AGENDA C-5(a)
JANUARY 1996

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director

DATE: January 26, 1996

SUBJECT: BSAI Pollock IFQ Program

ESTIMATED TIME
6 HOURS
(for all C-5 items)

ACTION REQUIRED

Review qualitative analyses prepared by staff and provide further direction on alternatives.

BACKGROUND

Last June the Council began developing an IFQ program for BSAI pollock fisheries, which included both harvesting and processing sectors. The initial suite of alternatives, elements, and options for such a program has been re-typed and is included here as Item C-5(a)(1). For reference, Item C-5(a)(2) is the list of elements and options from June 1994, when the Council redirected its focus from an all-species IFQ program to license limitation for groundfish and crab. The Council has indicated it may draw upon both the old and new alternatives in structuring a final program.

The Council last discussed the BSAI pollock IFQ program at its September 1995 meeting in Seattle, when the staff presented an initial outline of the analytical document (EA/RIR) envisioned for this program. It would be a two-part document: (1) a general analysis of the alternatives, including details of the actual mechanics of the fisheries under each alternative, and (2) a section which deals exclusively with various alternatives for initial allocation of pollock QS/IFQs/IPQs.

Our most current proposed outline for this document is under Item C-5(a)(3), which includes a much more detailed breakdown of Chapter 5 where we would expect to examine, among other things, the management of the pollock fisheries under various aspects of the proposed system. That chapter will describe the complexity of the management change proposed and likely conclude that many aspects of the current management of pollock fisheries (and some of the associated fisheries) will need to be revisited. The Council will face many decisions such as: (1) whether or not to make a distinction between pelagic and on-bottom pollock fisheries; (2) whether IFQs will be allocated for only 'directed', or target, pollock fisheries; (3) whether or not allocations for bycatch should be made, for both PSC and non-PSC species; and (4) how to deal with 'A' versus 'B' season pollock fisheries in the context of IFQ initial allocations, and subsequent prosecution of fisheries throughout the year. These decisions are independent of the initial allocation alternatives.

In the limited time we have been able to devote to this project since September, we have concentrated on some of the issues identified above. Many lend themselves only to qualitative assessment, but are still extremely critical in understanding how a pollock-only IFQ program would work, and in defining the various elements and options for the system. We hope that these discussions, found under Item C-5(a)(4), will shed light on some of the mechanics of this program, and help the Council make some basic decisions early on which will make the

process much more tractable for both the Council and the analysts. This is the area in which we will concentrate the remainder of our report.

Item C-5(a)(5) is a short discussion from September which focuses on one initial allocation issue which has the potential to greatly simplify the complexity, and perhaps the contentiousness, of the initial allocations of QS/IFQs/IPQs. These allocations options are contained in the original proposal from June 1995 and are suggested in a letter from Alaska Ocean Seafoods. In essence, these options would guarantee a minimum IFQ in the initial allocation - for example, not less than some percentage (75% to 95%) of a vessel's catch in a recent time period. Under this type of alternative, the impact of historical participation (catch), or weighting factors, is greatly reduced.

Finally, Item C-5(a)(6) contains letters received on this issue since the June 1995 meeting, including a letter to Rollie Schmitten from Congressman Bob Livingston and Senator Ted Stevens regarding further implementation and development of IFQ programs by NMFS and the Councils. How far and fast we move ahead in ITQs will in part depend on the outcome of Magnuson Act reauthorization.

BSAI POLLOCK ITQ PROGRAM

This ITQ program would only cover the directed fishery for Alaskan pollock in the Bering Sea and Aleutian Islands.

INITIAL QS CALCULATION

QS/ITQs allocated and designated according to categories for harvesting and processing; and inshore and offshore. QS/ITQs further divided into roe/non-roe portions within these categories, based on the annual roe/non-roe season split. Initial harvester QSs only awarded to vessels that (1) qualify to fish in the BSAI areas under the vessel moratorium, or if the License Limitation program is implemented, qualify for BSAI license and appropriate area endorsements; and (2) have made landing(s) during certain years as specified under this ITQ program. Initial processor QSs only awarded to processors that have processed pollock during certain years as specified under this program.

SPECIES FOR INCLUSION

Alaska pollock only with prohibited species issued as PSC QSs (prohibited species quotas) based on the historical apportionment of the PSC cap for pollock for each prohibited species, as appropriate.

AREAS

QS/ITQs will be awarded for the Bering Sea and Aleutian Island areas only.

CRITERIA FOR INITIAL QS QUALIFICATION

Initial allocation of QS will be to current owners of vessels and processing facilities which meet certain allocation criteria; and in the case of vessels, are moratorium qualified or licensed under the Vessel Limitation program if that program is established.

OPTION A: No recent participation requirement.

OPTION B: Vessel must have landed pollock or processor must have processed pollock anytime in the three-year period prior to June 24, 1992, or December 31, 1994 (both options analyzed). If vessel or processing facility is lost during this period, owner at time of loss is still eligible to receive initial QS.

COMMUNITY DEVELOPMENT QUOTA (CDQ)

CDQ set-asides of 7.5% of the BSAI pollock TAC, but only for BSAI communities meeting current CDQ eligibility requirements, patterned after current pollock CDQ program, with no sunset provisions.

INITIAL QS CALCULATION (Two-Pie System)

Initial QS awarded to each qualifying recipient (harvester and/or processor) based on their participation in each of two QS categories (inshore category and offshore category, reflecting the current inshore-offshore quota split, if any). QS within each category further subdivided into roe and non-roe segments corresponding to the current percentage split between roe and non-roe pollock seasons (i.e., 45/55), or as annually established by the Council.

I. HARVESTER QS

OPTION A: QS based on reported pollock catch of vessel from 1984, or earliest year for which there are verifiable catch statistics, to June 27, 1992, or December 31, 1994 (both options analyzed). JVP history allocated either: (1) all to offshore category; (2) on a prorata basis according to allocation of vessel's DAP catches between categories; or (3) at option of vessel owner.

Suboption A: Weight DAP 3:5:1 JVP
Suboption B: Weight DAP 2:0:1 JVP
Suboption C: No weighting by DAP or JVP sector

OPTION B: Same as Option A, all Suboptions, except QS based on the weighted formula below with "X" and "Y" being weighting factors for Historic Participation and Present Participation, respectively, with the sum of X + Y = 1.0. The analysis would cover X and Y weighting factors ranging from X=0.4, Y=0.6 to X=0.8, Y=0.2

$$X([DAP+JVP]/1984\text{-}90) + Y(DAP/1991\text{-}94)$$

OPTION C: QS based on individual harvester's best year from 1991 to 1994.

OPTION D: QS based on individual harvester's average catch from 1991 to 1994.

II. PROCESSOR QS

Processor QS would either be symmetric (equal to 100% of total harvester QS) or asymmetric. The analysis of the asymmetric option would include processor QS equal to 101%, or 105% of total harvester QS. Processor QS for each factory trawler receiving harvester QS would be not less than their individual harvester QS.

OPTION A: QS based on reported receipt of pollock by processor from date of entry into the pollock fishery until June 27, 1992, or until December 31, 1994 (both options analyzed).

OPTION B: QS based on the following weighted formula with "X" and "Y" being weighting factors for Historic Participation and Present Participation, respectively, with the sum of W + Y = 1.0. The analysis would cover the same range of X and Y weighting factors as with the Harvester QS option.

$$X(DAP/1984\text{-}90) + Y(DAP/1991\text{-}94)$$

OPTION C: QS based on individual processor's best year from 1991 to 1994.

OPTION D: QS based on individual processor's average receipt of pollock from 1991 to 1994.

III. LIMITS ON INITIAL RECEIPT OF QS

OPTION A: No provisions relating to limits on initial receipt of QS.

OPTION B: Limits on initial receipt of QS--no harvester and/or processor would receive less than X% of their catch or receipt of pollock in 1994 with X ranging from 75% to 95% for analysis purposes.

PROHIBITED SPECIES CATCH (PSC) QS PROVISIONS

I. INITIAL ALLOCATION

OPTION A: PSC QS based prorata on initial Harvester QS.

OPTION B: PSC QS based on the application of industry average bycatch rates.

II. RELATION OF PSC QS TO POLLOCK QS

OPTION A: PSC QS/ITQ and pollock QS/ITQ bundled

OPTION B: PSC QS/ITQ and pollock QS/ITQ unbundled

Suboption A: PSC QS/ITQ transferable
Suboption B: PSC QS/ITQ non-transferable

TRANSFERABILITY PROVISIONS

I. No Restrictions.

II. Restrictions

Any or all of the following options may apply:

OPTION A: Two-year restriction on sales only (could lease).

OPTION B: Restriction on QS/ITQ transfers between inshore and offshore sectors. Range (of duration) for analysis to include 5 years, 10 years, and no transfers.

OPTION C: Restriction on QS/ITQ transfers between catcher-processor and catcher sectors. Range (of duration) for analysis to include 5 years, 10 years, and no transfers.

USE/OWNERSHIP PROVISIONS

The following options considered relative to accounting under the ITQ program. These options will affect an operator's ability to match ITQs to catch, and also relate to the ability to effectively manage the program with the overall TACs.

I. ITQ USE PROVISIONS

OPTION A: Must control ITQs to cover expected catch before fishing or processing.

OPTION B: Retrospective Balancing --- Overage/Underage program as with sablefish and halibut program, or some variant whereby quota may be acquired retrospectively to cover current catch.

OPTION C: "Use it or lose it" provision.

II. OWNERSHIP CAPS

OPTION D: No ownership caps.

OPTION E: Ownership caps of 1%, 5%, 10% or any percentage with that range with caps coming into effect subsequent to initial allocation of QS.

HARVESTING PROVISIONS

I. Pollock

OPTION A: No Restrictions on harvest method.

OPTION B: Restrictions on harvest method.

Suboption A: On-bottom trawling permitted to harvest pollock in directed pollock fishery only if catching vessel has sufficient halibut/crab PSC QS to cover its bycatch of these prohibited species. Otherwise, vessel must fish with pelagic trawl.

Suboption B: Only a pelagic trawl permitted for harvesting pollock in a directed pollock fishery.

II. Non-pollock Species

OPTION C: No restrictions on directed fishing for non-pollock species by holders of pollock ITQ.

OPTION D: Directed fishing for non-pollock species only permitted for those species for which vessel holding pollock ITQ had previously harvested in directed fishery for a particular species prior to June 24, 1992, January 1, 1994, or June ___, 1995 (all options analyzed), with or without restrictions on total allowed catch and/or seasons.

OPTION E: PSC QS (IBQ) program for directed fisheries for all non-pollock species.

ENFORCEMENT AND MONITORING PROVISIONS

An enforcement and monitoring plan, including not less than 100% observer coverage of all harvesting vessels and processing facilities, must be developed by NMFS and approved by the Council as part of the ITQ system. Such a plan should build on the experience gained in the CDQ program. It should clearly describe mechanisms for measuring and monitoring quota harvest and bycatch on an individual vessel and processing facility basis. Constraints imposed by current confidentiality requirements should be addressed. The plan should also clearly describe provisions for designating ports of landing and specific mechanisms to prevent leakage, including possibly transponders, plus measures to monitor at-sea transshipments and provisions to measure and record harvests on an individual vessel basis prior to transporting product into waters outside the jurisdiction of the U.S. The plan should include a review of enforcement and monitoring experience in the U.S. ITQ programs, including halibut/sablefish IFQ program and pollock CDQ program. A review of the accuracy of previous enforcement cost estimates should be included.

GENERAL PROVISIONS

1. Allocations represent a use privilege. The Council could alter or rescind the program without compensation. The Council needs a written legal opinion from NOAA General Counsel to clarify Council authority and liability for any future constitutional "takings" claims if ITQ program is substantially altered or rescinded.

2. Council should pursue some level of administrative fee extraction to fund program, possibly through a Magnuson Act amendment, if necessary. To establish an appropriate level of funding, an analysis of the impact of various fee collection levels and mechanisms is required. This analysis should include consideration of state and federal taxes and fees imposed on industry as well as management, enforcement and other fisher-related costs borne by state and federal governments in support of industry.

3. The U.S. citizenship/controlling interest definitions used in the halibut/sablefish IFQ program should be analyzed for all harvesting and processing operations as to their applicability to this ITQ program. This analysis should examine the implications of foreign ownership including an analysis of Pacific Council's foreign ownership provisions. This analysis should also address ownership or control of QS/ITQ by lien holders and/or lending institutions..

4. An analysis of constraints on management and implementation of this pollock ITQ system posed by present confidentiality requirements is required. As part of this analysis, the extent to which current confidentiality requirements impede Council compliance with MFCMA requirements for review of allocation scenarios is required.

5. An analysis should be made of possibly requiring Full Retention of all pollock harvested within the range of 1 to 5 years after the implementation of the ITQ program.

IFQs - GROUNDFISH AND CRAB

SPECIES FOR INCLUSION

Option A: All species under Council jurisdiction, including PSCs, excluding demersal shelf rockfish.

Option B: Under Option A, a percentage (either 45% or historical split) of BSAI Pacific cod would be set aside for a fixed gear License Limitation program

Option C: All species under Council jurisdiction, including PSCs, excluding DSR and crab.

AREAS

IFQs for all species and PSCs will be awarded based on current management areas.

Option A: QS/IFQs for all species and PSC allotments will be awarded based on GLS area licenses.

CRITERIA FOR INITIAL QS QUALIFICATION

Option A: Initial QS will be awarded to current vessel owners as of the date of final Council action, based on the catch history of their vessel(s). In addition, the Council is considering the following:

Suboption: For GOA fixed gear fisheries, allocate initial QS to owner at time of landing.

Option B: Initial QS will be awarded to vessel owners holding a valid GLS license. Initial QS/IFQ allocations will be based upon GLS categories. This proposed IFQ system is based on, and will replace, the GLS license system. WS/IFQ will only be awarded to GLS license holders. QS/IFQ will be allocated and designated according to GLS categories for areas, species, catcher/catcher-processor, vessel sizes, and inshore/offshore.

The Council also is considering the following recent participation requirement for QS qualification:

Vessel must have fished in three-year period prior to June 24, 1992 **and/or** 3-year period before date of final Council action. If vessel is lost during this period, owner at time of loss is still eligible.

COMMUNITY DEVELOPMENT QUOTA (CDQ) CONSIDERATIONS

In addition to allocating QS to current vessel owners, the Council may make initial allocations to CDQs as shown below:

Option A: No allocations to CDQs.

Option B: Initially allocate 3%, 7.5%, 10%, or 15% (options range up to 15%) as CDQs; may apply to any or all groundfish/crab species, but only for BSAI communities meeting current CDQ eligibility requirements, patterned after current pollock CDQ program, with no sunset provisions.

SKIPPER CONSIDERATIONS

The Council is also considering the following options for including skippers in the IFQ program.

Option A: No allocations to skippers.

Option B: Initially allocate 3%, 5%, or 10% (options range up to 10%) to 'bona fide' skippers (based on landings attributable to each skipper, or based on time spent in a given fishery).

Suboption A: For the purposes of initial allocations, a 'bonafide skipper' is any skipper who ran a vessel and landed groundfish or crab in a relevant fishery.

Suboption B: QS allocated under Option B shall form a separate QS pool. Subsequent transfers of QS in this pool shall be restricted to 'bona fide skippers.' For the purposes of subsequent transfers, a 'bonafide skipper' is any individual who received an initial skipper pool QS allocation **or** any individual who meets an industry approved "professionalization qualification scheme." (The intent is to provide for an entry-level access mechanism and to promote safety through professionalization. The qualifications cannot be overly restricting so as to create a closed class.)

