1	0	9	1	10	3	0	1	4	9	13	11	1	1	13	10	23
EG Species Endorsements		576	21	0	597	16	613	127	6	6	139	33	172	703	27	6	736	49	785
EG Vessels		761	29	0	790	16	806	131	9	3	143	18	161	892	38	3	933	34	967
WG	AMCK	0	0	0	0	1	1	0	2	1	3	3	6	0	2	1	3	4	7
	DFLT	5	2	0	7	2	9	1	3	1	5	3	8	6	5	1	12	5	17
	FSOL	0	2	0	2	1	3	0	0	0	0	1	1	0	2	0	2	2	4
	PCOD	53	4	0	57	3	60	6	6	0	12	8	20	59	10	0	69	11	80
	PLCK	1	2	0	3	0	3	2	3	0	5	0	5	3	5	0	8	0	8
	ROCK	19	4	0	23	3	26	7	5	1	13	7	20	26	9	1	36	10	46
	SFLT	4	1	0	5	2	7	0	1	0	1	2	3	4	2	0	6	4	10
WG Species Endorsements		82	15	0	97	12	109	16	20	3	39	24	63	98	35	3	136	36	172
WG Vessels		81	8	0	89	8	97	14	18	4	36	4	40	95	26	4	125	12	137
Total Endorsements		969	131	5	1,105	47	1,152	251	326	98	675	140	815	1,220	457	103	1,780	187	1,967
BSAI Vessels		31	23	1	55	5	60	22	77	15	114	23	137	53	100	16	169	28	197
GOA Vessels		972	53	1	1,026	28	1,054	166	45	6	217	35	252	1,138	98	7	1,243	63	1,306
Total Vessels		997	71	1	1,069	31	1,100	184	106	24	314	48	362	1,181	177	25	1,383	79	1,462

Table 6C

Configuration 3915411

Total A and B Licenses Issued to Current Owners Based on the Vessels, January 1, 1988 - December 31, 1993, Catch History and License Configuration 915411

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	License
AI	AMCK	2	5	2	9	10	19	4	37	14	55	64	119	6	42	16	64	74	138
	GTRB	17	11	2	30	14	44	26	50	18	94	75	169	43	61	20	124	89	213
	OFLT	0	4	1	5	11	16	4	24	14	42	59	101	4	28	15	47	70	117
	PCOD	22	14	2	38	17	55	31	75	28	134	92	226	53	89	30	172	109	281
	PLCK	1	5	2	8	11	19	4	54	26	84	68	152	5	59	28	92	79	171
	ROCK	19	17	3	39	17	56	31	76	24	131	86	217	50	93	27	170	103	273
	RSOL	1	5	0	6	9	15	3	23	13	39	54	93	4	28	13	45	63	108
	SQID	0	0	0	0	2	2	0	2	0	2	19	21	0	2	0	2	21	23
	YSOL	0	0	0	0	3	3	0	2	2	4	17	21	0	2	2	4	20	24
AI Species Endorsements		62	61	12	135	94	229	103	343	139	585	534	1,119	165	404	151	720	628	1,348
AI Vessels		38	23	3	64	20	84	47	116	39	202	106	308	85	139	42	266	126	392
BS	AMCK	4	17	1	22	10	32	2	86	23	111	64	175	6	103	24	133	74	207
	GTRB	45	32	3	80	16	96	40	121	36	197	90	287	85	153	39	277	106	383
	OFLT	38	40	2	80	16	96	36	119	36	191	90	281	74	159	38	271	106	377
	PCOD	249	86	3	338	28	366	97	199	52	348	100	448	346	285	55	686	128	814
	PLCK	64	45	2	111	18	129	42	132	38	212	89	301	106	177	40	323	107	430
	ROCK	87	47	3	137	20	157	48	129	34	211	90	301	135	176	37	348	110	458
	RSOL	21	40	1	62	16	78	23	115	33	171	81	252	44	155	34	233	97	330
	SQID	0	1	1	2	2	4	1	4	3	8	30	38	1	5	4	10	32	42
	YSOL	14	29	1	44	12	56	19	105	33	157	76	233	33	134	34	201	88	289
BS Species Endorsements		522	337	17	876	138	1,014	308	1,010	288	1,606	710	2,316	830	1,347	305	2,482	848	3,330
BS Vessels		284	106	4	394	31	425	123	236	55	414	111	525	407	342	59	808	142	950
CG	AMCK	4	3	0	7	2	9	0	3	0	3	15	18	4	6	0	10	17	27
	DFLT	60	41	1	102	17	119	23	60	6	89	55	144	83	101	7	191	72	263
	FSOL	40	33	0	73	13	86	10	65	6	81	34	115	50	98	6	154	47	201
	PCOD	884	139	4	1,027	55	1,082	153	140	19	312	69	381	1,037	279	23	1,339	124	1,463
	PLCK	258	55	1	314	23	337	35	101	15	151	57	208	293	156	16	465	80	545
	ROCK	718	118	2	838	50	888	188	128	16	332	70	402	906	246	18	1,170	120	1,290
	SFLT	99	46	0	145	14	159	26	75	11	112	45	157	125	121	11	257	59	316
CG Species Endorsements		2,063	435	8	2,506	174	2,680	435	572	73	1,080	345	1,425	2,498	1,007	81	3,586	519	4,105
CG Vessels		1,134	169	5	1,308	67	1,375	256	190	24	470	88	558	1,390	359	29	1,778	155	1,933
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	10	3	0	13	7	20	7	4	0	11	28	39	17	7	0	24	35	59
	FSOL	3	2	0	5	5	10	3	0	1	4	10	14	6	2	1	9	15	24
	PCOD	1,150	24	3	1,177	31	1,208	181	18	2	201	32	233	1,331	42	5	1,378	63	1,441
	PLCK	26	5	1	32	6	38	8	3	2	13	19	32	34	8	3	45	25	70
	ROCK	1,070	51	1	1,122	46	1,168	270	50	5	325	39	364	1,340	101	6	1,447	85	1,632
	SFLT	19	3	0	22	6	28	7	3	1	11	20	31	26	6	1	33	26	59
EG Species Endorsements		2,278	88	5	2,371	101	2,472	476	78	11	565	149	714	2,754	166	16	2,936	250	3,186
EG Vessels		1,943	72	3	2,018	56	2,074	392	65	8	465	58	523	2,335	137	11	2,483	114	2,597
WG	AMCK	6	2	1	9	9	18	1	25	9	35	31	66	7	27	10	44	40	84
	DFLT	33	18	1	52	17	69	18	54	19	91	59	150	51	72	20	143	76	219
	FSOL	13	7	1	21	8	29	7	50	12	69	38	107	20	57	13	90	46	136
	PCOD	215	47	3	265	25	290	46	103	31	180	83	263	261	150	34	445	108	553
	PLCK	38	18	1	57	13	70	14	73	22	109	68	177	52	91	23	166	81	247
	ROCK	87	30	2	119	22	141	58	86	20	164	78	242	145	116	22	283	100	383
	SFLT	31	14	1	46	14	60	12	60	22	94	59	153	43	74	23	140	73	213
WG Species Endorsements		423	136	10	569	108	677	156	451	135	742	416	1,158	579	587	145	1,311	524	1,835
WG Vessels		272	58	3	333	35	368	86	134	36	256	86	342	358	192	39	589	121	710
Total Endorsements		5,348	1,057	52	6,457	615	7,072	1,478	2,454	646	4,578	2,154	6,732	6,826	3,511	698	11,036	2,769	13,804
BSAI Vessels		302	113	4	418	34	453	139	273	62	474	122	596	441	386	66	893	156	1,049
GOA Vessels		3,077	218	8	3,303	106	3,409	590	237	44	871	131	1,002	3,667	455	52	4,174	237	4,411
Total Vessels		3,190	246	8	3,445	111	3,556	719	338	76	1,133	155	1,288	3,909	584	85	4,578	266	4,844