Suboption C: For the purposes of initial allocations, a "bonafide skipper" is any skipper who ran a vessel and landed groundfish in a relevant fishery, as identified by the mandatory skipper reporting provision of the GLS system.

PROCESSOR CONSIDERATIONS

The following options are being considered relevant to processors:

Option A: Assign separate processor QS (2-pie system). See separate description for elements of this program.

Option B: Require a percentage of harvest IFQs to be delivered shoreside (% will be based on last two years' average for each species for BSAI and GOA separately).

Option C: Direct allocation of harvesting QS to catcher boats, catcher-processors and shorebased processor (1-pie system).

Note: The analysis will include the impacts of providing no protection to onshore processors.

Option D: Assign separate processor QS (2-pie system). See separate description for elements of this program. Require a minimum percentage of PS to be utilized inshore (% to be based on 1993-94 average).

Option E: Require a minimum percentage of harvest IFQs to be delivered inshore (% will be based on 1993-94 average for each species for BSAI & GOA separately).

Option F: All harvests based on QS/IFQ designated as "inshore" must be delivered inshore. This shall represent the minimum level of inshore deliveries.

Option G: Direct allocation of harvesting QS to catcher boats, catcher-processors and shorebased processors (1-pie system). Require a minimum percentage QS/IFQ harvest to be delivered inshore (% to be based on 1993-94 average by species for BSAI and GOA separately.)

Note: The analysis will consider the impacts of no QS allocations to any person engaged in processing. This portion of the analysis should distinguish between industry sectors.

INITIAL QS CALCULATION

The following primary options are being considered for calculating QS of qualified recipients (all options will be analyzed on the basis of retained (when available) and reported catch).

Option A: QS based on catch of vessel from 1976 to **either** June 24, 1992 **or** date of final Council action (pre-1984 JV catch assigned based on average by fishery, by year, for vessels which participated).

For Option A, the following suboptions are being considered for weighting factors:

Suboption A: No weighting by sector.

Suboption B: Weight DAP 3.5:1 JV.

Suboption C: Weight DAP 2:1 JV.

Suboption D: For JV prior to 1986 and for DAP prior to 1989, weight at 2:1.

Option B: QS based on catch of vessel from date of full DAP (by species) to **either** June 24, 1992 **or** date of final Council action.

Option C: QS based on catch of vessel from 1993 only.

Option D: Analyze QS based on catch for 1990-91-92.

Option E: (1) To qualify, vessel must have fished in 1991, 1992, or 1993.
(2) Owner chooses best year from 1991, 1992, or 1993 as base for QS calculation (BSAI and GOA separately).
(3) QS credit then weighted based on length of involvement of vessel in each fishery since 1983. Base QS would be multiplied by length of involvement to determine total QS credit.

Suboption: The length of the involvement period multiplier may be further modified for the BSAI longline cod fishery to account for the relatively recent opening of that fishery. (Using 1983 as the base, each year in the fishery may be multiplied by 1.0, 1.5, or 2.0.)

Option F: A formula utilizes a blend of historical catch and recent participation combined with a range of weights for DAP and JVP participation. The formula under consideration is as follows:

Percentage Quota Share = W1 (Recent + W2 (weighted DAP/JVP),
where; W1 and W2 = percentage weights summing to 100%

Recent = catch in 1991 - 1992
Weighted DAP:JVP = 1982-92 catch with: (option a) 1:1 DAP:JVP Ratio
(option b) 2:1 DAP:JVP Ratio
(option c) 3:5:1 DAP:JVP Ratio

GLS ALTERNATIVES FOR QS CALCULATION

Initial QS awarded to each qualifying recipient based on GLS area licenses held. QS/IFQ designated according to GLS categories.

Option A: Analyze QS based on catch for 1990-91-92.

Suboption: For GOA fixed gear fisheries, allocate initial QS to owner at time of landings.

Option B: (1) Base for QS calculation (by area by species) determined by:

Suboption A: Owner chooses best year from 1991, 1992 or 1993 as base QS.

Suboption B: Owner's average catch from 1991, 1992, & 1993 to serve as base QS.

Suboption C: Owner chooses best year under GLS system to serve as base QS.

Suboption D: Owner's average catch from all years under GLS system serves as base QS.

Suboption E: Owner's catch under GLS system in year prior to implementation of IFQ system serves as base QS.

(2) QS credit then weighted based on length of involvement of vessel in each fishery since 1983. Base QS would be multiplied by length of involvement to determine total QS credit.

Suboption A: The length of the involvement period multiplier may be further modified for the BSAI longline cod fishery to account for the relatively recent opening of that fishery. (Using 1983 as the base, each year in the fishery may be multiplied by 1,0, 1.5, or 2.0.)
Suboption B: For GOA fixed gear fisheries, use length of involvement of owner, not vessel.

In addition to the options shown above, the Council is considering the following possible alternatives which are specific to Pacific cod in the BSAI. If either of the options below is chosen, the calculation alternatives shown above would still apply for the remaining fisheries.

Option A: Allocate Pacific cod QS at 45% for fixed gear recipients/55% for trawl gear.

Option B: Allocate Pacific cod QS by gear types based on historical split. We will examine: (1) back to 1976, (2) back to date of full DAP for Pacific cod, and (3) 1993 only to determine historical split.

Unless otherwise directed, the same QS calculations apply to divide QS among participants in each sector.

TARGET/BYCATCH CALCULATIONS

For QS calculation alternatives described above, the following species will be considered target species:

BSAI	GOA
pollock	pollock
Pacific cod	Pacific cod
Atka mackerel	deepwater flats
yellowfin sole	shallow water flats
other flatfish	Atka mackerel
rockfish	rockfish
squid (fixed gear only)	
rocksole	
turbot	

Whichever option is chosen, QS amounts for each species will be calculated based on catch, then adjusted based on average bycatch rates (or industry-derived bycatch rates) to achieve initial 'bundles' of target/bycatch species and PSC species. The Council has discussed the issue of basing QS calculations on retained, as opposed to reported, catch. As noted earlier, options will be analyzed on the basis of retained, when available, and reported catch.

TARGET/BYCATCH CALCULATIONS (As revised per GLS proposal)

For the QS calculation alternatives described above, the following species will be considered target species (conforms to GLS target species list):

BSAI	GOA
pollock	pollock
Pacific cod	Pacific cod
Atka mackerel	deepwater flats
yellowfin sole	shallow water flats
other flatfish	Atka mackerel
rockfish	
squid (fixed gear only)	
rocksole[1]	
turbot	

Target species QS will be based on retained catch.

PSC bycatch allotments will be bundled directly to target species QS. PSC bycatch allotments for each PSC species will be calculated by applying average PSC bycatch rates to retained target species IFQ (adjusted as necessary to stay within PSC caps).

PSC bycatch allotment are not transferable except when bundled with target species QS/IFQ. Partial bundles are transferable only on a pro rata basis of target QS/IFQ to PSC bycatch allotment. The Council will annually determine PSC bycatch rates, caps, and allotments.

1/ The Council has previously decided to designate this fishery a target fishery. Given the extreme discard wastage associated with this fishery, the State of Alaska again notes its opposition to this designation.

The full utilization provisions of the GLS system apply: Full retention and utilization of all target species for which a TAC exists (except PSCs), total catch measurements and monitoring, and total PSC enumeration but not retention unless provided for by other management/regulatory programs.

HARVEST PRIORITY IFQ MULTIPLIER

The harvest priority multiplier will provide an individual incentive/reward structure for PSC bycatch reduction. IFQ allocations for each target species fishery will be adjusted by an index that reflects individual bycatch mortality rates (the "harvest priority multiplier").

A) Harvest Priority Multiplier Calculations

Target species/gear type IFQ allocations in each area will be annually adjusted by a harvest priority multiplier as follows:

$IFQ_{ix} = [Q_{ix}/TQ_x] \times TAC_x \times H_{ix}$

where: IFQ_{ix} = individual i's pound of IFQ for target species X.
Q_{ix} = individual i's holding of quota shares for target species X
TQ_x = total quota shares for target species X
TAC_x = TAC for target species X
H_{ix} = individual i's harvest priority multiplier for target species X, where $H_{ix} = B_{px}/B_{ix}$, if H_{ix} is not specified directly (see option C below).
B_{px} =PSC bycatch mortality rate performance standard for participants in the target fishery for species X
B_{ix} = individual i's PSC bycatch mortality rate in the target fishery for species X

Options for analysis for defining the PSC bycatch rate performance standard (B_{px}) and/or the harvest priority multiplier (H_{ix}) are:

Option A: For a given year, the lowest PSC bycatch rate recorded among all participants in the target fishery for species X would be the performance standard (B_{px}).

Option B: For a given year, the PSC bycatch rate exceeded by a specified percentage of all participants in the target fishery for species X would be the performance standard (B_{px}). Under this option, participants with individual bycatch rates below the performance standard would be assigned a harvest priority multiplier of 1 (i.e., $H_{ix} = 1$). All other participants would be assigned a harvest priority multiplier according to the formula specified above (i.e. $H_{ix} = B_{px} / B_{ix}$). Options for analysis are:

Suboption A: The performance standard (B_{px}) would be set equivalent to the PSC bycatch rate exceeded by 75% of the participants in the target fishery for species X (i.e. top 25% get a multiplier of 1).

Suboption B: The performance standard (B_{px}) would be set equivalent to the PSC bycatch rate exceeded by 50% of the participants in the target fishery for species X.

Suboption C: For a given year, rank all participants according to PSC bycatch rates (from lowest to highest) recorded for the previous year then divided participants into quartiles based on this ranking. Directly assign specific harvest priority multipliers to each quartile. Options for analysis are:

Suboption A: Participants in the first, second, third, and fourth quartiles would be assigned harvest priority multiplies of 1, 0.9, 0.8, and 0.7 respectively.

Suboption B: Participants in the first, second, third, and fourth quartiles would assigned harvest priority multiplies, of 1, 0.9, 0.8, and 0.6 respectively.

B) Harvest Priority Multiplier Conditions

1) TAC shall not be exceeded.

2) Under situations where an unclaimed portion of the TAC results from applications of the harvest priority multiplier, the following are options for analysis:

Option A: Redistribute unclaimed portion of the TAC to fishers with individual PSC bycatch rates below the performance standard. Redistribution to be in relative proportion to the extent that recipients have fished "cleaner" than the performance standard, and shall be apportioned on a pro rata basis such that TAC is not exceeded.

Option B: Use the unclaimed TAC as an auction pool, with participants in the auction being restricted to only those fishers with individual PSC bycatch rates below the performance standard.

3) During the first implementation year, individual bycatch rates will be determined by averaging performance in target fisheries under the GLS system. For all subsequent years, bycatch rates will be determined by performance in the previous years (i.e., the year prior to the annual IFQ allocation). The Council may annually adjust specification of the performance standard and/or the harvest priority multiplier as part of the TAC specification process.

4) Transfers of QS/IFQ shall carry the previous year's harvest priority multiplier for the first year of use under new ownership/control.

TRANSFERABILITY PROVISIONS

Any or all of the following options may apply:

Option A: No restrictions.

Option B: Two year restriction on sales only (could lease).

Option C: For groundfish only, non-transferable between fixed and mobile gear categories.

Option D: For crab fisheries only, non-transferable across catcher vs. catcher/processor categories.

Option E: IFQs will not be tied to a particular gear type after initial issuance.

NOTE: Normal legal gear regulations will still apply, i.e., unless the Council changes its regulations, trawl gear could not be used to harvest crab.

Option F: Restrictions on QS transfers between inshore and offshore sectors. Range (of duration) for analysis to include 5 years, 10 years, and no transfers. This applies to both groundfish and crab.

Option G: QS/IFQ not transferable across GLS categories.

Option H: QS/IFQ may only be transferred within GLS categories or from GLS catcher-processor to catcher vessel categories and from larger to smaller GLS catcher vessel size categories.

With regard to PSC QS/IFQ, 3 options are being considered:

Option A: PSC QS/IFQ are tied to initial bundles and are not transferable.

Option B: PSC QS/IFQ are tied to initial bundles and must be transferred with bundles.

Option C: PSC QS/IFQ are transferrable separately from the initial bundles.

USE/OWNERSHIP PROVISIONS

The following options are being considered relative to accounting under the IFQ program. These options will affect an operator's ability to match IFQs to catch, and also relate to the ability to manage the program effectively within the overall TACs.

Option A: Must control IFQs to cover expected catch before fishing.

Option B: overage program as with sablefish and halibut program.

Option C: QS/IFQ use is conditional upon: Full retention and utilization of all target species for which a TAC exists (except PSCs), total catch measurement and monitoring, and total PSC enumeration but not retention unless provided for by other management/regulatory programs. Non-compliance with any or all of these conditions may be grounds for suspension of IFQ and revocation of QS for multiple instances of non-compliance.

The following use/ownership provisions may also be considered by the Council:

Option A: Require a percent of harvest IFQs to be delivered shoreside (% will be based on average of the last 2 years' for each species). This option was also included under "PROCESSOR CONSIDERATIONS'.

Option B: Ownership caps would be set at .1%, 1%, 5%, 10%, or any number in that range and would apply to the BSAI and GOA separately. Same caps would apply to the skippers' quota share pool. Skippers shares keep their identity after distribution. Initial allocants would be grandfathered.

ENFORCEMENT AND MONITORING REQUIREMENTS

An enforcement and monitoring plan must be developed by NMFS and approved by the Council as part of the IFQ system. Such a plan should clearly describe mechanisms for measuring and monitoring quota harvest and bycatch on an individual vessel basis. (constraints imposed by current confidentiality) requirements should be addressed). The plan should also clearly describe provisions for designating parts of landing and specific

mechanisms to prevent leakage, including measures to monitor at-sea transshipments and provisions to measure and record harvests on an individual vessel basis prior to transporting product into waters outside the jurisdiction of the U.S. The plan should include a review of enforcement and monitoring experience in other U.S. IFQ programs. A review of the accuracy of previous enforcement cost estimates should be included.

GENERAL PROVISIONS

* Allocations represent a use privilege; however, the Council could alter or rescind the program without compensation.

* Council should pursue some level of administrative fee extraction t o fund program, If Magnuson Act is amended.

* The U.S. ownership definitions used in the Halibut/Sablefish IFQ regulations should be used in analyzing both the intital issuance and the subsequent transfer of QS/IFQs. Would examine the implications of foreign ownership including an analysis of the Pacific council's foreign ownership provisions.

* An analysis of the impact of various fee collection levels and mechanisms is required. The analysis will differentiate between administrative fees and rents.

* The U.S. citizenship/controlling interest definitions used in Title 46 §802 should be used in analyzing both the initial issuance and the subsequent transfer of QS/IFQs. This analysis should examine the implications of foreign ownership including an analysis of the Pacific Council's foreign ownership provisions. This analysis should also address ownership or control of QS/IFQ by lien holders and/or lending institutions.

* An analysis of the impact of various rent collection levels and mechanisms is required. This analysis should include consideration of state and federal taxes and fees imposed on industry as well as management, enforcement and other costs borne by state and federal governments in support of industry.

* An analysis of the feasibility and implementation of IFQ management with in-season TAC adjustments is required.

* An analysis of constraints on management and implementation of IFQ systems posed by present confidentiality requirements is required.

* A report on results from the halibut/sablefish IFQ post-implementation monitoring program (mandated under the GLS system) is required as part of the overall analysis.

* An analysis of the extent to which current confidentiality requirements impede Council compliance with MFCMA requirements for review of allocation scenarios is required. The mandate that assignments of fishing privileges shall be"fair and equitable to all such fishermen . . . carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges" is particularly pertinent to this requirement.

Proposed Outline of EA/RIR of BSAI Pollock IFQs

1. Introduction
   a. Problem Statement
   b. Alternatives
      i. Status quo
      ii. IFQs for pollock
   c. Overview of Document

2. Pollock and the BSAI Ecosystem
   a. Pollock Biology
   b. Interactions with other commercial fish
   c. Interactions with non-commercial animals

3. The Pollock Fishery in the BSAI
   a. Pollock Processing
   b. Pollock Harvesting
   c. Management
   d. Communities
   e. Models of the fishery

4. Status Quo: Alternative 1
   a. Description of the Fishery into the Future
   b. Cost and Benefits
   c. Distributional Impacts
   d. Summary of Continued Status Quo

5. IFQs for Pollock: Alternative 2
   a. General Overview and Literature Review of IFQs
   b. Management Under Pollock IFQs
   c. Allocation of IFQs
   d. Description of the Pollock IFQ Fishery in the Future
   e. Cost and Benefits
   f. Distributional Impacts
   g. Summary of Non-pollock Fishery Impacts
   h. Summary of IFQs for Pollock

6. Summary and Conclusions
   a. General summary and conclusions
      i. Comparison of alternatives
   b. EA/RIR
   c. IRFA
   d. E.O. 12866
   e. NEPA

Supplemental Analysis of IFQ Allocation Options

1. Introduction
2. Description of General Allocation Methods
3. Hierarchy of Pollock IFQ Program Allocation Options
4. Description of Reference Configurations and Variants
5. Distribution of IFQs under Reference Configurations

Detailed Preliminary Outline of Chapter 5 of EA/RIR
Alternative 2: IFQs for BSAI Pollock

5. Alternative 2: IFQs for BSAI Pollock
   a. General Overview and Literature Review of IFQ Systems

      i. Harvesting IFQs; A "one pie" system
         (1) Theory and Global Experience
            (a) Multi-species IFQs Multiple Species Fisheries.
            (b) Single Species IFQs in Single Species Fisheries.
            (c) Single Species IFQs in Multiple Species Fisheries.
         (2) Processors in a Harvesting IFQ system.
         (3) Inshore-Offshore in a one-pie system.

      ii. The Two-Pie System; Harvesting IFQs and Processing IFQs
         (1) Theory
         (2) Inshore-Offshore in a two-pie System
         (3) Comparison to "One-Pie" System

   b. Management Under Pollock IFQs

      i. ✔IFQ System Definition
         (1) Two-Pie IFQ for Directed Mid-water Pollock
         (2) Two-Pie IFQ for Directed Pollock (Midwater and Bottom)

      ii. ✔Definition of Quota Types. Including one or more "type" creates a separate quota and therefore a separate apportionment of the TAC. Additionally, "quota types" may imply a barrier to transferability.
         (1) Inshore - Offshore
         (2) A Season - B Season
         (3) Midwater-Bottom
         (4) Catcher Vessel-Catcher Processor
         (5) Catcher Processor-Mothership-Shore plant

      iii. ✔Pre-Season Apportionments of Pollock TAC
         (1) ✔CDQ apportionment. An updated assessment of the CDQ program would be included as an attachment to the analysis.
         (2) ✔Apportionment of Pollock for Bycatch in Non-Pollock Fisheries.
         (3) Apportionment of Pollock for Directed IFQ Fishery
            (a) ✔A Season and B Season.
            (b) ✔Inshore and Offshore.
            (c) ✔Midwater and Bottom Pollock.

      iv. Prohibited Species Bycatch Management Regime
         (1) ✔Relationship to Non-Pollock Fisheries
            (a) Separate PSC Regime for Pollock IFQ and Non-Pollock Fisheries.
            (b) One PSC Regime for All BSAI Fisheries.

✔Denotes a "Decision Point". Some decision points have options which are themselves decision points.

(2) Included Species in Pollock IFQ PSC Regime
  (a) ✔Midwater Pollock
    (i) Chinook Salmon
    (ii) Chum Salmon
    (iii) Herring
    (iv) Halibut
  (b) ✔Bottom Pollock
    (i) Halibut
    (ii) King Crab
    (iii) Tanner Crab
(3) General Restrictions
    (i) ✔Area Closures
    (ii) ✔Catch/Mortality Caps
(4) ✔IPSQ for Included Species
  (a) Relationship to General Restrictions
  (b) ✔Requirements for IPSQ
    (i) Sufficient IPSQ before trip begins
    (ii) Grace Period to Purchase IPSQ if catch exceeds individual quota.
(5) ✔Allocation of Prohibited Species Bycatch Quotas
  (a) Proportional to initial harvester QS based on industry bycatch rates, i.e., IPSQ = Industry Bycatch Rate × Initial QS.
  (b) Each vessel receives industry average bycatch amount, i.e., IPSQ = Total Pollock PSC Cap ÷ # of vessels receiving IFQs.

v. ✔Management of Groundfish Bycatch in the Pollock IFQ Fishery
(1) No restrictions on the amount of groundfish bycatch in the pollock IFQ fishery.
(2) ✔Separate apportionment of bycatch amounts of groundfish species TACs allowed to be taken in the Pollock IFQ fisheries. For example allocate X% of Pacific cod TAC to be used as bycatch in the pollock IFQ fishery.
  (a) Close IFQ Fishery if groundfish bycatch apportion has been harvested.
  (b) Require discards of groundfish bycatch if apportion has been harvested.
  (c) Allocate non-pollock groundfish bycatch in form of IGBQ by species to each harvester.
    (i) ✔Allocation options of individual groundfish bycatch quotas.

vi. ✔Participation of IFQ Recipients in Directed Fisheries for Non-Pollock Species
(1) No Restrictions
(2) ✔Limited to vessels which had previously fished in non-pollock fisheries, i.e., a species /area endorsement to be applied only to pollock IFQ recipients.
  (a) based on participation prior to June 24, 1992.
  (b) based on participation prior to June 17, 1995.
(3) ✔Apportion TACs for Directed Fishing of Non-Pollock Species to Pollock IFQ holders and to other open access participants. For example allocate Y% of Pacific Cod TAC to Pollock IFQ holders for directed fishing on Pacific cod.
(4) ✔Restrict Seasons in which IFQ holders may fish open access.

vii. General Enforcement and Administrative Provisions in IFQ Pollock Fishery
(1) ✔Observer Requirements
(2) ✔Weight Measurement Requirements
(3) ✔Use and Accounting Requirements of IFQs
  (a) IFQ holder must use IFQs on all pollock caught/processed.
  (b) IFQ holder must use IFQs on all pollock caught/processed in a directed pollock

fishery.

(4) ✔Retention Requirements
   (a) Do not require full retention.
   (b) Require full retention of all pollock harvested under IFQs upon implementation.
   (c) ✔Require full retention of all pollock harvested under IFQs after a set number of years following implementation. Options include a range of 1 to 5 years.

(5) ✔Other Enforcement Measures.

(6) ✔Requirements for IFQs to Cover Catch/Processing
   (a) Sufficient IFQ before trip or processing begins.
   (b) Grace Period to Purchase IFQs if catch exceeds individual quota. (Allow Retroactive Balancing)

(7) ✔Harvesting/Processing Overages or Underages
   (a) rollover into next years IFQ is catch or processing is ± R%.
   (b) If overage is greater than R% then penalize.
   (c) If underage is greater than R% then penalize. (Use it or loose it.)

(8) ✔Transferability of Pollock QS and prohibited species IPSQs
   (a) Pollock QS and IPSQs are not transferable.
   (b) Pollock QS and IPSQs are transferable, but only as a "bundle".
   (c) Pollock QS are transferable, but IPSQs are not transferable.
   (d) Pollock QS and IPSQs are independently transferable.

(9) ✔Transferability within quota types. (Inshore-Offshore, A Season-B Season, etc)
   (a) No restrictions on transferability
   (b) Two year restriction on sales of QS. Leases of QS (or sale of IFQs) would be allowed.

(10) ✔Transfers between inshore and offshore sectors.
   (a) No transfers allowed.
   (b) Transfers allowed after 5 years. This implies that inshore-offshore designation is dropped after 5 years, and shares which had been designated as offshore could be used for delivery inshore.
   (c) Transfers allowed after 5 years.
   (d) Transfers allowed after 10 years.

(11) ✔Transfers between other Quota Types

(12) ✔Ownership Caps. These caps would limit purchases of additional QS, but not affect the amount which could be received in the initial allocation. *This section may be moved to the "Supplemental..." because its impacts are dependent on the allocation.*
   (a) No ownership caps
   (b) ✔Limit ownership to a percent of the entire QS pools for Harvesting and Processing. Options include 1%, 5%, 10% of each pool or any % within that range.
   (c) ✔Limit ownership to a percent of each Quota Type, Inshore Quota Pool, Offshore Quota Pool, A Season Quota Pool, B Season Quota Pool, Catcher Vessel Quota Pool etc. Options include 1%, 5%, 10% of each pool or any % within that range.

viii. Assessment of Enforcement and Administrative Costs.

ix. ✔Analysis of potential fee collection measures.

x. Assessment of regulations regarding confidentiality and their impacts on management and enforcement of the pollock IFQ program.

c. Allocation of IFQs

i. General discussion of the critical nature of the initial allocation

ii. Generalized discussion of various methods of allocation.
(1) Uniform distribution to all recipients
(2) Physical characteristics of recipients (vessel size, processing facilities)
(3) Participation history of recipients
(a) Catch/Processing History
(b) Number of years in fishery
(c) Catch/Processing in last or best year of participation.
(4) Combination of elements from above.
(5) Guaranteed % of last or best year, plus additional shares for longer term participation.
(a) Guaranteed minimum share to each, plus additional shares for longer term participation and/or higher catch/processing.
(b) Graduated minimum share to each based on physical characteristics, plus additional shares for longer term participation.

iii. Key Decision Points
(1) ✔Recipients of IFQs
(a) Owners of vessels or processing facilities as of the date of final council Action
(b) Owners of vessels or processing facilities as of the date of application for IFQs.
(2) ✔Primary qualification criteria
(a) Vessel must be moratorium qualified and permitted, and processors must have Participated in North Pacific Groundfish between 1988 and February 9, 1992.
(b) Vessel must be qualified to receive a license and BS and/or AI endorsements, and Processors must have participated in BSAI pollock between January 1, 1992 and June 17, 1995.
(3) ✔Data To Be Included In Calculation of QS
(a) All reported pollock
(b) All retained pollock
(c) All pollock reported in a directed pollock fishery
(d) All pollock retained in a directed pollock fishery
(4) ✔Disposition of CDQ catch between 1992 and the present.
(a) Do not include CDQ catches in allocation calculation.
(b) ✔Include CDQ catches in allocation calculation.

iv. Description of Supplemental Analysis of IFQ Allocation Options
(1) ✔Hierarchy of Pollock IFQ Allocation Options

d. Description of the pollock IFQ fishery in the future
e. Cost and benefits
f. Distributional impacts
g. Summary of non-pollock fishery impacts
h. Summary of IFQs for pollock

Preliminary Hierarchy of Pollock IFQ Allocation Options

Primary Qualification Criteria

10,000,000 Vessel must be moratorium qualified and permitted, and processors must have participated in North Pacific groundfish between 1/1/88 and 2/9/92.

20,000,000 Vessel must be qualified to receive a license and BS and/or AI endorsements, and processors must have participated in North Pacific groundfish between 1/1/92 and 6/17/95.

Recent Participation Qualification Criteria

0,000,000 No additional Qualification Criteria

1,000,000 Must have fished from 6/24/89 - 6/27/92.

2,000,000 Must have fished from 1/1/92 - 12/31/94.

Data To Be Included In Calculation of QS (Added by Staff)

100,000 All reported pollock in open access fishery

200,000 All retained pollock in open access fishery

300,000 All pollock reported in a directed pollock open access fishery

400,000 All pollock retained in a directed pollock open access fishery

Minimum QS: Set a minimum QS ratio (QSR) and allocate a minimum QS (MQS) which will result in IFQs which are not less than the QSR × individual's Catch over a given time period (C_{it}). This assumes that IFQs are based on a TAC=ΣC_{it}.

00,000 No minimum. MQS=0 & QSR=0. All QS allocated in "Regular QS calculation" below.

10,000 QSR = 75%, "C_{it}" = 1994 catch. MQS=QSR×C_{it} . MQS=0 for those with no 1994 participation.

20,000 QSR = 95%, "C_{it}" = 1994 catch. MQS=QSR×C_{it} . MQS=0 for those with no 1994 participation.

Regular QS Calculation: If the Council allocates MQS then Regular QS (RQS) will function as a kind of "reward" for additional participation outside the Minimum QS time period. If the Council does not allocate MQS then IFQs will be based solely on RQS.

0,000 No remainder calculation, i.e. all QS allocated with Minimum QS.

1,000 Sum of JVP and DAP catch\processing from 1/1/84 - 6/27/92.

2,000 Sum of JVP and DAP catch\processing from 1/1/84 - 12/31/94

3,000 0.2 × (Sum of 1/1/84 - 12/31/90) + 0.8 × (Sum of 1/1/91 -12/31/94)

4,000 0.4 × (Sum of 1/1/84 - 12/31/90) + 0.6 × (Sum of 1/1/91 -12/31/94)

5,000 0.6 × (Sum of 1/1/84 - 12/31/90) + 0.4 × (Sum of 1/1/91 -12/31/94)

6,000 0.8 × (Sum of 1/1/84 - 12/31/90) + 0.2 × (Sum of 1/1/91 -12/31/94)

7,000 Best year: 1991, 1992, 1993, or 1994.

8,000 Annual average from 91-94, i.e. (Total: 1/1/91 - 12/31/94) ÷ 4

Note: Harvesters QS includes all DAP and JVP data on or before 12/31/90 and all DAP catch on or after 1/1/91as applicable. Processors QS includes only DAP data for entire QS calculation period.

Assignment of QS to Inshore or Offshore category.

000 No assignment to categories, allow two pie system to allocate to inshore and offshore.

100 DAP is based on disposition of catch, i.e. to inshore/offshore categories, all JVP is designated as Offshore.

200 DAP is based on disposition of catch, i.e. to inshore/offshore categories, JVP catch is distributed proportionate to DAP deliveries.

300 DAP is based on disposition of catch, i.e. to inshore/offshore categories, JVP catch is distributed to inshore and offshore categories based on the owners choice.

Assignment of QS to A season or B season (Options implied in proposal but specified by Staff.)

10	No assignment of QS by season. IFQs are split between A and B season upon issuance each year.
20	45% of each initial allocation of QS is assigned to A season and 55% of QS is assigned to B season.
30	Catch\processing history from January through May is assigned A season, from June through December to B season.

Minimum Amounts of PQS: to be received by catcher processors

0	No minimum
1	PQS must be greater than or equal to the HQS received by the processor.

Options which may be feasible additions to, or substitutes in, the hierarchy.

One or both of the following two option make the recent participation options more consistent with the License Limitation Program.

3,000,000	Must have fished from 6/27/92 - 6/17/95.
4,000,000	Must have fished from 1/1/92 - 6/17/95.

The following five could be added to the minimum QS options. In the existing minimum QS options, a vessel which did not participate in 1994 would not receive a minimum QS, and would have to rely solely on Regular QS. This would prove to be a very severe "penalty". In the additional options the "penalty" for not participating in the 1994 pollock fishery would not be as dr aconian. A QSR of 95% was not included in these additions because 95% approaches the maximum feasible QSR; if the Council wishes to base QS strictly on recent participation, then it could set the minimum QSR=0 and choose among last few options under regular QS. Additional information on the impacts of allocating a minimum QS are included in the of the "issues" paper.