Table 7A

Configuration 31421		Licenses Issued to Current Owners Based on the Vessels, June 28,1989 - June 27, 1992 (June 29, 1980 - June 25, 1983 for Dutch Harbor Red & June 29, 1986 - June 25, 1986 for Pribilof Blue)																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Licenses
King Crab																			
Norton Sound	Red	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton Sound Species Endorsements		0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
Norton Sound Vessels		0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
St Lawrence/St Mathew	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St Lawrence/St Mathew Species Endorsements		1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
St. Lawrence/St.Mathew Vessels		1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
Pribilof	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	2	39	9	50	6	56	2	39	9	50	6	56
	Brown	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
Pribilof Species Endorsements		0	0	0	0	0	0	2	39	9	50	7	57	2	39	9	50	7	57
Pribilof Vessels		0	0	0	0	0	0	2	39	9	50	7	57	2	39	9	50	7	57
Adak	Red	0	12	2	14	1	15	0	30	10	40	5	45	0	42	12	54	6	60
	Brown	0	10	3	13	0	13	0	36	18	54	6	60	0	46	21	67	6	73
Akak Species Endorsements		0	22	5	27	1	28	0	66	28	94	11	105	0	88	33	121	12	133
Adak Vessels		0	18	4	20	1	21	0	47	22	69	7	76	0	63	26	89	8	97
Dutch Harbor	Red	30	39	3	72	1	73	21	96	7	124	7	131	51	135	10	196	8	204
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	1	1	2	0	2	0	7	11	18	3	21	0	8	12	20	3	23
Dutch Harbor Species Endorsements		30	40	4	74	1	75	21	103	18	142	10	152	51	143	22	216	11	227
Dutch Harbor Vessels		30	39	4	73	1	74	21	103	16	140	10	150	51	142	20	213	11	224
Bristol Bay	Red	6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bristol Bay Species Endorsements		6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
Bristol Bay Vessels		6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
Total King Crab Species Endorsements		37	192	35	264	7	271	27	419	121	567	62	629	64	611	156	831	69	900
Total King Crab Vessels		36	139	19	194	4	198	26	221	53	300	24	324	62	360	72	494	28	522
Tanner Crab																			
Eastern Bering Sea	C opilo	0	73	15	88	3	91	2	123	49	174	19	193	2	196	64	262	22	284
	C bairdi	1	94	16	111	3	114	2	146	49	197	19	216	3	240	65	308	22	330
Eastern Bering Sea Species Endorsements		1	167	31	199	6	205	4	269	98	371	38	409	5	436	129	570	44	614
Eastern Bering Sea Vessels		1	94	16	111	3	114	4	148	50	202	19	221	5	242	66	313	22	335
Western Bering Sea	C opilo	0	50	11	61	3	64	1	98	41	140	18	158	1	148	52	201	21	222
	C bairdi	0	7	2	9	0	9	0	7	12	19	5	24	0	14	14	28	5	33
Western Bering Sea Species Endorsements		0	57	13	70	3	73	1	105	53	159	23	182	1	162	66	229	26	255
Western Bering Sea Vessels		0	50	11	61	3	64	1	98	41	140	18	158	1	148	52	201	21	222
Eastern Aleutians	C opilo	0	0	0	0	0	0	0	3	0	3	0	3	0	3	0	3	0	3
	C bairdi	8	2	0	10	0	10	2	5	0	7	1	8	10	7	0	17	1	18
Eastern Aleutians Species Endorsements		8	2	0	10	0	10	2	8	0	10	1	11	10	10	0	20	1	21
Eastern Aleutians Vessels		8	2	0	10	0	10	2	5	0	7	1	8	10	7	0	17	1	18
Western Aleutians	C opilo	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	0	2
	C bairdi	0	4	0	4	0	4	5	5	2	12	3	15	5	9	2	16	3	19
Western Aleutians Species Endorsements		0	5	0	5	0	5	5	6	2	13	3	16	5	11	2	18	3	21
Western Aleutians Vessels		0	5	0	5	0	5	5	6	2	13	3	16	5	11	2	18	3	21
Total Tanner Crab Endorsements		9	231	44	284	9	293	12	388	153	553	65	618	21	619	197	837	74	911
Total Tanner Crab Vessels		9	96	16	121	3	124	12	150	50	212	19	231	21	246	66	333	22	355
Total Endorsements for King and Tanner Crab		46	423	79	548	16	564	39	807	274	1,120	127	1,247	85	1,230	353	1,668	143	1,811
Total Vessels for King and Tanner Crab		42	142	21	205	4	209	38	224	59	321	24	345	80	366	80	526	28	554

Table 7B

Configuration 231421

B Licenses Issued to Current Owners Based on the Vessels, January 1, 1980 to December 31, 1993 and did not Receive a License Under Configuration 31421

Please note, because some observations were not broken out by individual area, they were not included.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Licenses
King Crab																			
Norton Sound	Red	0	4	1	5	0	5	0	8	1	9	4	13	0	12	2	14	4	18
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton Sound Species Endorsements		0	4	1	5	0	5	0	8	1	9	4	13	0	12	2	14	4	18
Norton Sound Vessels		0	4	1	5	0	5	0	8	1	9	4	13	0	12	2	14	4	18
St Lawrence/St Mathew	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	1	37	4	42	2	44	0	58	14	72	15	87	1	95	18	114	17	131
	Brown	0	5	6	11	0	11	0	6	5	11	2	13	0	11	11	22	2	24
St Lawrence/St. Mathew Species Endorsements		1	42	10	53	2	55	0	64	19	83	17	100	1	106	29	136	19	155
St. Lawrence/St Mathew Vessels		1	40	7	48	2	50	0	60	18	78	15	93	1	100	25	126	17	143
Pribilof	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	1	6	2	9	0	9	0	0	0	0	4	4	1	6	2	9	4	13
	Brown	0	1	0	1	0	1	0	4	2	6	1	7	0	5	2	7	1	8
Pribilof Species Endorsements		1	8	2	11	0	11	0	4	2	6	5	11	1	12	4	17	5	22
Pribilof Vessels		1	8	2	11	0	11	0	4	2	6	5	11	1	12	4	17	5	22
Adak	Red	1	40	11	52	3	55	1	78	25	104	17	121	2	118	36	156	20	176
	Brown	1	39	8	48	3	51	2	78	28	108	20	128	3	117	36	156	23	179
Adak Species Endorsements		2	79	19	100	6	106	3	156	53	212	37	249	5	235	72	312	43	355
Adak Vessels		2	82	14	68	3	71	2	109	37	148	21	169	4	161	81	216	24	240
Dutch Harbor	Red	1	5	2	8	1	9	1	9	0	10	7	17	2	14	2	18	8	26
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	2	12	3	17	1	18	1	61	9	71	13	84	3	73	12	88	14	102
Dutch Harbor Species Endorsements		3	17	5	25	2	27	2	70	9	81	20	101	5	87	14	106	22	128
Dutch Harbor Vessels		3	17	8	28	1	29	2	69	9	80	18	98	5	86	14	108	18	121
Bristol Bay	Red	7	61	12	80	4	84	2	64	21	87	29	116	9	125	33	167	33	200
	Blue	0	2	0	2	0	2	0	6	2	8	0	8	0	8	2	10	0	10
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bristol Bay Species Endorsements		7	63	12	82	4	86	2	70	23	95	29	124	9	133	35	177	33	210
Bristol Bay Vessels		7	61	12	80	4	84	2	70	23	95	29	124	9	131	35	176	33	208
Total King Crab Species Endorsements		14	213	49	276	14	290	7	372	107	486	112	598	21	585	156	762	126	888
Total King Crab Vessels		14	113	20	147	4	151	5	186	57	248	32	280	19	299	77	395	36	431
Tanner Crab																			
Eastern Bering Sea	C. opilio	1	31	7	39	3	42	2	25	8	35	18	53	3	56	15	74	21	95
	C. bairdi	10	25	3	38	3	41	3	19	7	29	19	48	13	44	10	67	22	89
Eastern Bering Sea Species Endorsements		11	56	10	77	6	83	5	44	15	64	37	101	16	100	25	141	43	184
Eastern Bering Sea Vessels		11	41	8	60	3	63	6	38	11	62	19	71	16	77	18	112	22	134
Western Bering Sea	C. opilio	0	38	10	48	3	51	0	33	15	48	18	66	0	71	25	96	21	117
	C. bairdi	0	49	11	60	2	62	0	64	17	81	10	91	0	113	28	141	12	153
Western Bering Sea Species Endorsements		0	87	21	108	5	113	0	97	32	129	28	157	0	184	53	237	33	270
Western Bering Sea Vessels		0	70	17	87	3	90	0	88	26	110	18	128	0	158	42	197	21	218
Eastern Aleutians	C. opilio	6	0	0	6	0	6	1	0	0	1	0	1	7	0	0	7	0	7
	C. bairdi	28	6	0	34	0	34	7	19	2	28	3	31	35	25	2	62	3	65
Eastern Aleutians Species Endorsements		34	6	0	40	0	40	8	19	2	29	3	32	42	25	2	69	3	72
Eastern Aleutians Vessels		27	6	0	33	0	33	8	18	2	28	3	31	38	24	2	61	3	64
Western Aleutians	C. opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C. bairdi	1	8	1	10	1	11	1	20	5	26	5	31	2	28	6	36	6	42
Western Aleutians Species Endorsements		1	8	1	10	1	11	1	20	5	26	5	31	2	28	6	36	6	42
Western Aleutians Vessels		1	8	1	10	1	11	1	20	5	26	5	31	2	28	6	36	6	42
Total Tanner Crab Endorsements		46	157	32	235	12	247	14	180	54	248	73	321	60	337	86	483	85	568
Total Tanner Crab Vessels		37	94	17	148	4	152	12	126	34	172	23	195	49	220	51	320	27	347
Total Endorsements for King and Tanner Crab		60	370	81	511	26	537	21	552	161	734	185	919	81	922	242	1,245	211	1,456
Total Vessels for King and Tanner Crab		48	145	23	216	4	220	17	216	63	298	32	327	65	360	86	511	36	547

Table 7C

Configuration 331421

A and B Licenses Issued to Current Owners Based on the Vessels, January 1 1960 to December 31, 1993 and and License Configuration 31421

Please note, because some observations were not broken out by individual area, they were not included.