30,000	QSR = 75%, "C_{it}" = individual's catch or processing in most recent year of participation from 91-94.
40,000	QSR = 75%, "C_{it}" = best year: 1991, 1992, 1993, or 1994.
50,000	QSR = 75%, "C_{it}" = annual average from 91-94, i.e. catch ÷ 4 (or processing ÷ 4).
60,000	QSR = 75%, "C_{it}" = participation average 91-94, i.e. catch ÷ # of years fished (or processing).

The following two options "fill out" the Regular QS options. The "participation average" shown here (and in option 50,000) is defined differently than the "annual average." The annual averages from 1991-1994 divides the sum of catch from 1991-1994 by four. This means that if a vessel did not participate in one of the four years then its annual average would be its three year total divided by four. The "participation average" sums the catch over the four year period but divides by the number of years of participation. Thus the vessel with three years of fishing would have a higher participation average than its annual average.

9,000	Participation Average from 91-94, i.e. catch ÷ # of years fished (or processing).
A,000	Most Recent Year of participation from 1991-1994.

DISCUSSION PAPER ON COMPONENTS OF AN IFQ PROGRAM FOR THE BSAI POLLOCK FISHERIES

Prepared by North Pacific Fishery Management Council Staff

January 29, 1996

1 Introduction

This paper explores several major issues regarding a BSAI pollock only IFQ program. It focuses on the harvesting portion and examines some 'systemic' issues which can be addressed qualitatively, though considerable catch information is provided for pelagic and non-pelagic trawls in the pollock fisheries. Some important aspects of the proposed IFQ system, such as the implications of the "two-pie" system and allocations of IFQs or IPQs to processors, are not included here, but may be the subject of future subsequent discussion papers.

The paper has five sections. The first four deal with the following issues:

- Nature of IFQ Privileges and Degree of 'Guarantees'
- Bottom vs. Midwater Pollock Targets and Pelagic vs. Non-Pelagic Trawls
- Implications of 'Systemic' Decisions on Initial Allocations
- Transferability Considerations

These issues are interrelated, and we will conclude by offering four hypothetical system configurations to help illustrate the mechanics of the issues, and perhaps allow some decisions to be made before formal analysis commences. This concluding section is titled "Hypothetical Examples of Pollock IFQ Systems."

2 IFQ Harvest Privileges and Guarantees

IFQs generally are viewed as harvest privileges, granting the holder the right to harvest a given amount of pollock. But how protected is that harvesting privilege or right? Clearly, it is not absolute. NMFS reserves the authority to revoke the harvest privilege in certain situations, such as if an unanticipated disaster, e.g. an oil spill, puts the pollock stock in jeopardy, or the IFQ system is terminated by the Council or the Secretary of Commerce, or an IFQ holder's harvest privilege is revoked due to a violation. This section assumes that NMFS will retain the authority to revoke the IFQs for these types of situations. Rather, the primary question we will address in this section is, "How well insulated will IFQ holders be from closures to their IFQ fishery as a result of the activities of vessels in other fisheries, or of other vessels in the IFQ fisheries?"

One can imagine systems whereby the IFQ holder is extremely well insulated from the activities of others. We will call these systems ones with "relatively strong harvest guarantees" for IFQ holders. Such systems would not force the closure of IFQ fisheries as a result of bycatch in other fisheries, nor would such systems force certain IFQ holders to cut short their fishing as a result of the activities of other IFQ holders. The IFQ systems for halibut and sablefish feature "relatively strong harvest guarantees." For example, bycatch of halibut in the Pacific cod fishery has little or no impact on the halibut IFQ fishery. The only major impact is the apportionment of a halibut PSC cap for the Pacific cod, which results in a reduction in the amount that IFQ holders may harvest. Even so, that PSC cap is limited and cannot increase in size without regulatory action.

One can also imagine systems whereby the IFQ holder is much less insulated from the activity of others. We will call these systems ones with "relatively weak harvest guarantees." The early days of the pollock fishery provide an example of relatively weak harvest guarantees. Various countries were allocated portions of the pollock TAC for directed fishing (TALFF) and processing with US harvesters (JVP). These apportionments were subject to processing and harvesting by purely domestic operators (DAP) which had a priority allocation; whatever amount of the pollock DAP operators were projected to need, they received. Although this was not an IFQ system *per se*, it did feature relatively weak harvest guarantees for foreign harvesters and processors.

In the longline IFQ system, bycatch of halibut by sablefish IFQ holders, who don't also hold halibut IFQs, is monitored but does not count against a PSC cap. In removing bycatch of halibut from the PSC cap, the Council changed the sablefish IFQ system from one with relatively weak harvest guarantees to one with stronger guarantees. If instead, halibut bycatch counted against a PSC cap, then some sablefish IFQ holders could be shut down by the action of other sablefish IFQ holders.

The relative strength of the harvest right for IFQ holders can also impact participants in other non-IFQ fisheries. If, for example, there was a requirement that all halibut caught with longline gear must count against a halibut IFQ, then participants in the Pacific cod longline fishery would be forced to purchase enough halibut to cover their bycatch. Such a system would have relatively stronger harvest guarantees for halibut IFQ holders than the current system, because the Halibut PSC cap for longline fisheries could be eliminated, closing an avenue by which overall IFQ harvests could have been reduced. Such a system would of course have an impact on P. cod vessels. From this example, one can envision systems with very strong harvest guarantees for IFQ holders which make it virtually impossible for participants in other fisheries to operate.

In designing a pollock only IFQ system the relative strength of the harvest guarantees will be an important determinant in the overall system configuration. Pollock is an extremely ubiquitous species which shows up as bycatch in almost every other target fishery prosecuted in the North Pacific. At times pollock may also be found in huge schools in which few, if any, other species are found. At other times bycatch of other groundfish species may be considerable. Finally, prohibited species such as halibut, crab, herring, and salmon are captured not only in the pollock fisheries, but in other groundfish target fisheries as well. These characteristics make a single species pollock IFQ system somewhat susceptible to external impacts. In general there are three basic approaches to dealing with these external impacts on IFQ holders. We include as a fourth item an approach to

reduce the impacts of the IFQ fishery on other groundfish fisheries. None of these approaches appears to be mutually exclusive of the others.

1) Accept external impacts on IFQ holders.
2) Limit the impact of other target fisheries on pollock IFQ holders.
3) Limit the impact of IFQ holders on each other.
4) Limit the impact of IFQ holders on other groundfish fisheries.

2.1 Accept External Impacts On IFQ Holders

With this approach at least some of the external impacts are accepted. One possible rationale for accepting these impacts may be that they are viewed as a cost of the increased benefits anticipated in the IFQ fishery. It is unlikely that any system can be designed which would completely isolate the IFQ holder from all external impacts. The question is how many of these external impacts can be accepted without significantly reducing the potential benefits of the IFQ?

In a pollock-only IFQ system, one such area of acceptable external impacts may be found in the bycatch of other groundfish in the pollock fisheries. Section 3 will show that nearly 27,000 mt of other groundfish were captured in pollock target fisheries. At some point in the year it is likely that the TACs of other groundfish species will be approached, prompting NMFS to put certain species on "bycatch only" status. This means that retention of that species in amounts greater than levels defined by the directed fishing standard will not be allowed. Further catches of "bycatch only" groundfish species may lead NMFS to declare the species on PSC status, requiring they be discarded. Current regulations do not force pollock fisheries to close when a groundfish bycatch species is put on PSC status; they would however prevent additional profits were retention not allowed. Clearly the placement of a species often retained in pollock target fisheries on "bycatch only" or as a PSC could impact pollock IFQ holders. These external impacts may be acceptable to pollock IFQ holders.

King crab bycatch is another example where potential external impacts may prove acceptable to IFQ holders. When bycatch exceeds PSC caps, areas of the Eastern Bering Sea close to trawling. Not all of this bycatch will have occurred in the pollock fisheries, but all trawlers are forced to relocate. A very simple IFQ program with relatively weak harvest guarantees might include open access management of crab bycatch. The bycatch of all trawl fisheries would count toward the PSC cap whether they were managed with IFQs or not. Once the cap was attained all trawl fisheries would be forced to move out of the closed area.

2.2 Limit the Impact of Other Target Fisheries on Pollock IFQ Holders

Under this approach the external impacts on IFQ holder are limited by allocating groundfish and prohibited species for bycatch in the IFQ fisheries. Only catches by IFQ holders would be counted against these apportionments, thus effectively limiting the impact of other groundfish fisheries. This conclusion assumes that the amount allocated to the IFQ fishery is enough to cover its needs; anything less could be considered an external impact which the IFQ holders would have to accept. This last point illustrates the somewhat fuzzy nature of these approaches. Even a system which could provide relatively strong guarantees for harvest of pollock, could also force IFQ holders to accept external impacts from other fisheries.

2.3 Limit the Impact Of IFQ Holders On Each Other

Above, the IFQ fishery was insulated from other fisheries by receiving a separate apportionment for each species taken in the pollock fisheries. The bycatch of halibut in the pollock IFQ fisheries would count against the pollock IFQ halibut PSC apportionment. Assuming that attainment of that PSC apportionment closed all IFQ fisheries, it is clear that some IFQ holders may be impacted by other IFQ holders. To limit the impact of IFQ holders on each other, the apportionments would need to be individualized, resulting in individual bycatch quotas (IBQs).

Within this general framework there is a lot of wiggle room. IBQs would not be necessary for all species for which an apportionment to the IFQ fishery exists. IBQs could be established for prohibited species, leaving the IFQ apportionments of groundfish species to act against the entire fleet, e.g., if the Pacific cod apportionment were attained then all P. cod would be treated as PSC for all IFQ holders. Attainment of an IBQ would not necessarily have to mean the end of fishing. For example, the current halibut PSC regulation for pollock prohibits the use of non-pelagic gear once the cap is attained. A similar prohibition could be used in the pollock IFQ fisheries. IBQs which force individual area closures could also be developed.

2.4 Limit The Impact Of IFQ Holders On Other Groundfish Fisheries

The three approaches above span the range from relatively weak harvest rights to relatively strong harvest rights. To limit the impacts of IFQ holders on each other, one must first limit the impacts of participants in other fisheries on the IFQ fisheries. In doing so, however, we also create externalities on the participants in the other groundfish fisheries. The most obvious impact is the reduction of the TAC available for these fisheries in the creation of the IBQ apportionments. As mentioned earlier, in order to make the apportionments non-binding on the IFQ fisheries, they need to be sufficiently large. The larger the apportionment, the greater the impact on the participants in the target fisheries. Therefore, in order to limit the negative impact of the IFQ fisheries, participants in other fisheries would argue that bycatch apportionments should be set at an absolute minimum needed to prosecute the IFQ fishery. And if apportionments are set very low, the IFQ fishery still could have negative long-run impacts, even if the only repercussion of attainment of the apportionment was to require discards, thus potentially allowing TAC over-runs.

Another more subtle impact on participants in other groundfish fisheries has been called the "domino effect." The domino effect could occur in situations where there are IFQ fisheries and non-IFQ fisheries open to IFQ holders.

IFQ holders, because they have a harvest privilege, do not have to race for the fish once the season begins. They may choose to harvest their quota at optimal times. At any given time IFQ holders will ask themselves whether it would be better to participate in the IFQ fishery now or in a non-IFQ fishery. In large part that decision will depend on the chance that harvest amounts later will be as great as harvest amounts now. In the case of the non-IFQ fishery, there is no guarantee that the fishery will be open later, whereas the IFQ is available for harvest at any time. In this case the likely decision will be to participate in the non-IFQ fishery, delaying activity in the IFQ fishery until later. The nature of the pollock fishery, particularly in the roe season, may mitigate this impact somewhat, none-the-less it is a factor to be considered. Alternatives in the current proposal before the Council do contain options for addressing this domino effect and will have to be examined in more detail.

3 Bottom vs. Midwater Pollock Targets and Pelagic vs. Non-Pelagic Trawls

This section examines the differences between bottom and mid-water pollock targets and the definitions and use of the term of pelagic and non-pelagic trawls with respect to the pollock fisheries. A preliminary summary of 1995 catches of pollock in bottom and mid-water targets caught by pelagic and non-pelagic trawls from the blend data is presented. The section ends with a few conclusions and caveats, and examines the potential implications of the findings for the pollock IFQ system.

3.1 Summary of Current Gear and Target Regulations Impacting Pollock

When examining the pollock fishery in the North Pacific a clear distinction must be made between definitions of gear and targets. While regulatory language may make this distinction fairly clear, the practical differences may appear somewhat fuzzy. There are two types of trawl gear defined in regulations: "pelagic trawls," and "non-pelagic trawls." Similarly, two target fisheries are defined for pollock: "bottom pollock" and "mid-water pollock." In most cases, "non-pelagic trawls" when used in the pollock fishery are classified as targeting "bottom pollock," however, it is possible to be in a "mid-water pollock target fishery" while using "non-pelagic trawl" gear. Similarly a bottom pollock target fishery while using "pelagic trawl" gear is possible.

3.1.1 Trawl Gear Definitions

Currently there are two general types of trawl gear allowed in the BSAI open access fisheries: "pelagic trawls" and "non-pelagic trawls." As shown in the box below, the definition of a pelagic trawl is quite complex, while "non-pelagic trawls" are defined as any trawl which does not meet the "pelagic trawl" definition.

§ 672.2 Definitions. *(Parts 5 and 7)*

(5) Non-pelagic trawl means a trawl other than a pelagic trawl;

(6) .....

(7) Pelagic trawl means a trawl that:

(i) Has no discs, bobbins, or rollers;

(ii) Has no chafe protection gear attached to the foot rope or fishing line;

(iii) Except for the small mesh allowed under paragraph (7)(ix) of this definition:

(A) Has no mesh tied to the fishing line, head rope, and breast lines with less than 20 inches (50.8 cm) between knots, and has no stretched mesh size of less than 60 inches (152.4 cm) aft from all points on the fishing line, head rope, and breast lines and extending past the fishing circle for a distance equal to or greater than one half the vessel's length overall; or

(B) Has no parallel lines spaced closer than 64 inches (162.6 cm), from all points on the fishing line, head rope, and breast lines and extending aft to a section of mesh, with no stretched mesh size of less than 60 inches (152.4 cm), extending aft for a distance equal to or greater than one half the vessel's LOA;

(iv) Has no stretched mesh size less than 15 inches (38.1 cm) aft of the mesh described in paragraph (7)(iii) of this definition for a distance equal to or greater than one half the vessel's length overall;

(v) Contains no configuration intended to reduce the stretched mesh sizes described in paragraphs (7)(iii) and (iv) of this definition;

(vi) Has no flotation other than floats capable of providing up to 200 pounds (90.7 kg) of buoyancy to accommodate the use of a net-sounder device;

(vii) Has no more than one fishing line and one foot rope for a total of no more than two weighted lines on the bottom of the trawl between the wing tip and the fishing circle;

(viii) Has no metallic component except for connectors (e.g., hammerlocks or swivels) or net-sounder

device aft of the fishing circle and forward of any mesh greater than 5.5 inches (14.0 cm) stretched measure;

(ix) May have small mesh within 32 feet (9.8 m) of the center of the head rope as needed for attaching instrumentation (e.g., net-sounder device); and

(x) May have weights on the wing tips;

The primary reason to define the difference as such is to allow the Regional Director to disallow the use of "non-pelagic trawl" gear in a given area once a Prohibited Species Catch (PSC) cap for halibut or crab is attained, while allowing the continued prosecution of the pollock fishery with pelagic gear.

3.1.2 Target Definitions.

Because, in principle, "pelagic gear" is pulled through the water column rather than across the bottom, bycatch of crab and halibut are greatly reduced. In practice, however, "pelagic gear" may be fished "hard on bottom," resulting in bycatch rates more typical of "non-pelagic trawl" gear. Thus two target fishery definitions for pollock (shown in the box below) have been developed to assign bycatch rates and PSCs when fishing is allowed with both "pelagic" and "non-pelagic trawls". The regulations defining these targets are shown below.