Current Owner's State of Residence

Area	Species	Alaska CV < 60	Alaska CV 60-125	Alaska CV > 125	Alaska CV Total	Alaska CP	Alaska Total	Other CV < 60	Other CV 60-125	Other CV > 125	Other CV Total	Other CP	Other Total	Total CV < 60	Total CV 60-125	Total CV > 125	Total CV Total	Total CP	Licenses
King Crab																			
Norton Sound	Red	0	4	1	5	0	5	1	8	1	10	4	14	1	12	2	15	4	19
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton Sound Species Endorsements		0	4	1	5	0	5	1	8	1	10	4	14	1	12	2	15	4	19
Norton Sound Vessels		0	4	1	5	0	5	1	8	1	10	4	14	1	12	2	15	4	19
St Lawrence/St Mathew	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	2	57	14	73	4	77	0	113	33	146	29	175	2	170	47	219	33	252
	Brown	0	5	6	11	0	11	0	6	5	11	2	13	0	11	11	22	2	24
St Lawrence/St Mathew Species Endorsements		2	62	20	84	4	88	0	119	38	157	31	188	2	181	58	241	35	276
St. Lawrence/St Mathew Vessels		2	60	17	79	4	83	0	116	37	152	29	181	2	176	54	231	33	264
Pribilof	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	1	6	2	9	0	9	2	39	9	50	10	60	3	45	11	59	10	69
	Brown	0	1	0	1	0	1	0	4	2	6	2	8	0	5	2	7	2	9
Pribilof Species Endorsements		1	8	2	11	0	11	2	43	11	56	12	68	3	51	13	67	12	79
Pribilof Vessels		1	8	2	11	0	11	2	43	11	56	12	68	3	51	13	67	12	79
Adak	Red	1	52	13	66	4	70	1	108	35	144	22	166	2	160	48	210	26	236
	Brown	1	49	11	61	3	64	2	114	46	162	26	188	3	163	57	223	29	252
Adak Species Endorsements		2	101	24	127	7	134	3	222	81	306	48	354	5	323	105	433	55	488
Adak Vessels		2	68	18	88	4	92	2	166	69	217	28	245	4	224	77	305	32	337
Dutch Harbor	Red	31	44	5	80	2	82	22	105	7	134	14	148	53	149	12	214	16	230
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	2	13	4	19	1	20	1	68	20	89	16	105	3	81	24	108	17	125
Dutch Harbor Species Endorsements		33	57	9	99	3	102	23	173	27	223	30	253	56	230	36	322	33	355
Dutch Harbor Vessels		33	56	9	98	2	100	23	172	26	220	26	246	56	228	34	318	27	346
Bristol Bay	Red	13	171	28	212	7	219	5	220	68	293	49	342	18	391	96	505	56	561
	Blue	0	2	0	2	0	2	0	6	2	8	0	8	0	8	2	10	0	10
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bristol Bay Species Endorsements		13	173	28	214	7	221	5	226	70	301	49	350	18	399	98	515	56	571
Bristol Bay Vessels		13	171	28	212	7	219	5	226	70	301	49	350	18	397	98	513	56	569
Total King Crab Species Endorsements		51	405	84	540	21	561	34	791	228	1,053	174	1,227	85	1,196	312	1,593	195	1,788
Total King Crab Vessels		50	252	39	341	8	349	31	407	110	548	56	604	81	659	149	889	64	953
Tanner Crab																			
Eastern Bering Sea	C. opilio	1	104	22	127	6	133	4	148	57	209	37	246	5	252	79	336	43	379
	C. bairdi	11	119	19	149	6	155	5	165	56	226	38	264	16	284	75	375	44	419
Eastern Bering Sea Species Endorsements		12	223	41	276	12	288	9	313	113	435	75	510	21	536	154	711	87	798
Eastern Bering Sea Vessels		12	135	24	171	6	177	9	184	61	254	38	292	21	319	85	425	44	469
Western Bering Sea	C. opilio	0	88	21	109	6	115	1	131	56	188	36	224	1	219	77	297	42	339
	C. bairdi	0	56	13	69	2	71	0	71	29	100	15	115	0	127	42	169	17	186
Western Bering Sea Species Endorsements		0	144	34	178	8	186	1	202	85	288	51	339	1	346	119	466	59	525
Western Bering Sea Vessels		0	120	28	148	6	154	1	183	66	250	38	288	1	303	94	398	42	440
Eastern Aleutians	C. opilio	6	0	0	6	0	6	1	3	0	4	0	4	7	3	0	10	0	10
	C. bairdi	36	8	0	44	0	44	9	24	2	35	4	39	45	32	2	79	4	83
Eastern Aleutians Species Endorsements		42	8	0	50	0	50	10	27	2	39	4	43	52	35	2	89	4	93
Eastern Aleutians Vessels		35	8	0	43	0	43	10	23	2	35	4	39	45	31	2	78	4	82
Western Aleutians	C. opilio	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	0	2
	C. bairdi	1	12	1	14	1	15	6	25	7	38	8	46	7	37	8	52	9	61
Western Aleutians Species Endorsements		1	13	1	15	1	16	6	26	7	39	8	47	7	39	8	54	9	63
Western Aleutians Vessels		1	13	1	15	1	16	6	26	7	39	8	47	7	39	8	54	8	63
Total Tanner Crab Endorsements		55	388	76	519	21	540	26	568	207	801	138	939	81	956	283	1,320	159	1,479
Total Tanner Crab Vessels		46	190	33	269	7	276	24	276	84	384	42	426	70	466	117	653	49	702
Total Endorsements for King and Tanner Crab		106	793	160	1,059	42	1,101	60	1,359	435	1,854	312	2,166	166	2,152	595	2,913	354	3,267
Total Vessels for King and Tanner Crab		90	287	44	421	8	429	55	438	122	615	56	672	145	725	166	1,037	64	1,101

Table 8A

Configuration 3142I		Licenses Issued to Current Owners Based on the Vessels, June 28,1989 - June 27, 1992 (June 29, 1980 - June 25, 1983 for Dutch Harbor Red & June 29, 1986 - June 28, 1988 for Pribilof Blue)																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Licenses
King Crab																			
Norton Sound	Red	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton Sound Species Endorsements		0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
Norton Sound Vessels		0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
St Lawrence/St Mathew	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St Lawrence/St. Mathew Species Endorsements		1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
St. Lawrence/St.Mathew Vessels		1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
Pribilof	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	2	39	9	50	6	56	2	39	9	50	6	56
	Brown	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
Pribilof Species Endorsements		0	0	0	0	0	0	2	39	9	50	7	57	2	39	9	50	7	57
Pribilof Vessels		0	0	0	0	0	0	2	39	9	50	7	57	2	39	9	50	7	57
Adak	Red	0	12	2	14	1	15	0	30	10	40	5	45	0	42	12	54	6	60
	Brown	0	10	3	13	0	13	0	36	18	54	6	60	0	46	21	67	6	73
Adak Species Endorsements		0	22	5	27	1	28	0	66	28	94	11	105	0	88	33	121	12	133
Adak Vessels		0	16	4	20	1	21	0	47	22	69	7	76	0	63	26	89	8	97
Dutch Harbor	Red	30	39	3	72	1	73	21	96	7	124	7	131	51	135	10	196	8	204
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	1	1	2	0	2	0	7	11	18	3	21	0	8	12	20	3	23
Dutch Harbor Species Endorsements		30	40	4	74	1	75	21	103	18	142	10	152	51	143	22	216	11	227
Dutch Harbor Vessels		30	39	4	73	1	74	21	103	16	140	10	150	51	142	20	213	11	224
Bristol Bay	Red	6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bristol Bay Species Endorsements		6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
Bristol Bay Vessels		6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
Total King Crab Species Endorsements		37	192	35	264	7	271	27	419	121	567	62	629	64	611	156	831	69	900
Total King Crab Vessels		36	139	19	194	4	198	26	221	63	300	24	324	62	360	72	494	28	822
Tanner Crab																			
Eastern Bering Sea	C. opilio	0	73	15	88	3	91	2	123	49	174	19	193	2	196	64	262	22	284
	C. bairdi	1	94	16	111	3	114	2	146	49	197	19	216	3	240	65	308	22	330
Eastern Bering Sea Species Endorsements		1	167	31	199	6	205	4	269	98	371	38	409	5	436	129	570	44	614
Eastern Bering Sea Vessels		1	94	16	111	3	114	4	148	50	202	19	221	5	242	66	313	22	335
Western Bering Sea	C. opilio	0	50	11	61	3	64	1	98	41	140	18	158	1	148	52	201	21	222
	C. bairdi	0	7	2	9	0	9	0	7	12	19	5	24	0	14	14	28	5	33
Western Bering Sea Species Endorsements		0	57	13	70	3	73	1	105	53	159	23	182	1	162	66	229	26	255
Western Bering Sea Vessels		0	50	11	61	3	64	1	98	41	140	18	158	1	148	52	201	21	222
Eastern Aleutians	C. opilio	0	0	0	0	0	0	0	3	0	3	0	3	0	3	0	3	0	3
	C. bairdi	8	2	0	10	0	10	2	5	0	7	1	8	10	7	0	17	1	18
Eastern Aleutians Species Endorsements		8	2	0	10	0	10	2	8	0	10	1	11	10	10	0	20	1	21
Eastern Aleutians Vessels		8	2	0	10	0	10	2	5	0	7	1	8	10	7	0	17	1	18
Western Aleutians	C. opilio	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	0	2
	C. bairdi	0	4	0	4	0	4	5	5	2	12	3	15	5	9	2	16	3	19
Western Aleutians Species Endorsements		0	5	0	5	0	5	5	6	2	13	3	16	5	11	2	18	3	21
Western Aleutians Vessels		0	6	0	6	0	6	5	6	2	13	3	16	5	11	2	18	3	21
Total Tanner Crab Endorsements		9	231	44	284	9	293	12	388	153	553	65	618	21	619	197	837	74	911
Total Tanner Crab Vessels		9	96	16	121	3	124	12	140	60	212	19	231	21	246	66	333	22	355
Total Endorsements for King and Tanner Crab		46	423	79	548	16	564	39	807	274	1,120	127	1,247	85	1,230	353	1,668	143	1,811
Total Vessels for King and Tanner Crab		47	142	21	205	4	209	38	224	59	321	24	345	80	366	80	526	28	554

Table 8B

Configuration 331421

B Licenses Issued to Current Owners Based on the Vessels, January 1, 1988 to December 31, 1993 and did not Receive a License Under Configuration 31421

Please note, because some observations were not broken out by individual area, they were not included.

		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Licenses
King Crab																			
Norton Sound	Red	0	4	1	5	0	5	0	8	1	9	3	12	0	12	2	14	3	17
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton Sound Species Endorsements		0	4	1	5	0	5	0	8	1	9	3	12	0	12	2	14	3	17
Norton Sound Vessels		0	4	1	5	0	5	0	8	1	9	3	12	0	12	2	14	3	17
St Lawrence/St Mathew	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	36	4	40	2	42	0	55	14	69	14	83	0	91	18	109	16	125
	Brown	0	4	4	8	0	8	0	6	4	10	2	12	0	10	8	18	2	20
St Lawrence/St. Mathew Species Endorsements		0	40	8	48	2	50	0	61	18	79	16	95	0	101	26	127	18	145
St. Lawrence/St.Mathew Vessels		1	39	7	47	2	49	0	67	18	75	14	89	1	96	26	122	16	138
Pribilof	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	1	5	2	8	0	8	0	0	0	0	4	4	1	5	2	8	4	12
	Brown	0	1	0	1	0	1	0	4	2	6	1	7	0	5	2	7	1	8
Pribilof Species Endorsements		1	7	2	10	0	10	0	4	2	6	5	11	1	11	4	16	5	21
Pribilof Vessels		1	7	2	10	0	10	0	4	2	6	5	11	1	11	4	16	5	21
Adak	Red	1	34	8	43	2	45	0	67	20	87	13	100	1	101	28	130	15	145
	Brown	1	29	6	36	2	38	0	58	17	75	15	90	1	87	23	111	17	128
Adak Species Endorsements		2	63	14	79	4	83	0	125	37	162	28	190	2	188	51	241	32	273
Adak Vessels		2	42	11	65	2	67	0	88	26	114	16	130	2	130	37	169	18	187
Dutch Harbor	Red	0	1	2	3	0	3	0	1	0	1	4	5	0	2	2	4	4	8
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	1	8	2	11	0	11	0	46	8	54	10	64	1	54	10	65	10	75
Dutch Harbor Species Endorsements		1	9	4	14	0	14	0	47	8	55	14	69	1	56	12	69	14	83
Dutch Harbor Vessels		1	9	4	14	0	14	0	47	8	55	11	66	1	56	12	69	11	80
Bristol Bay	Red	7	33	9	49	3	52	2	26	14	42	20	62	9	59	23	91	23	114
	Blue	0	0	0	0	0	0	0	6	2	8	0	8	0	6	2	8	0	8
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bristol Bay Species Endorsements		7	33	9	49	3	52	2	32	16	50	20	70	9	65	25	99	23	122
Bristol Bay Vessels		7	33	9	49	3	52	2	32	16	50	20	70	9	65	25	99	23	122
Total King Crab Species Endorsements		11	156	38	205	9	214	2	277	82	361	86	447	13	433	120	566	95	661
Total King Crab Vessels		11	80	17	108	3	111	2	134	46	182	20	202	13	214	63	290	23	313
Tanner Crab																			
Eastern Bering Sea	C opilio	1	29	7	37	3	40	1	18	8	27	18	45	2	47	15	64	21	85
	C bairdi	10	24	3	37	3	40	2	17	7	26	18	44	12	41	10	63	21	84
Eastern Bering Sea Species Endorsements		11	53	10	74	6	80	3	35	15	53	36	89	14	88	25	127	42	169
Eastern Bering Sea Vessels		11	39	8	58	3	61	3	29	11	43	18	61	14	68	19	101	21	122
Western Bering Sea	C opilio	0	37	10	47	3	50	0	33	15	48	18	66	0	70	25	95	21	116
	C bairdi	0	49	11	60	2	62	0	64	17	81	10	91	0	113	28	141	12	153
Western Bering Sea Species Endorsements		0	86	21	107	5	112	0	97	32	129	28	157	0	183	53	236	33	269
Western Bering Sea Vessels		0	69	17	86	3	89	0	84	26	110	18	128	0	154	42	196	21	217
Eastern Aleutians	C opilio	2	0	0	2	0	2	1	0	0	1	0	1	3	0	0	3	0	3
	C bairdi	13	3	0	16	0	16	3	4	2	9	1	10	16	7	2	25	1	26
Eastern Aleutians Species Endorsements		15	3	0	18	0	18	4	4	2	10	1	11	19	7	2	28	1	29
Eastern Aleutians Vessels		15	3	0	18	0	18	4	4	2	10	1	11	19	7	2	28	1	29
Western Aleutians	C opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C bairdi	1	5	1	7	1	8	1	8	1	10	3	13	2	13	2	17	4	21
Western Aleutians Species Endorsements		1	5	1	7	1	8	1	8	1	10	3	13	2	13	2	17	4	21
Western Aleutians Vessels		1	5	1	7	0	7	1	8	1	10	3	13	2	13	2	17	3	20
Total Tanner Crab Endorsements		27	147	32	206	12	218	8	144	50	202	68	270	35	291	82	408	80	488
Total Tanner Crab Vessels		26	88	17	126	3	131	6	100	30	136	18	154	31	186	47	264	21	285
Total Endorsements for King and Tanner Crab		38	303	70	411	21	432	10	421	132	563	154	717	48	724	202	974	175	1,149
Total Vessels for King and Tanner Crab		35	111	20	166	3	169	8	165	62	216	20	236	43	266	72	381	23	404

Table 5B

Configuration 3915211		B Licenses Issued to Current Owners Based on the Vessels, January 1, 1980 - December 31, 1993, Catch History and did not Receive a License Under Configuration 915211																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Licenses
AI	AMCK	2	3	1	6	0	6	4	17	9	30	16	46	6	20	10	36	16	52
	GTRB	9	2	1	12	1	13	12	26	16	54	13	67	21	28	17	66	14	80
	DFLT	0	2	1	3	2	5	2	9	9	20	9	29	2	11	10	23	11	34
	PCOD	3	1	0	4	1	5	9	29	16	54	14	68	12	30	16	58	15	73
	PLCK	1	5	1	7	1	8	2	21	14	37	8	45	3	26	15	44	9	53
	ROCK	11	3	1	15	2	17	16	29	18	63	11	74	27	32	19	78	13	91
	RSOL	1	4	0	5	1	6	1	18	10	29	9	38	2	22	10	34	10	44
	SQID	0	0	0	0	2	2	0	0	0	0	19	19	0	0	0	0	21	21
	YSOL	0	0	0	0	0	0	0	2	2	4	5	9	0	2	2	4	5	9
AI Species Endorsements		27	20	5	52	10	62	46	151	94	291	104	395	73	171	99	343	114	457
AI Vessels		14	7	3	24	7	31	21	59	28	108	56	164	35	66	31	132	63	195
BS	AMCK	3	5	0	8	1	9	0	12	6	18	6	24	3	17	6	26	7	33
	GTRB	20	8	2	30	0	30	21	22	11	54	7	61	41	30	13	84	7	91
	DFLT	14	2	0	16	1	17	17	14	8	39	4	43	31	16	8	55	5	60
	PCOD	45	4	0	49	1	50	23	27	14	64	2	66	68	31	14	113	3	116
	PLCK	22	2	0	24	1	25	17	23	8	48	1	49	39	25	8	72	2	74
	ROCK	33	6	1	40	0	40	17	19	8	44	9	53	50	25	9	84	9	93
	RSOL	7	3	0	10	0	10	8	15	6	29	4	33	15	18	6	39	4	43
	SQID	0	0	1	1	1	2	1	0	1	2	26	28	1	0	2	3	27	30
	YSOL	6	2	0	8	1	9	6	15	9	30	4	34	12	17	9	38	5	43
BS Species Endorsements		150	32	4	186	6	192	110	147	71	328	63	391	260	179	75	514	69	583
BS Vessels		77	19	2	98	4	102	45	61	23	129	49	178	122	80	25	227	53	280
CG	AMCK	2	3	0	5	0	5	0	2	0	2	5	7	2	5	0	7	5	12
	DFLT	16	8	0	24	8	32	9	18	4	31	13	44	25	26	4	55	21	76
	FSOL	18	6	0	24	6	30	6	25	4	35	10	45	24	31	4	59	16	75
	PCOD	209	22	1	232	12	244	51	37	6	94	13	107	260	59	7	326	25	351
	PLCK	71	9	0	80	7	87	16	34	5	55	11	66	87	43	5	135	18	153
	ROCK	145	25	1	171	9	180	48	24	7	79	11	90	193	49	8	250	20	270
	SFLT	25	7	0	32	6	38	12	20	4	36	7	43	37	27	4	68	13	81
CG Species Endorsements		486	80	2	568	48	616	142	160	30	332	70	402	628	240	32	900	118	1,018
CG Vessels		367	56	2	425	27	452	98	75	11	184	36	220	465	131	13	609	63	672
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	7	2	0	9	2	11	3	3	0	6	13	19	10	5	0	15	15	30
	FSOL	2	1	0	3	1	4	2	0	0	2	5	7	4	1	0	5	6	11
	PCOD	409	14	2	425	11	436	87	9	1	97	15	112	496	23	3	522	26	548
	PLCK	14	3	1	18	2	20	3	3	2	8	7	15	17	6	3	26	9	35
	ROCK	408	30	1	439	11	450	111	15	4	130	12	142	519	45	5	569	23	592
	SFLT	9	1	0	10	3	13	5	0	1	6	11	17	14	1	1	16	14	30
EG Species Endorsements		849	51	4	904	30	934	211	30	8	249	64	313	1,060	81	12	1,153	94	1,247
EG Vessels		962	49	2	1,013	23	1,036	204	29	5	238	24	262	1,166	78	7	1,251	47	1,298
WG	AMCK	6	2	0	8	0	8	1	8	3	12	3	15	7	10	3	20	3	23
	DFLT	18	3	0	21	4	25	7	11	4	22	4	26	25	14	4	43	8	51
	FSOL	11	3	1	15	1	16	5	10	2	17	6	23	16	13	3	32	7	39
	PCOD	62	9	0	71	6	77	14	13	5	32	9	41	76	22	5	103	15	118
	PLCK	16	7	1	24	1	25	7	9	2	18	5	23	23	16	3	42	6	48
	ROCK	29	9	0	38	7	45	17	14	4	35	8	43	46	23	4	73	15	88
	SFLT	18	4	1	23	2	25	6	9	2	17	4	21	24	13	3	40	6	46
WG Species Endorsements		160	37	3	200	21	221	57	74	22	153	39	192	217	111	25	353	60	413
WG Vessels		116	22	1	139	12	151	37	50	15	102	23	125	153	72	16	241	35	276
Total Endorsements		1,672	220	18	1,910	115	2,025	566	562	225	1,353	340	1,693	2,238	782	243	3,263	455	3,718
BSAI Vessels		85	21	3	109	9	118	55	105	36	196	70	266	140	126	39	305	79	384
GOA Vessels		1,345	108	5	1,456	46	1,502	285	108	21	415	57	472	1,630	216	26	1,871	103	1,974
Total Vessels		1,462	115	6	1,582	51	1,633	374	173	42	589	94	683	1,836	288	47	2,171	145	2,316