§ 675.21 Prohibited species catch (PSC) limitations.

(a) .....

(b) Apportionment of PSC limits to fisheries.

(1) Apportionment to trawl fishery categories.

(i) .....

(ii) .....

(iii) For purposes of apportioning trawl PSC limits among fisheries, the following fishery categories are specified and defined in terms of round-weight equivalents of those groundfish species or species groups for which a TAC has been specified under § 675.20.

(A) Midwater pollock fishery. Fishing with trawl gear during any weekly reporting period that results in a catch of pollock that is 95 percent or more of the total amount of groundfish caught during the week.

(C) - (E) .....

(F) Pollock/Atka mackerel/"other species." Fishing with trawl gear during any weekly reporting period that results in a retained aggregate amount of pollock other than pollock harvested in the midwater pollock fishery defined at paragraph (b)(1)(iii)(A) of this section, Atka mackerel, and "other species" that is greater than the retained amount of any other fishery category defined under paragraph (b)(1)(iii) of this section.

The regulatory interplay between gears and targets in the pollock trawl fishery are summarized below. In the BSAI, prohibited species catch limits are apportioned as follows:

a) Herring PSC is apportioned to the midwater pollock target fishery, where midwater pollock is defined as a report of catch that is 95% or more pollock.
b) Separate halibut and crab PSC caps are apportioned to the "pollock/Atka mackerel/other species target".

When the pollock fishery opens, it proceeds until one of the following things happen:

a) The pollock TAC is reached, in which case the directed fishery for pollock closes for all gears;
b) a PSC limit for crab or halibut is reached, in which case directed fishing for pollock is closed to trawl vessels using non-pelagic trawl gear, but pollock target fisheries using pelagic gears are unaffected.

In making the decision to close the non-pelagic trawl portion of the pollock fishery, the NMFS attempts to estimate how much additional halibut will be taken in the remaining pelagic trawl pollock fisheries, and in the remaining Atka mackerel and "other groundfish" fisheries. The closure order will occur at such time as the estimated additional future catches of halibut added to the catches which have already occurred equals the halibut PSC cap for these fisheries. Any halibut caught in a pelagic trawl pollock fishery (or in the Atka mackerel or "other groundfish" fisheries) following the closure order for the non-pelagic pollock, are counted against this buffer. If the buffer, and therefore the PSC cap, is exceeded there is no mechanism to close these fisheries. In past years this has not been a problem.

3.1.3 Directed Fishing Standards and Bycatch

Directed Fishing Standards and their relationship to target fisheries, as well as their relationship to bycatch, are important issues in discussions of targets and gear, and in discussions of the pollock system in general. The use of the term "directed fishing" is perhaps one of the most misused, from the perspective of the regulations. Directed fishing standards have been defined for each major bycatch species, for each of the groundfish target fisheries. However, it is important to note that the directed fishing standards as defined in regulation, apply only when a species has been closed to directed fishing, by a NMFS action placing the species in "bycatch only" status. Assume for explanatory purposes that Pacific cod has been declared "bycatch only." At this point it is prohibited to target on Pacific cod, and it is prohibited to retain amounts of Pacific cod caught as bycatch which exceeds the Directed Fishing Standard of Pacific cod as defined for the particular target fishery.

Directed fishing is defined in terms of bycatch rather than in terms of target fisheries, and therefore the standards are relatively low. For pollock and Pacific cod the directed fishing standard is in most cases set at 20% of the total retained groundfish. For some species the directed fishing standard is as low as 5%. Thus it is possible to retain amounts which would exceed directed fishing standards for several species simultaneously. For example a trawler might report 31 tons of retained pollock, 30 tons of retained Pacific cod, 30 tons of rock sole, and 9 tons of sablefish. The retained catch of each species would exceed the directed fishing standard for the bottom pollock target fishery. However, unless any of these species had been placed on "bycatch only" status, the vessel would not technically be "directed fishing" for any of the species.

3.1.4 Terminology Used in This Paper

In order to differentiate between gears and targets, this paper will use the following conventions:

a) pelagic trawl refers to the specific gear used as defined above (no rollers, chafing gear, etc.), regardless of the target fishery.
b) non-pelagic trawl refers to all trawl gear which does not meet the definition of pelagic trawl, regardless of the target fishery.
c) midwater pollock will mean any pollock trawl fishery in which total catch is at least 95% pollock by weight.
d) bottom pollock will mean a trawl fishery in which the weight of retained pollock exceeds the weight of any other retained groundfish species defined as a target fishery, but in which the weight of all pollock caught is less than 95% of the total catch.

3.2 Catch by Gear and Target in 1995

Prior to this analysis the distinction between pelagic and non-pelagic trawl was not carried forward into distributed versions of the Blend data, although it is reported by processor in their submissions of weekly reports, and is used in the apportionment of PSC. Therefore, until now it has not been possible to accurately report how much pollock was harvested with pelagic trawls and how much with non-pelagic trawls. This is particularly true at times when both gears may be legally used, i.e., at the beginning of the year. To aid this assessment, NMFS has reprogrammed the algorithm used to develop the Blend Data to include the distinction between pelagic and non-pelagic trawls. However this new algorithm has been applied only to preliminary 1995 data. Therefore this discussion paper will be based only on the 1995 fishing year, and our findings and conclusions should be viewed with caution.

Table 1 shows the basic catch matrix we will use in the discussions to follow. The matrix shows pollock catch by pelagic and non-pelagic trawls (rows), broken out by bottom and midwater pollock targets as well as the catch of pollock in other groundfish trawl targets (columns). The leftmost column shows the total catch by that gear. Working from left to right across the first row of Table 1, we see that just over 41,198 mt of pollock were taken in bottom pollock fisheries with non-pelagic trawls. Perhaps surprisingly, 29,556 mt of pollock which was harvested with non-pelagic trawl gear, was assigned to the midwater trawl target fishery. The largest portion of the pollock caught with non-pelagic trawl gear was assigned to other target fisheries, and may therefore be termed bycatch. In all, a total of 129,723 mt of pollock was harvested with non-pelagic trawls.

The second row of Table 1 contains the row % or the catch of a target as a percent of the total catch by non-pelagic trawl gear. Thus we see that pollock assigned to the bottom pollock target fishery was 31.8% of the total pollock catch by non-pelagic trawls (41,198÷129,732.1).

The third row of the table shows the column percentages for pollock harvests with non-pelagic trawls. We can see that non-pelagic trawls accounted for just 43.6% of the total amount of pollock assigned to the bottom pollock target fishery, but only 2.9% of the total amount of pollock assigned to the midwater pollock fishery. We also see that non-pelagic trawls accounted for almost all (99.3%) of the "bycatch" of pollock in other trawl fisheries. Overall, 10.9% of the pollock harvested in 1995 was caught with non-pelagic trawls.

The last row in the non-pelagic trawl section shows the percent of the total trawl pollock catch represented by the different targets using non-pelagic trawls. Thus the pollock harvested with non-pelagic trawls and assigned to the bottom pollock target accounted for only 3.5% of the total trawl pollock harvest (41,198 ÷ 1,185,946).

Table 1. Sum of Pollock Tons in BSAI Trawl Fisheries by Gear and Target in 1995

Gear		Target: Bottom Pollock	Target: Mid-Water Pollock	Target: All Other Targets	Grand Total
Non-Pelagic Trawls	metric tons	41,198.1	29,556.1	58,968.9	129,723.1
row %	(target÷gear total)	31.8%	22.8%	45.5%	100.0%
column %	(gear-target÷target total)	43.6%	2.9%	99.3%	10.9%
total %	(gear-target÷grand total)	3.5%	2.5%	5.0%	
Pelagic Trawls	metric tons	53,317.8	1,002,511.4	394.1	1,056,223.3
row %	(target÷gear total)	5.0%	94.9%	0.0%	100.0%
column %	(gear-target÷target total)	56.4%	97.1%	0.7%	89.1%
total %	(gear-target÷grand total)	4.5%	84.5%	0.0%	
Grand Total	metric tons	94,515.9	1,032,067.6	59,362.9	1,185,946.4
row %	(target total÷grand total)	8.0%	87.0%	5.0%	100.0%

The second section of numbers shows the pollock harvest with pelagic trawl and how that catch was assigned to various target fisheries. We notice immediately that almost all of the pelagic trawl pollock harvest (94.9%) was assigned to the midwater pollock target. We also see that the amount of pelagic trawl caught pollock assigned to the bottom pollock target exceeds the amount of non-pelagic trawl bottom pollock by over 12,000 mt. Overall 89.1% of the total trawl caught pollock was harvested with pelagic gear.

3.3 Retained and Discard Pollock in the 1995 Trawl Fisheries

In Table 2 we provide additional details regarding retention and discards by gear and target fishery. Table two follows the same basic format as Table 1 with the assignment of catch by gear into targets as we go from left to right. In this table however the percentages represent retained and discard amounts for each gear and target combination. From the table it is quite clear that in 1995 there was little difference in pollock retention rates between gears and targets in the pollock fisheries ranging between 3% and 5%. In the other target trawl fisheries over 85% of the pollock caught was discarded.

Table 2. Pollock Tons in BSAI Trawl Fisheries by Gear and Target in 1995 with Discard / Retained %

		Target			
Gear		Bottom	Mid-Water	Other	Grand Total
Non-Pelagic Trawls	metric tons	41,198.1	29,556.1	58,968.9	129,723.1
	percent discarded	5%	3%	86%	41%
	percent retained	95%	97%	14%	59%
Pelagic Trawls	metric tons	53,317.8	1,002,511.4	394.1	1,056,223.3
	percent discarded	3%	3%	82%	3%
	percent retained	97%	97%	18%	97%
Grand Total	metric tons	94,515.9	1,032,067.6	59,362.9	1,185,946.4
	percent discared	4%	3%	86%	8%
	percent retained	96%	97%	14%	92%

3.4 Distribution of Catch by Gear and Target Among Processors

Table 3 shows the distribution of pollock catch and deliveries among the various processors by the same gear and targets shown in earlier tables. Because of the added dimension of processor classes this table has a somewhat different format. Each section of three rows contains the information for a given processor class. The first row in the set of three shows the catch in metric tons. For each processing class there are two sets of four columns corresponding to the catch by gear. The catch by gear type is broken out into the separate target fisheries. The last column contains the totals. The second row shows the row percent. Because sub-totals for each gear are shown, the meaning of the row percentages varies. As an example, the first row shows that 905 mt of pollock from a bottom pollock target fishery using non-pelagic trawls were delivered to motherships in 1995. This was 22.1% of the 4,100 mt non-pelagic trawl pollock total delivered to motherships. That 4,100 mt represented only 2.9% of the 139,521 mt of pollock in total delivered to motherships. The third row for each class shows the column percent. For example, the 905 mt non-pelagic trawl bottom target pollock delivered to motherships was 2.2% of the total non-pelagic trawl bottom target pollock from the BSAI in 1995.

Table 3 shows that, in general, vessels delivering to motherships or shore plants relied relatively less on non-pelagic trawls than did the factory trawlers. The data also indicate that compared to factory trawlers, pelagic trawl catches of delivery vessels were less likely to be assigned to bottom pollock targets.

Table 3 Pollock Catch and Deliveries By Processor Class by Gear and Target										
Processor Class	Gear	Non-Pelagic Trawls				Pelagic Trawls				Grand
	Target	Bottom	Mid-Water	Other	Total	Bottom	Mid-Water	Other	Total	Total
Motherships	m. tons	905	281	2,914	4,100	2,957	132,168	296	135,421	139,521
	row %	22.1%	6.9%	71.1%	2.9%	2.2%	97.6%	0.2%	97.1%	100.0%
	column %	2.2%	1.0%	4.9%	3.2%	5.5%	13.2%	75.1%	12.8%	11.8%
Bering Sea Shore Plants	m. tons	-	1,133	7,849	8,982	4,488	316,380	25	320,893	329,875
	row %	0.0%	12.6%	87.4%	2.7%	1.4%	98.6%	0.0%	97.3%	100.0%
	column %	0.0%	3.8%	13.3%	6.9%	8.4%	31.6%	6.4%	30.4%	27.8%
Gulf Shore Plants	m. tons	-	-	763	763	72	30,636	-	30,708	31,471
	row %	0.0%	0.0%	100.0%	2.4%	0.2%	99.8%	0.0%	97.6%	100.0%
	column %	0.0%	0.0%	1.3%	0.6%	0.1%	3.1%	0.0%	2.9%	2.7%
Surimi Factory Trawlers	m. tons	23,217	25,835	10,175	59,227	34,629	446,926	36	481,591	540,819
	row %	39.2%	43.6%	17.2%	11.0%	7.2%	92.8%	0.0%	89.0%	100.0%
	column %	56.4%	87.4%	17.3%	45.7%	64.9%	44.6%	9.2%	45.6%	45.6%
Fillet Factory Trawlers	m. tons	16,065	2,285	8,917	27,267	11,151	76,103	30	87,284	114,551
	row %	58.9%	8.4%	32.7%	23.8%	12.8%	87.2%	0.0%	76.2%	100.0%
	column %	39.0%	7.7%	15.1%	21.0%	20.9%	7.6%	7.6%	8.3%	9.7%
Head & Gut Factory Trawlers	m. tons	1,011	23	28,351	29,385	21	298	7	325	29,710
	row %	3.4%	0.1%	96.5%	98.9%	6.5%	91.4%	2.1%	1.1%	100.0%
	column %	2.5%	0.1%	48.1%	22.7%	0.0%	0.0%	1.7%	0.0%	2.5%
Grand Total	m. tons	41,198	29,556	58,969	129,723	53,318	1,002,511	394	1,056,223	1,185,946
	row %	31.8%	22.8%	45.5%	10.9%	5.0%	94.9%	0.0%	89.1%	100.0%

Some of the more interesting information to be gleaned from this table is found when comparing the catch of the different factory trawler classes. Surimi vessels harvest 11% of their pollock with non-pelagic trawls, while fillet vessels harvested 24% of their totals with non-pelagic trawls. Head & Gut vessels on the other hand harvested 98.9% of their pollock using non-pelagic trawls, almost all of it in other target fisheries. Surimi vessels accounted for 87% of the non-pelagic trawl caught pollock assigned to the mid-water target. In fact more non-pelagic trawl caught pollock was classified as midwater target than was classified as a bottom target.

3.5 Bycatch of Other Groundfish in the 1995 Pollock Trawl Fisheries

Table 4 shows the bycatch of groundfish species in 1995 pollock fisheries as a percent of trawl apportionments and TACs. In this table we have not included information by pollock target definitions. There are two rows for each groundfish bycatch species showing metric tons and the row %, which is the bycatch as a percent of the 1995 TAC or trawl apportionment of that species. As an example of how this table is set up, look at the two rows showing bycatch of Pacific cod in the pollock trawl fisheries. The first column shows that 4,811 mt of Pacific cod were taken with non-pelagic trawls. This represented 3.56% of the 1995 trawl apportionment which was set at 135,000 mt. Pelagic trawls accounted for 13,744 mt or 10.18% of the apportionment. The total P. cod bycatch in all pollock target fisheries represented 13.74% of the allowable trawl catch.

Comparing the bycatch by the two gear types is an important exercise. The bycatch of Pacific cod in the non-pelagic trawl pollock fishery is approximately 1/3 of the bycatch in the pelagic trawl pollock fishery. Recall however, from earlier tables, that the non-pelagic pollock fishery accounted for only 1/8 of the pollock catch overall. For some species, mainly flatfish, the total bycatch in the non-pelagic trawl fisheries exceeds that of the pelagic trawl fisheries. This of course in not unexpected, but will have implications for development of IFQ systems for pollock.