Table 6A

Licenses Issued to Current Vessel Owners
Based on the Vessel's, January 1, 1990 - December 31, 1993, Catch History
Current Owner's State of Residence

Configuration 915411

Area	Species	Alaska CV < 60	Alaska CV 60-125	Alaska CV >125	Alaska CV Total	Alaska CP < 60	Alaska CP 60-125	Alaska CP >125	Alaska CP Total	Alaska Total	Other CV < 60	Other CV 60-125	Other CV >125	Other CV Total	Other CP < 60	Other CP 60-125	Other CP >125	Other CP Total	Other Total	Total CV < 60	Total CV 60-125	Total CV >125	Total CV Total	Total CP < 60	Total CP 60-125	Total CP >125	Total CP Total	Licenses
AI	AMCK	1	3	2	6	1	0	9	10	16	3	15	8	26	3	9	48	60	86	4	18	10	32	4	9	57	70	102
	GTHB	8	8	1	17	1	2	9	12	29	18	30	14	62	6	16	45	67	129	26	38	15	79	7	18	54	79	158
	OFLT	0	2	1	3	0	1	10	11	14	4	18	12	34	6	9	40	55	89	4	20	13	37	6	10	50	66	103
	PCOD	20	11	2	33	2	4	10	16	49	26	58	23	107	7	17	64	88	195	46	69	25	140	9	21	74	104	244
	PLCK	0	1	2	3	0	0	10	10	13	3	40	20	63	7	7	51	65	128	3	41	22	66	7	7	61	75	141
	ROCK	5	12	2	19	2	3	10	15	34	21	51	15	87	7	17	57	81	168	26	63	17	106	9	20	67	96	202
	RSOL	0	2	0	2	0	0	9	9	11	2	4	8	14	5	6	41	52	66	2	6	8	16	5	6	50	61	77
	SQID	0	0	0	0	0	0	2	2	2	0	2	0	2	6	0	13	19	21	0	2	0	2	6	0	15	21	23
	YSOL	0	0	0	0	0	0	3	3	3	0	1	1	2	2	0	13	15	17	0	1	1	2	2	0	16	18	20
AI Species Endorsements		34	39	10	83	6	10	72	88	171	79	217	101	397	49	81	372	502	899	113	256	111	480	55	91	444	590	1,070
AI Vessels		23	16	2	41	2	4	10	16	57	36	69	29	134	7	18	66	91	225	59	85	31	175	9	22	76	107	282
BS	AMCK	4	13	1	18	0	1	8	9	27	0	64	20	84	5	7	46	58	142	4	77	21	102	5	8	54	67	169
	GTFB	40	25	2	67	1	3	11	15	82	34	103	30	167	7	20	57	84	251	74	128	32	234	8	23	68	99	333
	OFLT	36	35	2	73	0	5	11	16	89	32	109	30	171	7	21	61	89	260	68	144	32	244	7	26	72	105	349
	PCOD	236	83	3	322	7	9	12	28	350	90	188	46	324	7	24	67	98	422	326	271	49	646	14	33	79	126	772
	PLCK	62	42	2	106	2	5	11	18	124	37	118	32	187	7	21	61	89	276	99	160	34	293	9	26	72	107	400
	ROCK	79	44	2	125	4	5	11	20	145	42	116	28	186	7	21	58	86	272	121	160	30	311	11	26	69	106	417
	RSOL	20	34	1	55	0	5	11	16	71	20	103	27	150	7	18	56	81	231	40	137	28	205	7	23	67	97	302
	SQID	0	1	1	2	0	0	2	2	4	1	4	3	8	6	1	22	29	37	1	5	4	10	6	1	24	31	41
	YSOL	13	23	1	37	0	1	11	12	49	16	94	29	139	7	14	55	76	215	29	117	30	176	7	15	66	88	264
BS Species Endorsements		490	300	15	805	14	34	88	136	941	272	899	245	1,416	80	147	463	690	2,106	762	1,199	260	2,221	74	181	671	826	3,047
BS Vessels		266	89	3	358	8	9	12	29	387	110	184	47	351	7	24	67	98	449	378	283	50	709	16	33	79	127	836
CG	AMCK	3	2	0	5	0	0	2	2	7	0	2	0	2	0	0	12	12	14	3	4	0	7	0	0	14	14	21
	DFLT	54	37	1	92	2	6	9	17	109	22	53	5	80	1	13	36	50	130	76	90	6	172	3	19	45	67	239
	FSOL	27	29	0	56	2	2	8	12	68	9	56	6	71	0	7	25	32	103	36	85	6	127	2	9	33	44	171
	PCOD	764	130	4	898	28	12	10	50	948	128	127	17	272	1	22	40	63	335	892	257	21	1,170	29	34	50	113	1,283
	PLCK	222	48	1	271	8	5	8	21	292	31	88	14	133	2	15	35	52	185	253	136	15	404	10	20	43	73	477
	ROCK	656	110	1	767	30	8	10	48	815	173	117	14	304	3	20	41	64	368	829	227	15	1,071	33	28	51	112	1,183
	SFLT	86	43	0	129	2	3	8	13	142	24	66	9	99	0	11	30	41	140	110	109	9	228	2	14	38	54	282
CG Species Endorsements		1,812	399	7	2,218	72	38	55	163	2,381	387	509	85	981	7	88	219	314	1,275	2,199	908	72	3,179	79	124	274	477	3,656
CG Vessels		959	146	4	1,109	34	13	10	57	1,166	217	165	21	403	4	23	45	72	475	1,176	311	25	1,512	38	36	55	129	1,641
EG	AMCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DFLT	7	3	0	10	1	1	4	6	16	5	3	0	8	0	6	15	21	29	12	6	0	18	1	7	19	27	45
	FSOL	2	2	0	4	0	0	4	4	8	1	0	0	1	0	1	8	9	10	3	2	0	5	0	1	12	13	18
	PCOD	875	20	3	898	20	2	4	26	924	126	16	1	143	2	6	17	25	168	1,001	36	4	1,041	22	8	21	51	1,092
	PLCK	15	4	1	20	1	0	4	5	25	5	3	1	9	0	3	14	17	26	20	7	2	29	1	3	18	22	51
	ROCK	792	36	1	829	28	8	4	36	888	208	47	3	258	4	12	17	33	291	1,000	83	4	1,087	33	18	21	72	1,159
	SFLT	11	2	0	13	2	0	3	5	18	4	3	0	7	0	2	9	11	18	15	5	0	20	2	2	12	16	36
EG Species Endorsements		1,702	67	5	1,774	53	9	23	85	1,859	349	72	5	426	6	30	80	116	542	2,051	139	10	2,200	59	39	103	201	2,401
EG Vessels		1,182	43	3	1,228	30	6	4	40	1,268	261	56	5	322	5	14	21	40	362	1,443	99	8	1,550	35	20	25	80	1,630
WG	AMCK	6	2	1	9	0	1	7	8	17	1	23	8	32	1	3	24	28	60	7	25	9	41	1	4	31	36	77
	DFLT	28	16	1	45	1	3	11	15	60	17	51	18	86	1	14	41	56	142	45	67	19	131	2	17	52	71	202
	FSOL	13	5	1	19	0	1	6	7	26	7	50	12	69	1	8	28	37	106	20	55	13	88	1	9	34	44	132
	PCOD	162	43	3	208	7	5	10	22	230	40	97	31	168	3	20	52	75	243	202	140	34	376	10	25	62	97	473
	PLCK	37	16	1	54	0	4	9	13	67	12	70	22	104	5	13	50	68	172	49	86	23	158	5	17	59	81	239
	ROCK	68	26	2	96	4	4	11	19	115	51	81	19	151	4	18	49	71	222	119	107	21	247	8	22	60	90	337
	SFLT	27	13	1	41	0	3	9	12	53	12	59	22	93	3	10	44	57	150	39	72	23	134	3	13	53	69	203
WG Species Endorsements		341	121	10	472	12	21	43	96	568	140	431	132	703	18	86	288	392	1,095	481	552	142	1,175	30	107	351	488	1,663
WG Vessels		191	50	3	244	10	6	11	27	271	72	116	32	220	5	21	56	82	302	263	166	35	464	15	27	67	109	573
Total Endorsements		4,379	926	47	5,352	157	110	301	568	5,920	1,227	2,126	548	3,903	140	432	1,442	2,014	5,917	5,606	3,054	595	9,255	297	542	1,743	2,582	11,837
BSAI Vessels		271	90	3	364	8	8	12	28	392	117	196	47	360	7	24	68	99	459	388	286	50	724	15	33	80	128	852
GOA Vessels		2,105	165	7	2,277	53	14	11	78	2,355	424	192	38	654	13	25	58	96	750	2,529	357	45	2,931	66	39	69	174	3,105
Total Vessels		2,193	175	8	2,376	53	15	12	80	2,456	535	232	52	819	14	25	68	107	926	2,728	407	60	3,195	67	40	80	187	3,382

Table 8C

A and B Licenses Issued to Current Owners Based on the Vessels, January 1, 1988 to December 31, 1993 and and License Configuration 31421

Please note, because some observations were not broken out by individual area, they were not included.

Configuration 231421		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Total	< 60	60-125	> 125	Total	CP	Licenses
King Crab																			
Norton Sound	Red	0	4	1	5	0	5	1	8	1	10	3	13	1	12	2	15	3	18
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton Sound Species Endorsements		0	4	1	5	0	5	1	8	1	10	3	13	1	12	2	15	3	18
Norton Sound Vessels		0	4	1	5	0	5	1	8	1	10	3	13	1	12	2	15	3	18
St Lawrence/St Mathew	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	1	56	14	71	4	75	0	110	33	143	28	171	1	166	47	214	32	246
	Brown	0	4	4	8	0	8	0	6	4	10	2	12	0	10	8	18	2	20
St Lawrence/St Mathew Species Endorsements		1	60	18	79	4	83	0	116	37	153	30	183	1	176	55	232	34	266
St. Lawrence/St.Mathew Vessels		2	59	17	78	4	82	0	112	37	149	28	177	2	171	54	227	32	259
Pribilof	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	1	5	2	8	0	8	2	39	9	50	10	60	3	44	11	58	10	68
	Brown	0	1	0	1	0	1	0	4	2	6	2	8	0	5	2	7	2	9
Pribilof Species Endorsements		1	7	2	10	0	10	2	43	11	56	12	68	3	50	13	66	12	78
Pribilof Vessels		1	7	2	10	0	10	2	43	11	56	12	68	3	50	13	66	12	78
Adak	Red	1	46	10	57	3	60	0	97	30	127	18	145	1	143	40	184	21	205
	Brown	1	39	9	49	2	51	0	94	35	129	21	150	1	133	44	178	23	201
Adak Species Endorsements		2	85	19	106	5	111	0	191	65	256	39	295	2	276	84	362	44	406
Adak Vessels		2	58	16	76	3	79	0	136	48	183	23	206	2	193	63	258	26	284
Dutch Harbor	Red	30	40	5	75	1	76	21	97	7	125	11	136	51	137	12	200	12	212
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	1	9	3	13	0	13	0	63	10	72	13	85	1	62	22	85	13	98
Dutch Harbor Species Endorsements		31	49	8	88	1	89	21	150	26	197	24	221	52	199	34	285	25	310
Dutch Harbor Vessels		31	48	8	87	1	88	21	150	24	195	21	216	52	198	32	282	22	304
Bristol Bay	Red	13	143	25	181	6	187	5	182	61	248	40	288	18	325	86	429	46	476
	Blue	0	0	0	0	0	0	0	6	2	8	0	8	0	6	2	8	0	8
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bristol Bay Species Endorsements		13	143	25	181	6	187	5	188	63	256	40	296	18	331	88	437	46	483
Bristol Bay Vessels		13	143	25	181	6	187	5	188	63	256	40	296	18	331	88	437	46	483
Total King Crab Species Endorsements		48	348	73	469	16	485	29	696	203	928	148	1,076	77	1,044	276	1,397	164	1,561
Total King Crab Vessels		47	219	36	302	7	309	28	366	88	482	44	526	75	585	124	784	51	835
Tanner Crab																			
Eastern Bering Sea	C opilio	1	102	22	125	6	131	3	141	57	201	37	238	4	243	79	326	43	369
	C bairdi	11	118	19	148	6	154	4	163	56	223	37	260	15	281	75	371	43	414
Eastern Bering Sea Species Endorsements		12	220	41	273	12	285	7	304	113	424	74	498	19	524	154	697	86	783
Eastern Bering Sea Vessels		12	133	24	169	6	175	7	177	61	245	37	282	19	310	85	414	43	457
Western Bering Sea	C opilio	0	87	21	108	6	114	1	131	56	188	36	224	1	218	77	296	42	338
	C bairdi	0	56	13	69	2	71	0	71	29	100	15	115	0	127	42	169	17	186
Western Bering Sea Species Endorsements		0	143	34	177	8	185	1	202	85	288	51	339	1	345	119	465	59	524
Western Bering Sea Vessels		0	119	28	147	6	153	1	183	66	250	36	286	1	302	94	397	42	439
Eastern Aleutians	C opilio	2	0	0	2	0	2	1	3	0	4	0	4	3	3	0	6	0	6
	C bairdi	21	5	0	26	0	26	5	9	2	16	2	18	26	14	2	42	2	44
Eastern Aleutians Species Endorsements		23	5	0	28	0	28	6	12	2	20	2	22	29	17	2	48	2	50
Eastern Aleutians Vessels		23	6	0	29	0	29	6	8	2	16	2	18	29	14	2	45	2	47
Western Aleutians	C opilio	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	0	2
	C bairdi	1	9	1	11	1	12	6	13	3	22	6	28	7	22	4	33	7	40
Western Aleutians Species Endorsements		1	10	1	12	1	13	6	14	3	23	6	29	7	24	4	35	7	42
Western Aleutians Vessels		1	10	1	12	0	12	6	14	3	23	6	29	7	24	4	35	6	41
Total Tanner Crab Endorsements		36	378	76	490	21	511	20	532	203	755	133	888	56	910	279	1,245	154	1,399
Total Tanner Crab Vessels		34	182	33	249	6	256	18	260	80	344	37	386	52	432	113	597	43	640
Total Endorsements for King and Tanner Crab		84	726	149	959	37	996	49	1,228	406	1,683	281	1,964	133	1,954	655	2,642	318	2,960
Total Vessels for King and Tanner Crab		77	253	41	371	7	378	44	379	111	536	44	580	121	632	152	907	51	958

Table 6C

Configuration 3915411		Total A and B Licenses Issued to Current Owners Based on the Vessels, January 1, 1988 - December 31, 1993, Catch History and License Configuration 915411																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	License
AI	AMCK	2	5	2	9	10	19	4	37	14	55	64	119	6	42	16	64	74	138
	GTRB	17	11	2	30	14	44	26	50	18	94	75	169	43	61	20	124	89	213
	OFLT	0	4	1	5	11	16	4	24	14	42	59	101	4	28	15	47	70	117
	PCOD	22	14	2	38	17	55	31	75	28	134	92	226	53	89	30	172	109	281
	PLCK	1	5	2	8	11	19	4	54	26	84	68	152	5	59	28	92	79	171
	ROCK	19	17	3	39	17	56	31	76	24	131	86	217	50	93	27	170	103	273
	RSOL	1	5	0	6	9	15	3	23	13	39	54	93	4	28	13	45	63	108
	SQID	0	0	0	0	2	2	0	2	0	2	19	21	0	2	0	2	21	23
	YSOL	0	0	0	0	3	3	0	2	2	4	17	21	0	2	2	4	20	24
AI Species Endorsements		62	61	12	135	94	229	103	343	139	585	534	1,119	165	404	151	720	628	1,348
AI Vessels		38	23	3	64	20	84	47	118	38	202	106	308	85	139	42	286	126	392
BS	AMCK	4	17	1	22	10	32	2	86	23	111	64	175	6	103	24	133	74	207
	GTRB	45	32	3	80	16	96	40	121	36	197	90	287	85	153	39	277	106	383
	OFLT	38	40	2	80	16	96	36	119	36	191	90	281	74	159	38	271	106	377
	PCOD	249	86	3	338	28	366	97	199	52	348	100	448	346	285	55	686	128	814
	PLCK	64	45	2	111	18	129	42	132	38	212	89	301	106	177	40	323	107	430
	ROCK	87	47	3	137	20	157	48	129	34	211	90	301	135	176	37	348	110	458
	RSOL	21	40	1	62	16	78	23	115	33	171	81	252	44	155	34	233	97	330
	SQID	0	1	1	2	2	4	1	4	3	8	30	38	1	5	4	10	32	42
	YSOL	14	29	1	44	12	56	19	105	33	157	76	233	33	134	34	201	88	289
BS Species Endorsements		522	337	17	876	138	1,014	308	1,010	288	1,606	710	2,316	830	1,347	305	2,482	848	3,330
BS Vessels		284	106	4	394	31	425	123	236	55	414	111	626	407	342	59	808	142	980
CG	AMCK	4	3	0	7	2	9	0	3	0	3	15	18	4	6	0	10	17	27
	DFLT	60	41	1	102	17	119	23	60	6	89	55	144	83	101	7	191	72	263
	FSOL	40	33	0	73	13	86	10	65	6	81	34	115	50	98	6	154	47	201
	PCOD	884	139	4	1,027	55	1,082	153	140	19	312	69	381	1,037	279	23	1,339	124	1,463
	PLCK	258	55	1	314	23	337	35	101	15	151	57	208	293	156	16	465	80	545
	ROCK	718	118	2	838	50	888	188	128	16	332	70	402	906	246	18	1,170	120	1,290
	SFLT	99	46	0	145	14	159	26	75	11	112	45	157	125	121	11	257	59	316
CG Species Endorsements		2,063	435	8	2,506	174	2,680	435	572	73	1,080	345	1,425	2,498	1,007	81	3,586	519	4,105
CG Vessels		1,134	169	5	1,308	67	1,375	266	180	24	470	88	558	1,390	359	29	1,778	155	1,933
EG	AMCK	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
	DFLT	10	3	0	13	7	20	7	4	0	11	28	39	17	7	0	24	35	59
	FSOL	3	2	0	5	5	10	3	0	1	4	10	14	6	2	1	9	15	24
	PCOD	1,150	24	3	1,177	31	1,208	181	18	2	201	32	233	1,331	42	5	1,378	63	1,441
	PLCK	26	5	1	32	6	38	8	3	2	13	19	32	34	8	3	45	25	70
	ROCK	1,070	51	1	1,122	46	1,168	270	50	5	325	39	364	1,340	101	6	1,447	85	1,532
	SFLT	19	3	0	22	6	28	7	3	1	11	20	31	26	6	1	33	26	59
EG Species Endorsements		2,278	88	5	2,371	101	2,472	478	78	11	565	149	714	2,754	166	16	2,936	250	3,186
EG Vessels		1,943	72	3	2,018	56	2,074	392	65	8	465	58	523	2,335	137	11	2,483	114	2,597
WG	AMCK	6	2	1	9	9	18	1	25	9	35	31	66	7	27	10	44	40	84
	DFLT	33	18	1	52	17	69	18	54	19	91	59	150	51	72	20	143	76	219
	FSOL	13	7	1	21	8	29	7	50	12	69	38	107	20	57	13	90	48	138
	PCOD	215	47	3	265	25	290	46	103	31	180	83	263	261	150	34	445	108	553
	PLCK	38	18	1	57	13	70	14	73	22	109	68	177	52	91	23	166	81	247
	ROCK	87	30	2	119	22	141	58	86	20	164	78	242	145	116	22	283	100	383
	SFLT	31	14	1	46	14	60	12	60	22	94	59	153	43	74	23	140	73	213
WG Species Endorsements		423	136	10	569	108	677	156	451	135	742	416	1,158	579	587	145	1,311	524	1,835
WG Vessels		272	58	3	333	35	368	86	134	36	256	86	342	358	192	39	589	121	710
Total Endorsements		5,348	1,057	52	6,457	615	7,072	1,478	2,454	646	4,578	2,154	6,732	6,826	3,511	698	11,035	2,769	13,804
BSAI Vessels		302	113	4	419	34	453	139	273	62	474	122	596	441	386	66	893	156	1,049
GOA Vessels		3,077	218	8	3,303	106	3,409	680	237	44	871	131	1,002	3,667	455	52	4,174	237	4,411
Total Vessels		3,190	246	9	3,445	111	3,556	719	338	76	1,133	155	1,288	3,909	584	85	4,578	266	4,844