Also of particular importance are the "row %" data in this table. The figures indicate how much of the TAC or trawl apportionments of the various species are taken with either of the two gears in the pollock fishery. If NMFS were to set aside separate bycatch pools for the pollock fisheries, it is likely that the TAC available to the remaining fisheries would be reduced by these amounts. Perhaps surprisingly, Squid bycatch is the highest from this perspective with 32% of the total TAC taken as bycatch in the pollock fishery. Other significant bycatch species ranked as a percent of TAC are Pacific cod, arrowtooth, flathead sole, other groundfish, other rockfish, and rock sole. If one looks at only the pelagic trawls, rock sole would not be considered significant.

Table 4. Bycatch of Groundfish Species in 1995 Pollock Fisheries As a Percent of Trawl Apportionments and TACs.

		Non-Pelagic Trawls	Pelagic Trawls	Total Bycatch	1995 TAC
Pacific Cod	metric tons	4,811	13,744	18,555	135,000
	row %	3.56%	10.18%	13.74%	
Yellowfin Sole	metric tons	375	298	672	190,000
	row %	0.20%	0.16%	0.35%	
Greenland Turbot	metric tons	18	75	93	7,000
	row %	0.25%	1.07%	1.32%	
Arrowtooth	metric tons	400	702	1,102	10,227
	row %	3.91%	6.87%	10.78%	
Rock Sole	metric tons	1,500	525	2,025	60,000
	row %	2.50%	0.88%	3.37%	
Flathead Sole	metric tons	506	1,557	2,062	30,000
	row %	1.69%	5.19%	6.87%	
Other Flatfish	metric tons	246	257	503	16,540
	row %	1.49%	1.56%	3.04%	
True POP	metric tons	33	172	205	12,350
	row %	0.27%	1.39%	1.66%	
Other POP	metric tons	2	8	9	1,260
	row %	0.03%	0.15%	0.18%	
Sharpchin/Northern	metric tons	0	0	0	5,103
	row %	0.00%	0.00%	0.00%	
Shortraker/Rougheye	metric tons	2	3	5	1,098
	row %	0.18%	0.25%	0.43%	
Other Rockfish	metric tons	4	32	35	1,022
	row %	0.35%	3.10%	3.45%	
Atka Mackerel	metric tons	70	281	350	80,000
	row %	0.09%	0.35%	0.44%	
Squid	metric tons	3	318	320	1,000
	row %	0.25%	31.78%	32.03%	
Other Groundfish	metric tons	250	548	798	20,000
	row %	1.25%	2.74%	3.99%	
Sablefish	metric tons	0	8	8	1,350
	row %	0.00%	0.60%	0.61%	
Total metric tons	metric tons	8,216	18,527	26,744	571,950
	row %	1.44%	3.24%	4.68%	

The bycatch rates of other groundfish targets also vary within bottom and midwater, by gear, as shown in Table 5. For each groundfish species there are two rows, in two sets (for non-pelagic and pelagic trawls) of three columns, showing the bycatch in bottom pollock targets, mid-water pollock targets, and the total amount of bycatch. The first row of data shows the metric tons of bycatch. The "row %" under columns labeled "Bottom" or "Midwater" shows the bycatch in that target as a percent of the total bycatch for that gear. Under columns labeled "Total" row % is the total bycatch of that gear as a percent of the total bycatch of that species in all pollock trawls. The last two sets of rows in the table show the total bycatch as a percent in the pollock target and gear, and the total catch of pollock by gear and target for reference.

Table 5. Bycatch of Other Groundfish Species in Pollock Trawl Fisheries in 1995 By Gear and Target

		Non-Pelagic Trawls			Pelagic Trawls			Total
Bycatch Species		Bottom	Midwater	Total	Bottom	Midwater	Total	Bycatch
Pacific Cod	metric tons	4,339	472	4,811	4,835	8,909	13,744	18,555
	row %	90.18%	9.82%	25.93%	35.18%	64.82%	74.07%	100.00%
Yellowfin Sole	metric tons	367	8	375	144	154	298	672
	row %	97.93%	2.07%	55.73%	48.24%	51.76%	44.27%	100.00%
Greenland Turbot	metric tons	14	3	18	20	55	75	93
	row %	82.10%	17.90%	18.96%	26.82%	73.18%	81.04%	100.00%
Arrowtooth	metric tons	346	54	400	231	471	702	1,102
	row %	86.48%	13.52%	36.28%	32.93%	67.07%	63.72%	100.00%
Rock Sole	metric tons	1,438	61	1,500	250	275	525	2,025
	row %	95.91%	4.09%	74.07%	47.70%	52.30%	25.93%	100.00%
Flathead Sole	metric tons	434	72	506	600	956	1,557	2,062
	row %	85.79%	14.21%	24.51%	38.56%	61.44%	75.49%	100.00%
Other Flatfish	metric tons	231	15	246	70	187	257	503
	row %	93.89%	6.11%	48.86%	27.29%	72.71%	51.14%	100.00%
True POP	metric tons	17	16	33	8	164	172	205
	row %	50.47%	49.53%	16.07%	4.50%	95.50%	83.93%	100.00%
Other POP	metric tons	0	1	2	0	7	8	9
	row %	15.65%	84.35%	16.96%	6.39%	93.61%	83.04%	100.00%
Sharpchin/Northern	metric tons	0	0	0	0	0	0	0
	row %	0.00%	100.00%	77.40%	0.00%	100.00%	22.60%	100.00%
Shortraker/Rougheye	metric tons	0	2	2	0	3	3	5
	row %	0.00%	100.00%	42.66%	0.00%	100.00%	57.34%	100.00%
Other Rockfish	metric tons	3	1	4	0	32	32	35
	row %	79.25%	20.75%	10.12%	0.39%	99.61%	89.88%	100.00%
Atka Mackerel	metric tons	1	68	70	199	82	281	350
	row %	1.90%	98.10%	19.85%	70.81%	29.19%	80.15%	100.00%
Squid	metric tons	0	3	3	15	303	318	320
	row %	0.00%	100.00%	0.79%	4.77%	95.23%	99.21%	100.00%
Other Groundfish	metric tons	231	18	250	157	391	548	798
	row %	92.59%	7.41%	31.30%	28.72%	71.28%	68.70%	100.00%
Sablefish	metric tons	0	0	0	1	7	8	8
	row %	0.00%	100.00%	0.45%	11.16%	88.84%	99.55%	100.00%
Total Bycatch	metric tons	7,421	795	8,216	6,532	11,996	18,527	26,744
	row %	90.32%	9.68%	30.72%	35.25%	64.75%	69.28%	100.00%
Total Pollock	metric tons	41,349	35,737	77,085	56,791	1,029,035	1,085,826	1,162,911
	row %	53.64%	46.36%	6.63%	5.23%	94.77%	93.77%	1.00%

The information in Table 5 shows that over 1/3 of the Pacific cod caught in pelagic trawl pollock fisheries occurred when the target was calculated to be bottom pollock. Further the amount caught was nearly equal to the amount of Pacific cod caught in all non-pelagic trawls. This might lead to the conclusion that "bottom" pollock bycatch rates are identical regardless of gear. While that conclusion may be realistic for Pacific cod, it does not appear to be the case with all groundfish species. From these data yellowfin sole, rock sole, and other flatfish, and "other groundfish" appear to be more likely to be captured in bottom pollock targets using non-pelagic gear than in bottom pollock targets using pelagic gear. Conversely, bycatch of flathead sole, Atka mackerel, and squid appears more likely when using pelagic gear in a "bottom" pollock target fishery.

In order to check on differences in bycatch rates between gears and targets we calculated rates for each vessel-week as a percent of total pollock catch. The average of these bycatch rates is shown in Table 6. It turns out that the average bycatch rate is equal to the total bycatch of the species in the gear and fishery as a percent of the total pollock caught in the target fishery and gear. The average bycatch rates in general appear quite small, but when multiplied by nearly 1.2 million tons they can account for a lot of fish. As an example we see that the overall average bycatch rate for Pacific cod was only 1.6%; however as noted in Tables 4 and 5 Pacific cod bycatch in the pollock target fisheries was 18,555 mt, or 13.74 % of the trawl apportionment.

A closer examination of the Pacific cod bycatch rates shows considerable variance within gear and targets. The highest rates are found in the "bottom" targets with either gear, but with non-pelagic trawl it is almost two percentage points higher at 10.49%. With midwater targets the bycatch rates of Pacific cod drop to approximately 1%. Looking at the rock sole bycatch rates we see almost a 3% difference in bottom pollock targets with non-pelagic gear compared to bottom pollock targets with pelagic trawls. If we could determine whether or not these differences were statistically significant, then perhaps we could infer that bycatch in bottom pollock targets when pelagic gear is used does not result in the same amount of bycatch as bottom pollock when non-pelagic gear is used.

Table 6 Bycatch rates in the 1995 Pollock Target Fisheries.

	Non-Pelagic Trawl Bycatch Rates			Pelagic Trawl Bycatch Rates			Overall Bycatch
Bycatch Species	Bottom	Midwater	Overall	Bottom	Midwater	Overall	Rates
Pacific Cod	10.49%	1.32%	6.24%	8.51%	0.87%	1.27%	1.60%
Yellowfin Sole	0.89%	0.02%	0.49%	0.25%	0.01%	0.03%	0.06%
Greenland Turbot	0.03%	0.01%	0.02%	0.04%	0.01%	0.01%	0.01%
Arrowtooth	0.84%	0.15%	0.52%	0.41%	0.05%	0.06%	0.09%
Rock Sole	3.48%	0.17%	1.95%	0.44%	0.03%	0.05%	0.17%
Flathead Sole	1.05%	0.20%	0.66%	1.06%	0.09%	0.14%	0.18%
Other Flatfish	0.56%	0.04%	0.32%	0.12%	0.02%	0.02%	0.04%
Sablefish	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
True POP	0.04%	0.05%	0.04%	0.01%	0.02%	0.02%	0.02%
Other POP	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sharpchin/Northern	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Shortraker/Rougheye	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Other Rockfish	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Atka Mackerel	0.00%	0.19%	0.09%	0.35%	0.01%	0.03%	0.03%
Squid	0.00%	0.01%	0.00%	0.03%	0.03%	0.03%	0.03%
Other Groundfish	0.56%	0.05%	0.32%	0.28%	0.04%	0.05%	0.07%
All Species Bycatch Rate	17.95%	2.23%	10.66%	11.50%	1.17%	1.71%	2.30%

Because bycatch rates are a ratio of two numbers, simple statistical inference tests may not yield valid results. Further, because there is a likelihood that bycatch rates vary not only with gear, but also with the time of year and location of the fishing activity, a rather complex statistical procedure[1] was used to test the null hypothesis. If we are able to reject the null hypothesis then we can say, with an acceptable level of certainty, that the bycatch rates are different. In this case our null hypothesis was:

> The mean bycatch rates of specific groundfish species in the bottom pollock target fishery with non-pelagic trawls is not significantly different than the mean bycatch rates of specific groundfish species in the bottom pollock target fishery with pelagic trawls.

Preliminary model runs allowed us to reject the null hypothesis. In general, bycatch rates are different by gear in the pollock bottom target fishery. Bycatch rates for rock sole, other flatfish, yellowfin sole, and arrowtooth flounder were significantly different and lower for pelagic trawls at the 0.05 level. Bycatch rates of Pacific cod, flathead sole, and "other groundfish" did not appear to be significantly different at the 0.05 level. We did not include any of the rockfish species, squid, or Atka mackerel in the model. We should reiterate that these findings are preliminary, and should not be used outside the context of this discussion paper.

The findings in general matched our *a priori* assumptions. More demersal species would show higher bycatch rates with non-pelagic gear than with pelagic gear. Except for the finding of no significant difference in flathead sole our *a priori* assumptions held. It appears that some bycatch savings of flatfish could be made if the use of non-pelagic gear was reduced in the pollock target fisheries. These savings would probably not be realized in the more pelagic species such as a Pacific cod and "other" groundfish.

The finding of insignificant differences for flathead sole most likely indicates that further analysis needs to be undertaken, and also that additional inferences, with respect to halibut and crab for example, are probably inadvisable at this time. We did not have access to data on prohibited species bycatch by target and gear at the time of this writing, and therefore were unable to address this issue.

We did not use statistical tests for the differences in bycatch rates by gear regardless of target definition, i.e. by including midwater pollock targets. These tests were not undertaken because of the very large differences in sample sizes, and because "midwater" targets by definition have little bycatch.

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[1]We used a multivariate analysis of variance procedure in controlling for fishing week and zone. The dependent variables were the logarithms of the calculated bycatch rates of selected groundfish species for each vessel by week and area. The species included were Pacific cod, rock sole, yellowfin sole, other flatfish, flathead sole, arrowtooth, and other groundfish. The independent variables were gear and week, and a nested combination of week within area. Week and area were included to account for differences which might be due to changes in those variables. Preliminary model runs showed that week and area improved the results and therefore they were kept in the model.

We then tested the main effect of gear and found it to be significant using Wilkes Lambda ($pr > .0001$). This allowed us to reject the null hypothesis that gear had no overall effect. We then looked at the univariate output to see which species showed differing bycatch rates. At the 0.05 level bycatch rates for rock sole, other flatfish, yellowfin sole, and arrowtooth flounder were significantly different. Bycatch rates of Pacific cod, flathead sole and other groundfish did not appear to be significantly different at the 0.05 level.

3.6 Conclusions

From the information presented in the text and tables above, some general conclusions may be drawn, which could aid in the Council's decision regarding the inclusion of bottom pollock in an IFQ system for BSAI pollock. These conclusions are shown below.

- A clear distinction should be made between gears and targets and directed fishing.
- Currently regulation do not prohibit "bottom pollock targets" when fishing with non-pelagic trawl is closed.
- Non-pelagic trawl gear appears to be relatively unimportant in the pollock target fisheries.
- It is likely that the entire pollock TAC could be harvested with pelagic trawls.
- Pollock discards do not appear to vary between trawl gears or targets when pollock is the target.
- The great majority of pollock caught in other trawl target fisheries is discarded.
- Factory trawlers appear to be relatively more dependent on non-pelagic trawls in the pollock fisheries than delivery vessels.
- Head & Gut factory trawlers rarely target pollock.
- Fillet Factory trawlers are more dependent on non-pelagic trawls and bottom pollock targets than Surimi Factory trawlers.
- Significant bycatches of Pacific cod, squid, flathead sole, and other groundfish appear inherent in the pollock fishery even if only pelagic trawls are used.
- Bycatch of most flatfishes in bottom pollock target fisheries is significantly less when pelagic gear is used.
- No data were available to examine differences in prohibited species catches by gear and pollock target.

3.6.1 Caveats

While the conclusions shown above appear to be justified by the information presented, the following caveats should be considered and may temper the strength of the conclusions.

- 1995 catch may not be indicative of all years, and should be considered preliminary.
- The large 1989 year class may result in less fish taken on bottom than in years where the dominate year class is younger.
- Differences in observer coverage may be a factor in some of the findings.
- Examination of additional years under the new blend data algorithm may not lead to the same conclusions.
- Further statistical testing of differences in bycatch rates by gear in bottom pollock target fisheries should be undertaken before completely accepting the preliminary findings described above.

3.6.2 Implications For Structuring the IFQ System

The data and conclusions presented above have numerous implications for structuring the pollock IFQ system. We will briefly describe some of these here.

3.6.2.1 IFQs for Directed Fishing or IFQs for Target Fishing.

As noted above the definition of directed fishing technically applies only when a particular species is placed on "bycatch only" status. Pollock IFQ for Target Fishing as described above would be more definitive, however, the distinction blurs with the definition of 'bottom pollock" target. A feasible middle ground may be to issue IFQs for all who qualify and stipulate that any pollock caught by IFQ holders must be covered by IFQ whether they meet target definitions or not. As for non-IFQ holders, bycatch of pollock could be limited by the directed fishing standards, i.e., unless a person holds IFQs for pollock, retained pollock may not exceed levels defined by

the directed fishing standards. Under this scenario however, it is clear that the bycatch need of non-IFQ holders will reduce the amount of the pollock TAC available for harvest by IFQ holders. A solution as noted in Section 2 of this paper would be to establish an apportionment of the pollock TAC for use as bycatch in the other groundfish target fisheries.

3.6.2.2 Targets and Gears in the IFQ Program

It does not appear to be feasible to limit the IFQ fishery to "midwater" pollock target fishing, or to prohibit "on bottom" trawling. It could be feasible to only allow the use of pelagic trawl gear in the pollock IFQ fishery. This could have the effect of reducing the amount of bycatch of other groundfish and presumably of prohibited species needed to prosecute the IFQ fishery. However, as was shown in Table 4, only about 1/3 of the bycatch of other groundfish in the pollock target fisheries occur when non-pelagic trawls are used. Bycatch of Pacific cod, flathead sole and squid could still be 'troublesome' even if non-pelagic trawls were prohibited.

It may in fact be easier to allow both pelagic and non-pelagic trawls in the IFQ program. If bycatch apportionments were established such that the use of non-pelagic trawls were legal, but clearly discouraged, then vessels which have in the past used only non-pelagic gear would not be forced to immediately alter their actions.

3.6.2.3 Bycatch Apportionments

If the IFQ system is to provide reasonably strong harvest guarantees, it appears that some form of bycatch apportionments will be necessary. An apportionment of pollock for bycatch in the other groundfish fisheries would be needed to allow the prosecution of those fisheries, without unduly weakening the harvest rights of the IFQ holders. If no apportionment were made and the other groundfish fisheries were allowed to harvest unlimited amounts of pollock as bycatch, then either individual pollock IFQs would have to be reduced in-season, or the pollock TAC would be exceeded.

Unless bycatch of groundfish in the pollock fishery is to be disregarded, apportionments of at least some groundfish species for the IFQ program would appear to be required. As shown above over 13% of the Pacific cod trawl apportionment was taken in the pollock target fisheries. Additionally, the pollock fisheries took 32% of the squid TAC. If these species are to be prosecuted as targets in there own right, or if the harvest rights of IFQ holders are to have any strength, then some limits on the amount that could be taken in the pollock fishery would appear to be justified.

Data are not currently available showing bycatch of prohibited species by gear in the pollock target fisheries. However, a presumption of relatively strong harvest rights in the pollock IFQ fishery would imply that either bycatch of prohibited species should be disregarded, or a system of PSC apportionments devised.

4 Implications Of 'Systemic' Decisions To Initial Allocations

This section discusses some of the considerations, with regard to initial calculations and allocations of pollock QS/IFQs, which arise when deciding how the overall system will function. For example, decisions regarding pelagic vs. non-pelagic trawling, A and B season divisions, and target pollock fishing vs non-target pollock fishing have significant implications to the allocation formulas which would be used to calculate initial QS/IFQs. These implications are of a generic type; i.e., they are somewhat independent of other initial allocation factors such as length of catch history and weighting factors.

4.1 Target Fisheries Versus Non-Target Fisheries for Pollock

The proposal from which Council staff is working contains the provision that pollock IFQs would apply to 'directed' fisheries only for pollock. A previous section has provided a discussion on the use of the terms 'directed' versus 'target' fisheries. Assuming that the proposal intends for pollock IFQs to apply to target fisheries for pollock, the following initial allocation considerations arise:

1. For purposes of initial allocation, this scenario implies that QS would be calculated based on records of target fishing for pollock only. Those vessels which engaged in target fishing for pollock would be allocated QS/IFQ for pollock. Some amount of the pollock TAC would have to be set aside "off the top" to cover pollock which would be caught by all vessels in target fisheries for other groundfish species. Vessels not issued QS/IFQ would not be allowed to participate in pollock target fishing. Unfortunately, catch records which define pollock targets are limited, have changed over time, may be somewhat subjective in their determination, and may be more subject to appeal and litigation.

2. *Alternatively*, and perhaps more tractable, we could include any and all pollock catch in calculating a vessel's QS for pollock. Under this scenario, all vessels which ever caught a pollock would be issued QS/IFQ for pollock. At that point two alternative treatments could apply: (1) All pollock caught would have to be covered by IFQs - it would be the fisher's choice whether to use that IFQ in a target fishery or as bycatch in other groundfish fisheries, or (2) IFQs could only be used for targeting pollock, and some amount of pollock TAC would still need to be set aside "off the top" to cover pollock bycatch in other groundfish fisheries.

In either of the scenarios described above, the system still has to deal with how to treat bycatch of other groundfish fisheries encountered while pollock fishing. If IBQs for PSC and/or non-PSC species are envisioned, then initial allocations of the IBQ species would likely be done in proportion to the pollock QS, based on average, fleet-wide bycatch rates of those species.

4.2 Pollock A and B Seasons

Division of the pollock TAC between A and B (roe and non-roe) seasons is assumed to continue, and the percentage split between these seasons would be determined annually by the Council. IFQs would be proportioned each year based on this split. In the initial allocation, this split might be accomplished in two ways:

1. A vessel's total pollock catch history (which might or might not be based on target fishing only) determines their QS for pollock. Each year the proportion of A versus B season IFQ is simply determined based on the Council's percentage split for that year. Though simple, this calculation method would result in many vessels receiving B season quota, while they typically fish primarily in the A season (and vice-versa). Transferability provisions may alleviate the burdens imposed on some operations by this factor, whereby vessels could sell the QS/IFQ they do not want and buy that which they do want to fish.

2. *Alternatively*, the initial QS calculations could be based on the actual catch distribution, of each vessel, between the A and B seasons. This approach will result in a portfolio for each operation which more closely mirrors its actual historic fishing patterns. In this case, each operation will receive some amount of A season QS and some amount of B season QS, each within a separate overall QS pool. Annual percentage splits set by the Council would still apply to the overall TAC, and each operation's A and B season IFQs would then be calculated based on their proportion of the overall QS pool for each season. Under this scenario, some amount of the pollock TAC for each season may have to be set aside for other groundfish fisheries, depending on decisions outlined in the previous section regarding treatment of target versus non-target fisheries.

4.3 Pelagic Versus Non-Pelagic Pollock Fisheries

As with the discussions above, on a target fisheries and A/B seasons, decisions regarding the use of non-pelagic gear for pollock target fishing will effect the way in which initial QS calculations are made, aside from total catch histories and potential weighting factors. The following treatments are possible:

1. Assuming that continued use of non-pelagic gear for pollock will be allowed, QS calculations could be based on the separate catch histories of vessels for each gear type (pelagic and non-pelagic gear). Such an allocation approach would result in QS which closely mirror the past fishing patterns of each qualified participant. However, catch records which differentiate these gears are very limited, and the definitions for pelagic gear have changed over time. If a very recent catch history is used (say, from 1992 forward) this problem is largely circumvented. *A subalternative* to deal with the data limitations would be to use total catch histories for each vessel, then prorate their gear allocations based on their most recent year(s) use of pelagic versus non-pelagic gear.

2. In the event that non-pelagic gear is disallowed for this program, the use of total catch histories, without regard to gear type, would likely be the most appropriate treatment. In this case all pollock fishing would have to be conducted with pelagic gear, regardless of a vessel's past fishing practices.

3. A third scenario would be where a distinction between gears is desired in order to prorate an appropriate amount of bycatch species (either PSCs or non-PSC species or both) to each vessel which receives pollock QS/IFQ. Under this scenario non-pelagic trawling would still be allowed, but some amount of 'IBQs' will need to be allocated to support potential non-pelagic trawling, and some method of determining that IBQ needs to be utilized. As with the example above, we could use total pollock catch history, mitigated by the most recent proportions of pelagic to non-pelagic mode for each vessel.

4.4 Minimum Guarantees On IFQ Allocation

One alternative contained in the current proposal is to use catch history as the basic allocation criteria, but then apply a minimum guarantee (75% to 95% of their 1994 catch, for example) for the actual IFQ allocation. As is discussed separately under Item C-5(a)(5), this has the potential to reduce the significance of past catch history and weighting factors under consideration, as well as reduce the contentiousness of those decisions. However, some additional considerations related to this option have 'systemic' implications which are summarized below:

1. Depending on the number of years used to determine qualified IFQ recipients, there is a mathematical limit to the percentage which may be used to determine the "minimum guarantee" without exceeding the Pollock TAC. This mathematical limit will decrease as the number of recipients of the guaranteed minimum increases.

2. If catch histories are segregated by gear, season, or target modes, and a vessel fished in only one particular 'category' in 1994 (for whatever reason), this option could result in issuance of QS to that particular vessel which does not accurately reflect its overall past practices, or activities planned for the future. For example, if a vessel fished only the B season in 1994 due to mechanical difficulties during the A season, this option would have the potential of issuing the majority of that vessel's QS to B season fisheries, depending on the answer to some of the other questions posed above.

We bring these issues to your attention because we feel that resolution of some of these alternatives will greatly simplify the analyses to follow; in combination with the various specific alternatives on initial allocation of QS/IFQ (catch history, wieghting factors, minimum guarantees, etc.), these issues, if not resolved, will significantly expand the range and depth of the formal analysis, and the time which will be required to complete that analysis. It may be that by bringing these issues to the Council and industry at this time, some of these issues can be pondered, discussed, and decided upon at various points in the iterative analytical and Council process.

5 Transferability Considerations In A Pollock IFQSystem

Our previous analyses have treated transferability of IFQs in primarily a qualitative manner. The pollock IFQ proposal from the June 1995 meeting contains options for restrictions on transferability, but no outright prohibitions on transferability. Recognizing that such prohibitions are being discussed, at both the Council and Congressional levels, our discussions below will take outright prohibitions into account. Though formal analyses will address the issue of transferability in a more quantitative manner, many of the considerations boil down to either philosophical or 'systemic' considerations. Some of these are outlined below:

5.1 Allocation

Initial allocation decisions, the basic "who's in and who's out" as well the "how much", are perhaps the most difficult decisions facing fisheries managers when considering a limited entry system such as IFQs. The issue of transferability impacts this initial decision in at least two ways:

1. Under any system of limited entry, political and other forces invariably lead to the inclusion of many more initial recipients than are currently fishing, which is many more than necessary to harvest the quotas in an economically beneficial way. A prohibition on transferability might exacerbate this tendency because fisheries managers must seek to make the perfect initial allocation, in terms of who is in and who is out.

2. In addition to who is in and who is out, the amounts of the initial allocation become very important in a system where transferability is prohibited. This is particularly true in a multi-species system, or in a 'pollock only' system which includes allocations for PSC and non-PSC bycatch species. Without transferability, the recipients must receive a perfect mix of species or risk ending up with unfished quota when they reach their allocation for one of their species. This is related to the bundling concept discussed below.

5.2 Windfall Profits

A second highly contentious issue relative to IFQ systems is that of potential windfall profits to the recipients. A prohibition on transferability certainly solves the problem of windfall profits by not allowing the sale of the QS/IFQ (though in practice there may be ways to circumvent this restriction). However, it does so at considerable expense to the system and to the fishermen's flexibility to operate under the IFQ system. Though a prohibition on transfers may solve the windfall profit problem, it may be that an *allowance* for transfers can be structured which would directly address the issue of windfall profits, would allow for the flexibility required for IFQ systems to function effectively, and may have side benefits as well.

For example, if transferability is prohibited, but we assume that some fee will be charged to IFQ holders for the privilege of catching a common property resource (say 3%), and we assume that each recipient will receive IFQ poundage which is equal to his historical average catch (a generous assumption given the discussion above on initial allocations), the net result is, effectively, a windfall *loss* imposed on that IFQ holder. This of course ignores the future capitalized value of that IFQ amount and is an oversimplification. However, the converse of the example would be to allow transfers of QS/IFQ and, assuming a tax on IFQ transfers is allowed, tax the sale of the QS/IFQ at a rate which is high enough to eliminate all but a nominal amount of the windfall profit. Taking this hypothetical situation even further, this money could then be used to fund fisheries research and management.

In fact, the proposal before the Council contains a provision to pursue some level of fee extraction which will need to be further analyzed taking into account a variety of factors not included in the simplified discussion above. Results of the current Magnuson Act reauthorization process may also affect the disposition of this issue.

5.3 Entry/Exit Of Fishermen

Consideration of future entry and exit of fishermen is directly dependent upon the transferability provisions which are finally adopted. If transferability is allowed, a mechanism is provided which allows for new entrants into the fishery, albeit with an additional input cost to their operations, who may not qualify in the initial allocation of IFQs. Market influences are the primary force in determining these future entrants. In the absence of transferability, a 'closed class' may be created whereby no new entrants have the chance to enter a fishery. There has been discussion of reassigning 'unused' IFQ to new entrants, based on some as yet undefined method which would be 'fair and equitable'. Obvious difficulties arise in determining who should be the rightful heir to these IFQs when there will likely be a long line of willing recipients.

5.4 Leasing Versus Permanent Sales

Much of the Council's deliberations on the sablefish/halibut IFQ program related to the issue of leasing, which is really the trading of IFQs as opposed to the trading of QS. Prohibitions on leasing may be particularly relevant where there is a desire to maintain or promote an owner/operator fleet and eliminate the potential for absentee ownership or hired skippers. While an important consideration in the sablefish/halibut program, it may be less of a concern in a highly industrialized pollock fishery. A two-year restriction on permanent sales is one of the options being considered, with an allowance for leasing. A merit of this provision would be to allow the industry to stabilize for a period of time whereby participants could gain experience and make more informed decisions regarding their permanent portfolios. An annual, one-year valuation for a pound of fish is much easier to ascertain than a future, permanent right to that same pound of fish. Permanent QS does not necessarily relate to a specific poundage of fish, but may fluctuate with stock abundance levels. A two-year prohibition on permanent sales may allow for appropriate market values to be accurately evaluated.

A second advantage of leasing may be to allow for easier entry into the fishery, via the lower cost of an annual IFQ compared to a permanent QS, for those who do not receive initial allocations. Finally, leasing of pollock IFQs, and attendant IBQs, would likely enhance the ability of operators to make year-to-year adjustments of their portfolios, and perhaps even make inseason adjustments to balance their overall catch with IFQ/IBQ holdings.

5.5 The Bundling Concept

The bundling concept was discussed when the Council was considering an all-species groundfish IFQ program and is included as an option for the current pollock IFQ program. The issue in this context is, more specifically, whether the PSC QS/IFQ (or other bycatch QS/IFQ) which is allocated with the pollock QS/IFQ can be traded separately from that of Pollock QS/IFQ. This assumes that some transferability of QS/IFQs will be allowed. In a pelagic trawl only situation the issue is greatly simplified, in that the basic pollock QS/IFQ may not require attendant PSC, or other bycatch, QS/IFQ, and the bundling issue is moot. However, the following discussion will assume some amount of non-pelagic trawling, and the need to address the bundling issue.

Under this assumption, some 'bundle' of pollock and bycatch QS/IFQ would be issued in the initial allocation, with the bycatch portion of that bundle likely based on fleet-wide bycatch rates, and issued in proportion to the pollock QS/IFQ. In theory this would allow the recipient to have the mix of species necessary to prosecute the pollock target fishery. In practice, this is highly unlikely for several reasons: (1) the apportionments were based on average bycatch rates and may not reflect the realities of each fishing operation, (2) fishing patterns and practices are likely to change under an IFQ program, resulting in a different pattern of bycatch rates, and (3) incentives to reduce bycatch, perhaps by changing to pelagic gear, will change the bycatch patterns.