Table 7B

Configuration 231421		B Licenses Issued to Current Owners Based on the Vessels, January 1, 1980 to December 31, 1993 and did not Receive a License Under Configuration 31421. Please note, because some observations were not broken out by individual area, they were not included.																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Licenses
King Crab																			
Norton Sound	Red	0	4	1	5	0	5	0	8	1	9	4	13	0	12	2	14	4	18
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton Sound Species Endorsements		0	4	1	5	0	5	0	8	1	9	4	13	0	12	2	14	4	18
Norton Sound Vessels		0	4	1	5	0	5	0	8	1	9	4	13	0	12	2	14	4	18
St Lawrence/St Mathew	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	1	37	4	42	2	44	0	58	14	72	15	87	1	95	18	114	17	131
	Brown	0	5	6	11	0	11	0	6	5	11	2	13	0	11	11	22	2	24
St Lawrence/St. Mathew Species Endorsements		1	42	10	53	2	55	0	64	19	83	17	100	1	106	29	136	19	155
St. Lawrence/St Mathew Vessels		1	40	7	48	2	50	0	60	18	78	15	93	1	100	28	126	17	143
Pribilof	Red	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1
	Blue	1	6	2	9	0	9	0	0	0	0	4	4	1	6	2	9	4	13
	Brown	0	1	0	1	0	1	0	4	2	6	1	7	0	5	2	7	1	8
Pribilof Species Endorsements		1	8	2	11	0	11	0	4	2	6	5	11	1	12	4	17	5	22
Pribilof Vessels		1	8	2	11	0	11	0	4	2	6	5	11	1	12	4	17	5	22
Adak	Red	1	40	11	52	3	55	1	78	25	104	17	121	2	118	36	156	20	176
	Brown	1	39	8	48	3	51	2	78	28	108	20	128	3	117	36	156	23	179
Adak Species Endorsements		2	79	19	100	6	106	3	156	53	212	37	249	5	235	72	312	43	355
Adak Vessels		2	82	14	68	3	71	2	109	37	148	21	169	4	181	51	216	24	240
Dutch Harbor	Red	1	5	2	8	1	9	1	9	0	10	7	17	2	14	2	18	8	26
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	2	12	3	17	1	18	1	61	9	71	13	84	3	73	12	88	14	102
Dutch Harbor Species Endorsements		3	17	5	25	2	27	2	70	9	81	20	101	5	87	14	106	22	128
Dutch Harbor Vessels		3	17	8	28	1	29	2	69	9	80	18	98	5	86	14	105	18	121
Bristol Bay	Red	7	61	12	80	4	84	2	64	21	87	29	116	9	125	33	167	33	200
	Blue	0	2	0	2	0	2	0	6	2	8	0	8	0	8	2	10	0	10
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bristol Bay Species Endorsements		7	63	12	82	4	86	2	70	23	95	29	124	9	133	35	177	33	210
Bristol Bay Vessels		7	61	12	80	4	84	2	70	23	96	29	124	9	131	38	178	33	208
Total King Crab Species Endorsements		14	213	49	276	14	290	7	372	107	486	112	598	21	585	156	762	126	888
Total King Crab Vessels		14	113	20	147	4	151	6	166	87	248	32	280	19	299	77	398	36	431
Tanner Crab																			
Eastern Bering Sea	C opilio	1	31	7	39	3	42	2	25	8	35	18	53	3	56	15	74	21	95
	C bairdi	10	25	3	38	3	41	3	19	7	29	19	48	13	44	10	67	22	89
Eastern Bering Sea Species Endorsements		11	56	10	77	6	83	5	44	15	64	37	101	16	100	25	141	43	184
Eastern Bering Sea Vessels		11	41	8	60	3	63	6	36	11	52	19	71	16	77	19	112	22	134
Western Bering Sea	C opilio	0	38	10	48	3	51	0	33	15	48	18	66	0	71	25	96	21	117
	C bairdi	0	49	11	60	2	62	0	64	17	81	10	91	0	113	28	141	12	153
Western Bering Sea Species Endorsements		0	87	21	108	5	113	0	97	32	129	28	157	0	184	53	237	33	270
Western Bering Sea Vessels		0	70	17	87	3	90	0	88	28	110	18	128	0	158	42	197	21	218
Eastern Aleutians	C opilio	6	0	0	6	0	6	1	0	0	1	0	1	7	0	0	7	0	7
	C bairdi	28	6	0	34	0	34	7	19	2	28	3	31	35	25	2	62	3	65
Eastern Aleutians Species Endorsements		34	6	0	40	0	40	8	19	2	29	3	32	42	25	2	69	3	72
Eastern Aleutians Vessels		27	6	0	33	0	33	8	18	2	28	3	31	36	24	2	61	3	64
Western Aleutians	C opilio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C bairdi	1	8	1	10	1	11	1	20	5	26	5	31	2	28	6	36	6	42
Western Aleutians Species Endorsements		1	8	1	10	1	11	1	20	5	26	5	31	2	28	6	36	6	42
Western Aleutians Vessels		1	8	1	10	1	11	1	20	6	26	5	31	2	28	6	36	6	42
Total Tanner Crab Endorsements		46	157	32	235	12	247	14	180	54	248	73	321	60	337	86	483	85	568
Total Tanner Crab Vessels		37	94	17	148	4	152	12	126	34	172	23	195	49	220	81	320	27	347
Total Endorsements for King and Tanner Crab		60	370	81	511	26	537	21	552	161	734	185	919	81	922	242	1,245	211	1,456
Total Vessels for King and Tanner Crab		48	145	23	216	4	220	17	216	63	298	32	327	65	360	86	511	36	547

replacement vessel as to length (LOA) to prevent significant increases in capacity.

b. The Class B permit would terminate upon the death of the owner of the permit. In the case of multiple owners or vessels owned by corporations the permit would expire with the death of the last owner or shareholder who are owners of the vessel or corporate owner at the time of the original issuance of the Class B permit.

c. In addition, a performance requirement should be considered which would provide for the expiration of the permit in the event it was not utilized. For example, if the permit was not utilized in any two consecutive years the Class B permit would be terminated.

d. In addition, after issuance of the permit, if there is a change of ownership by sale, foreclosure or otherwise, the Class B permit would terminate (however, transfers between original owners would not cause the permit to terminate).

e. Class B permits would not be combinable into permits for larger vessels.

The merits of this particular proposal include the following:

1. First and foremost, it allows for equity. There are many vessel owners who would qualify under the moratorium to participate in the fisheries based upon historical landings between 1980 and whatever time is selected for the cutoff for eligibility for the currently proposed limited entry license. Most of these vessel owners have long since given up any concept of participating in the fishery but there are a few long term industry participants who have left the fishery for the sole reason they were pushed out by the overcapitalization occurring in 1988 and 1989, even though some of these participants have five or more years in the fishery prior to this time. For the reason that these vessel owners were the original pioneers in the Americanization

Table 8A

Configuration 31421		Licenses Issued to Current Owners Based on the Vessels, June 28,1989 - June 27, 1992 (June 29, 1980 - June 25, 1983 for Dutch Harbor Red & June 29, 1986 - June 26, 1988 for Pribilof Blue)																	
		Current Owner's State of Residence																	
		Alaska						Other						Total					
		CV						CV						CV					
Area	Species	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Total	< 60	60-125	>125	Total	CP	Licenses
King Crab																			
Norton Sound	Red	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton Sound Species Endorsements		0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
Norton Sound Vessels		0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0	1
St Lawrence/St Mathew	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St Lawrence/St. Mathew Species Endorsements		1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
St. Lawrence/St.Mathew Vessels		1	20	10	31	2	33	0	55	19	74	14	88	1	75	29	105	16	121
Pribilof	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	2	39	9	50	6	56	2	39	9	50	6	56
	Brown	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
Pribilof Species Endorsements		0	0	0	0	0	0	2	39	9	50	7	57	2	39	9	50	7	57
Pribilof Vessels		0	0	0	0	0	0	2	39	9	50	7	57	2	39	9	50	7	57
Adak	Red	0	12	2	14	1	15	0	30	10	40	5	45	0	42	12	54	6	60
	Brown	0	10	3	13	0	13	0	36	18	54	6	60	0	46	21	67	6	73
Adak Species Endorsements		0	22	5	27	1	28	0	66	28	94	11	105	0	88	33	121	12	133
Adak Vessels		0	16	4	20	1	21	0	47	22	69	7	76	0	63	26	89	8	97
Dutch Harbor	Red	30	39	3	72	1	73	21	96	7	124	7	131	51	135	10	196	8	204
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	1	1	2	0	2	0	7	11	18	3	21	0	8	12	20	3	23
Dutch Harbor Species Endorsements		30	40	4	74	1	75	21	103	18	142	10	152	51	143	22	216	11	227
Dutch Harbor Vessels		30	39	4	73	1	74	21	103	16	140	10	150	51	142	20	213	11	224
Bristol Bay	Red	6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bristol Bay Species Endorsements		6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
Bristol Bay Vessels		6	110	16	132	3	135	3	156	47	206	20	226	9	266	63	338	23	361
Total King Crab Species Endorsements		37	192	35	264	7	271	27	419	121	567	62	629	64	611	156	831	69	900
Total King Crab Vessels		36	139	19	194	4	198	26	221	53	300	24	324	62	360	72	494	28	522
Tanner Crab																			
Eastern Bering Sea	C opilio	0	73	15	88	3	91	2	123	49	174	19	193	2	196	64	262	22	284
	C bairdi	1	94	16	111	3	114	2	146	49	197	19	216	3	240	65	308	22	330
Eastern Bering Sea Species Endorsements		1	167	31	199	6	205	4	269	98	371	38	409	5	436	129	570	44	614
Eastern Bering Sea Vessels		1	94	16	111	3	114	4	148	50	202	19	221	5	242	66	313	22	335
Western Bering Sea	C opilio	0	50	11	61	3	64	1	98	41	140	18	158	1	148	52	201	21	222
	C bairdi	0	7	2	9	0	9	0	7	12	19	5	24	0	14	14	28	5	33
Western Bering Sea Species Endorsements		0	57	13	70	3	73	1	105	53	159	23	182	1	162	66	229	26	255
Western Bering Sea Vessels		0	50	11	61	3	64	1	98	41	140	18	158	1	148	52	201	21	222
Eastern Aleutians	C opilio	0	0	0	0	0	0	0	3	0	3	0	3	0	3	0	3	0	3
	C bairdi	8	2	0	10	0	10	2	5	0	7	1	8	10	7	0	17	1	18
Eastern Aleutians Species Endorsements		8	2	0	10	0	10	2	8	0	10	1	11	10	10	0	20	1	21
Eastern Aleutians Vessels		8	2	0	10	0	10	2	5	0	7	1	8	10	7	0	17	1	18
Western Aleutians	C opilio	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	0	2
	C bairdi	0	4	0	4	0	4	5	5	2	12	3	15	5	9	2	16	3	19
Western Aleutians Species Endorsements		0	5	0	5	0	5	5	6	2	13	3	16	5	11	2	18	3	21
Western Aleutians Vessels		0	5	0	5	0	5	5	6	2	13	3	16	5	11	2	18	3	21
Total Tanner Crab Endorsements		9	231	44	284	9	293	12	388	153	553	65	618	21	619	197	837	74	911
Total Tanner Crab Vessels		9	96	16	121	3	124	12	150	50	212	19	231	21	246	66	333	22	355
Total Endorsements for King and Tanner Crab		46	423	79	548	16	564	39	807	274	1,120	127	1,247	85	1,230	353	1,668	143	1,811
Total Vessels for King and Tanner Crab		42	142	21	205	4	209	38	224	59	321	24	345	80	366	80	526	28	554

economic value nor provide the base for increases in capacity by the development of more modern vessels.

6. In many cases, by having the option of granting Class B permits to certain classes of fishermen, it will permit the Council to be more restrictive in its consideration of criteria for Class A permits.

ERRATA

DRAFT for COUNCIL and PUBLIC REVIEW

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW
(EA/RIR)

FOR

LICENSE LIMITATION ALTERNATIVES

FOR THE

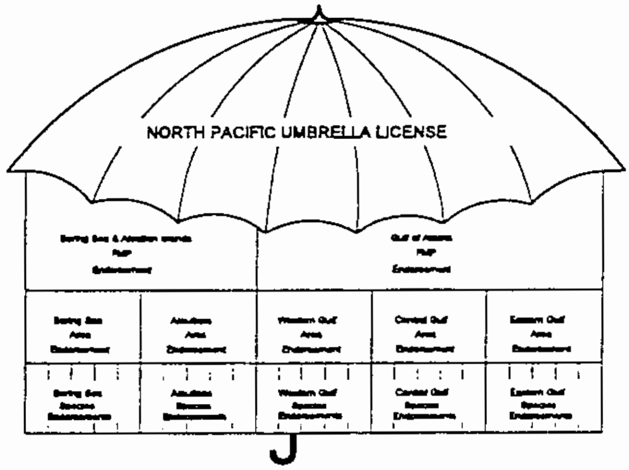
GROUNDFISH & CRAB FISHERIES

IN THE

GULF OF ALASKA AND BERING SEA/ALEUTIAN ISLANDS

November 14, 1994

ERRATA SHEET FOR LICENSE LIMITATION ANALYSIS

Location	Correction
p. E-1, ¶ 1, 4th line.	CAP should read CRP.
p. E-7, 3rd line.	should read ... (1) a homogenous fleet......
p. 60, 1st line.	footnote 20 should follow the word "rent" on the next line.
p. 101	Figure 3.7a is incorrect. It should look as follows. 
p. 108, Table 3.21	The note indicate that **BOLD** numbers are taken from tables in the back of the section. These are in fact taken from the Groundfish Tables Appendix.
p. 121, Table 3.22	The 3rd set of results should be titled: 20000 (option B) and 30000 (option B), rather than "(option C)".
p. 129, Figure 3.11, bottom right corner.	The number of vessels under Option 700 is 1,501 rather than 1,477.
p. 134, Title of Table 3.24	Should read as .. A Comparison of the Number of Vessels Issued Licenses.......
p. 149. Figure 3.7a is incorrect.	This should be the same as the corrected figure above.
p. 172, last ¶, 3rd line.	The current configuration is #314X1, where X=6/28/92-6/27/93, i.e. the 92-93 crab year.
p 173, Table 3.34	The Table header should read: " Licenses for each species/area combination issued to current owners which made landings between 6/28/92-6/27/93...."
List Of Appendices, following p. 211.	A corrected List of Appendices is attached.
Groundfish Tables Appendix p.45, 115711	These numbers are incorrect, the total should be 1,536. Distributions by class and state are off by a similar amount.
Groundfish Tables Appendix p.45, 215711	Total vessel count is incorrect: the total should be 1,527. Bottom line distributions by class and state are also off.

Groundfish Tables Appendix p.46, 415711	Total vessel count is incorrect: the total should be 1,536. Bottom line distributions by class and state are also off.
Groundfish Tables Appendix p.46, 515711	Total vessel count is incorrect: the total should be 1,527. Bottom line distributions by class and state are also off.
Groundfish Tables Appendix p.49, 815711	Total vessel count is incorrect: the total should be 1,502. Bottom line distributions by class and state are also off.
Crab Tables Appendix pp. 7-13	The "Current" crab configuration uses 6/28/92-6/27/93 rather than 1/1/93-12/31/93.

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ADDENDUM

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW
FOR
LICENSE LIMITATION ALTERNATIVES
FOR THE
GROUNDFISH AND CRAB FISHERIES
IN THE
GULF OF ALASKA AND BERING SEA/ALEUTIAN ISLANDS

This addendum to the Environmental Assessment (EA) summarizes the evolution of this proposed program and its problem statement and is intended to assist the Secretary of Commerce in his decision making process. The addendum also highlights key distinctions between the current moratorium and the proposed license limitation program (LLP).

In 1992, the North Pacific Fishery Management Council (Council) made a commitment to develop a "comprehensive rationalization plan" (CRP) for the North Pacific fisheries by 1996. As a preliminary step, the Council then developed and analyzed a range of alternative management measures for addressing 14 identified problems. The alternatives included exclusive registration, seasonal allocations, license limitation, gear allocations, inshore-offshore allocations, community development quota allocations, trip limits, individual fishing quotas (IFQ) for prohibited species, nontransferable IFQs, transferable IFQs, and auctions. At the January 1993 Council meeting, the Council, industry, and members of the public rated various options. Transferable IFQs emerged as the alternative most likely to address the most number of problems in the problem statement.

However, as the Council began to pursue implementation of an IFQ program, a variety of unforeseen issues began to arise and led the Council to conclude that it would not be practicable to implement an IFQ program by 1996. The Council shifted its focus from trying to achieve comprehensive rationalization, to trying to take a small first step that would lay the foundation for comprehensive rationalization. Thus the proposed LLP is designed to address a much smaller problem statement than that prepared for the CRP. The LLP is designed to (1) remove "latent capacity" and reduce effort, (2) lock existing effort into specific geographic areas, and (3) define the field of fishery participants.

The EA analyzes the <u>status quo</u> alternative in two ways, either with, or without, the vessel moratorium's being resubmitted. It is important to note that the LLP differs from the vessel moratorium in the following ways.

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First, the LLP removes latent capacity. Under the moratorium, 3,889 persons could qualify for a groundfish permit. To date, only 1,718 persons have applied and been issued permits. However, under the moratorium, any of the remaining 2,171 persons who are qualified may apply and be issued a permit. Under the LLP, 2,435 persons would qualify for a permit. Although this number is higher than the number of permits that have been issued under the moratorium, at least 1,454 persons representing latent capacity would be excluded from the fishery.

Second, the LLP would result in an overall reduction in capacity. Although more persons would qualify for LLP permits than currently fish under the moratorium, the increase in permit holders would occur among the low capacity, smaller vessels that accounted for less than 2 percent of the total catch of groundfish off Alaska in 1988-1992 (1,081 under the moratorium to 1,907 under the LLP). The number of permit holders among high capacity, larger vessels that accounted for over 98 percent of the total catch of groundfish off Alaska in 1988-1992 would actually decrease (637 under the moratorium to 528 under the LLP).

Third, the LLP creates a more refined system than the moratorium. The area endorsement requirement under the LLP would limit fishing effort to its current geographical areas thereby preventing disruptive effort shifts among different portions of the North Pacific. This aspect of the LLP would allow coastal communities to maintain traditional levels of fishing effort.