In order to ensure that all pollock IFQ holders can in fact harvest their IFQs, the initial allocation of the 'bundles' will, in effect, have to be 'perfect'; i.e., it will have to accurately capture the fishing patterns and bycatch occurrences of each vessel operating in the pollock fisheries. In order to achieve this, the initial allocation may have to be based on the actual bycatch rates of individual vessels, as opposed to fleet-wide averages. Even under this scenario, it is likely that actual bycatch rates by individual operators would change under the IFQ program.

The actual impact of the bundling issue on initial allocations may be somewhat moot in this sense. Transferability of the bycatch species, separately from the target IFQ species, has far greater implications for fishing operations after the initial allocation. Those implications will need to be addressed in further detail in subsequent analyses.

6 Hypothetical Examples of Pollock IFQ Systems

This section presents four hypothetical pollock IFQ systems which we have designed to illustrate the issues discussed in the preceding sections. In particular we focus on the relative strength of the harvest rights, on the issue of pelagic and non-pelagic trawls, and on bycatch management. The systems also illustrate some of the ideas discussed above concerning initial allocations and transferability. Each of the four hypothetical example systems are designed using the same basic set of system components. The systems differ as the specifics used in each component vary. Again, these do not contain all of the elements which will eventually comprise a total system - two-pie considerations and many others have not yet been discussed. The basic system components are shown below with some explanatory notes.

Pollock IFQ definition. This component is really a baseline description of the system. It also delineates the various IFQ categories which will be needed to implement the system.

Inshore/Offshore. This component is essentially the same in each system, and is included to indicate that our hypothetical systems would maintain the current inshore-offshore (35/65) allocations. This component may not be necessary in a "Two-Pie" system, but those discussions are left for a later document.

A and B Season Splits. In general A and B season splits can be treated in three ways: 1) Allocate separate QS and IFQs for A and B seasons. 2) Allocate non-season specific QS, but issue IFQs in terms of the A and B seasonal splits, allowing transfers of IFQs. 3) Allocate non-specific QS and IFQ and disallow transfers of IFQs.

Non-Pelagic v. Pelagic Trawling. This component delineates the use or prohibition of non-pelagic trawls. Non-pelagic trawls are allowed in all but one example.

IFQ Calculations. This component illustrates the annual IFQ calculations. We do not get into the specifics of initial QS allocation but the systems as defined will have implications for the types of historical catches which may be included in the QS allocation formulas.

Bycatch of Pollock in Other Groundfish Target Fisheries. This component explains how the system will deal with the bycatch of pollock in other groundfish target fisheries, and provides insight on the potential impacts of these fisheries on the IFQ system, and impacts on the other groundfish target fisheries by the IFQ program.

Bycatch of Other Groundfish in Pollock IFQ fisheries. This component describes how bycatch of groundfish in the IFQ fisheries will be managed.

Directed Fishing Standards. This is actually presented as a "sub-component" of the bycatch issue above, and delineates whether and how much of the other groundfish species may be retained in the pollock IFQ fisheries.

Bycatch of Salmon, Crab, and Herring. These prohibited species are grouped together because they have traditionally been managed as triggers for area closures. The component describes how these species will be managed under the example systems.

Halibut Bycatch. Halibut bycatch is separated from the other PSC because it triggers closures to non-pelagic trawls and possibly to entire fisheries, rather than closing areas.

Summary of New Bycatch Apportionments. This is not technically a component of the system, but rather a summary of the new bycatch apportionments created by the system, in addition to the new IFQ apportionments.

Transferability of Pollock IFQs. Each of the systems has differing implications regarding transferability. This component describes some of the limits and options.

6.1 Example System Definitions

This section draws from the discussions in the previous sections and describes four example systems for pollock IFQs. These example systems are presented in order to promote discussion of the issues and are not intended to replace alternatives and options proposed by the Council in earlier meetings, nor do they address every decision point which will need to be made. Again we should stress that we have not forgotten or ignored other issues such as processor IFQs, rather our focus at this point has been on the specifics of harvest IFQs. The four systems provide examples of different levels of "guarantees" for pollock IFQ harvests. They also use different approaches to bycatch management and the use of pelagic and non-pelagic gears. Example Pollock System 1 features relatively weak guarantees for pollock harvest, allows the use of pelagic or non-pelagic trawls, and uses an "open access" approach to bycatch management. Example Pollock System 2 features relatively strong guarantees for pollock harvest, allows the use of pelagic or non-pelagic trawls, but uses an "IBQ" approach to bycatch management. Example Pollock System 3 also features relatively strong guarantees for pollock harvest, uses a limited "IBQ" approach to bycatch management, but dis-allows non-pelagic trawls. Finally, Example Pollock System 4 is a hybrid of the earlier examples and presents a moderately strong system of harvest rights.

1. **EXAMPLE POLLOCK IFQ SYSTEM 1:** A System with "relatively weak" guarantees for harvest of Pollock IFQs. IFQ holders will be somewhat susceptible to externalities from other fisheries. It may be possible, for example, that bycatch of halibut in the Atka mackerel fishery will curtail non-pelagic trawling for pollock IFQs. Overall the system is relatively less complex with relatively few changes from the current management system.

   a. **Pollock IFQ Definition and Applicability:**
      i. A general pollock IFQ is defined with no gear or season definitions. All bycatch is managed with open access methods. All pollock caught by IFQ holders will be counted against the IFQs whether retained or discarded, and whether taken in a pollock target fishery or as bycatch in other groundfish targets. Once an individual's pollock IFQs are used, trawling for all groundfish will be prohibited.
      ii. Separate Pollock Permanent QS and Annual IFQs are defined as follows:
         (1) Inshore (IQS/IIFQ)
         (2) Offshore (OQS/OIFQ)

   b. **Inshore/Offshore**
      i. Separate Inshore/Offshore QS/IFQs will be issued and designated. The current "open access" inshore offshore management and TAC allocations will be maintained.

   c. **A and B Season Splits.**
      i. A limited amount (currently set at 45%) of the total pollock TAC may be harvested in the A season by each inshore and offshore sector. Once 45% of the Pollock TAC is harvested then directed fishing for Pollock is closed until the B season. This system does not designate IFQs for use in the A or B season, and therefore allows some choice of timing without the need for transfers. However, it also implies that if some IFQ holders harvest more than 45% in the A season, then the others may be forced to fish a greater share of their IFQs in the B season.

   d. **Non-Pelagic Trawling vs. Pelagic Trawling**
      i. No new regulations or apportionments regarding pelagic or non-pelagic trawls or halibut bycatch would be implemented. Pollock IFQs may be harvested with either pelagic or non-pelagic trawl gear prior to such time that NMFS disallows the use of non-pelagic trawls for pollock. As described in Section 3, halibut bycatch in the Atka mackerel and other groundfish targets may impact the closure of non-pelagic trawls in the pollock IFQ fishery.

e. **IFQ Calculations**

i. An individuals Inshore Pollock IFQ will be calculated as follows: (IQS ÷ IQSPool) × (TAC×.35 - X) where X is sum of adjustments to the TAC such as CDQs. It is assumed that the bycatch reserve set aside from the TAC, which currently equals 7.5% of the TAC, will be apportioned for use as bycatch in the other groundfish target fisheries, although the exact amount could be decided in the "spec. setting process" each year.

ii. Offshore Pollock IFQs will be calculated in a similar manner using the offshore QS pools and a 65% apportionment of the non-CDQ TAC.

f. **Bycatch of Pollock in Other Groundfish Target Fisheries.**

i. All bycatch of pollock caught in other groundfish target fisheries by IFQ holders must be covered by IFQs. Persons who do not hold IFQs may catch and retain pollock in other groundfish target fisheries subject to the directed fishing standards, i.e. pollock will be managed in a "bycatch only" status for non-IFQ holders. The pollock harvested by non-IFQ holders will be counted against a non-IFQ apportionment of pollock which initially might be set equal to the 7.5% bycatch reserve. If it appears that the pollock bycatch in other groundfish fisheries by non-IFQ holders will exceed the apportionment NMFS may declare pollock a PSC for these fisheries. As currently managed this would not close the other groundfish target fisheries. The Bycatch Pollock Apportionment would not contain inshore-offshore or A/B season designations.

g. **Bycatch of Other Groundfish in Pollock IFQ fisheries**

i. No change to Current management: Bycatch of groundfish in Pollock IFQ Fisheries will count against open access TACs of the other groundfish species.

ii. **Directed Fishing Standards.**

(1) Current practices will apply , i.e., if a groundfish species is declared "bycatch only" by NMFS, then directed fishing for that species will be prohibited in all IFQ and non-IFQ target fisheries alike.

h. **Bycatch of Crab, Salmon, and Herring.**

i. Maintain current management practices. Attainment of PSC cap shuts down applicable effort in certain areas, but other areas remain open. Closures affect both the IFQ and non-IFQ fisheries.

i. **Bycatch of Halibut.**

i. Maintain current practices: A halibut PSC cap for Pollock/Atka mackerel/"Other Groundfish" targets currently exists. When this cap is attained (less a buffer for projected additional halibut catches in the pelagic pollock fishery and the remaining Atka mackerel and other groundfish target fisheries), then directed fishing with non-pelagic trawls in the pollock IFQ fishery is no-longer allowed. All pollock target fishing must be conducted with pelagic gear. Currently there are no provisions to close pollock fishing with pelagic gear, except the attainment of the Pollock TAC, or an apportionment thereof.

j. **Summary of New Bycatch Apportionments**

i. Non-IFQ Apportionment of Pollock for bycatch in other groundfish targets

k. **Transferability of Pollock IFQs**

i. Since there are no distinctions between A and B seasons, pelagic or non-pelagic trawls, and further since there are no IBQs defined in the system, the only questions are general issues of transferability. The system as defined does not generate additional transferability issues.

2. **EXAMPLE POLLOCK IFQ SYSTEM 2:** This system features "relatively strong" guarantees for harvest of Pollock IFQs. IFQ holders will be relatively unsusceptible to externalities from other fisheries, or from other Pollock IFQ holders. Overall the system is very highly defined, with bycatch apportionment and IBQs for many groundfish and prohibited species for each gear, season and inshore-offshore component. Additionally, a separate "Pollock Bycatch Apportionment" is made for use by non-IFQ holders and IFQ holder alike in other groundfish targets.

   a. **Pollock IFQ Definition and Applicability:**
      i. IFQs will apply to all pollock caught in pollock target fisheries whether retained or discarded. IFQ holders may also participate in other groundfish target fisheries. If IFQ holders, while participating in other groundfish target fisheries, retain pollock in excess of the directed fishing standards, then all pollock (whether retained or discarded) will also apply to the IFQs. If IFQ holders, while participating in other groundfish target fisheries, do not retain pollock in excess of the directed fishing standards, than that pollock (whether retained or discarded) will not count against IFQs, but rather against the Pollock Bycatch Apportionment.
      ii. Separate Pollock Permanent QS and Annual IFQs are defined as follows:
         (1) Inshore Pelagic A season. (IAPQS/IAPIFQ)
         (2) Inshore Pelagic B season. (IBPQS/IBPIFQ)
         (3) Offshore Pelagic A season. (OAPQS/OAPIFQ)
         (4) Offshore Pelagic B season. (OBPQS/OBPIFQ)
         (5) Inshore Non-Pelagic A season. (IANQS/IANIFQ)
         (6) Inshore Non-Pelagic B season. (IBNQS/IBNIFQ)
         (7) Offshore Non-Pelagic A season. (OANQS/OANIFQ)
         (8) Offshore Non-Pelagic B season. (OBNQS/OBNIFQ)

   b. **Inshore/Offshore**
      i. QS/IFQs will be issued with Inshore/Offshore designations. Current Inshore/Offshore TAC allocations will be maintained (i.e. 35/65).

   c. **A and B Season Splits.**
      i. Separate QS/IFQs will be issued with A and B season designation. A and B season apportionments for inshore determined in the annual TAC setting process.

   d. **Non-Pelagic Trawling vs. Pelagic Trawling**
      i. Separate QS/IFQs for pelagic and non-pelagic pollock will be designated. Pelagic trawls may be used to harvest Non-pelagic Pollock IFQs, but non-pelagic trawls may not be used to harvest Pelagic Pollock IFQs. Because there will be separate pelagic and non-pelagic QS and IFQs there will also be separate pelagic and non-pelagic apportionments. These will be determined during the "spec. setting" process.

   e. **IFQ Calculations**
      i. An individual's Inshore A season Pelagic IFQ will be determined as follows:
         IAPIFQ = (IAPQS ÷ IAPQS Pool) × (IAPTAC), where IAPTAC is the inshore A season apportionment of pelagic pollock adjusted for CDQs and the Pollock Bycatch Apportionment.
      ii. Other IFQ calculations will be similar.

   f. **Bycatch of Pollock in Other Groundfish Target Fisheries:**
      i. A separate apportionment of pollock for use as bycatch in other open access groundfish target fisheries will be deducted from the pollock TAC prior to the annual issuance of IFQs. The Bycatch Pollock Apportionment will not contain Inshore/Offshore or A/B designations. This

apportionment will be based on previous years bycatch rates. All "bycatch" pollock whether retained or discarded, will be counted against this apportionment. "Bycatch" pollock is defined as an amount of retained pollock which does not exceed the directed fishing standard for the target fishery. This apportionment will be managed in two stages. Initially, pollock may be retained in other groundfish target fisheries, but only at levels below directed fishing standards (i.e., as bycatch only). At such point as NMFS deems necessary, pollock will be declared a PSC in other groundfish trawl target fisheries. Once pollock is a PSC it may no longer be retained. The attainment of the Bycatch Pollock Apportionment will not close any fisheries. All pollock IFQ fisheries will be unaffected.

ii. Catches of Pollock (whether discarded or retained) by IFQ holders participating in other groundfish target fisheries will accrue to the "Pollock Bycatch Apportionment" as long as the retained amount of pollock does not exceed the directed fishing standard. Otherwise, all pollock catches will apply to the pollock IFQ.

g. **Bycatch of Other Groundfish in Pollock IFQ Fisheries.**

i. Separate apportionments of groundfish target species which are taken in significant amounts in pollock target fisheries will be made by gear, season and inshore/offshore sector. The amounts of each apportionment will be based on the bycatch rates in previous years, adjusted as deemed necessary to promote Council goals and objectives.

ii. These apportionments will be allocated to QS/IFQ holders in the form of IBQs. Attainment of a Non-pelagic IBQ will mean the individual may no-longer use non-pelagic gear to harvest pollock IFQs, unless additional Non-pelagic IBQ are acquired. All remaining Non-pelagic Pollock IFQs may be harvested with pelagic trawl gear only. Remaining Non-pelagic IBQs for other species could not be redesignated as pelagic, but could be transferred to other holders of non-pelagic IFQs. Attainment of a Pelagic IBQ will close the Pelagic Pollock IFQ fishery to the vessel, unless additional Pelagic IBQs are acquired.

iii. All groundfish whether retained or discarded, which are caught while the IFQ holder is in a pollock target fishery will be counted against IBQs.

iv. **Directed Fishing Standards.**

(1) IFQ holders in a pollock target fishery, may retain IBQ species exceeding directed fishing standards if they have sufficient IBQs for the bycatch whether retained or discarded.

h. **Bycatch of Crab, Salmon, and Herring.**

i. Bycatch apportionments of king salmon, chum salmon, king crab, tanner crab, and herring will be calculated based on bycatch rates in previous years by gear, inshore/offshore sector and season. It is likely that no apportionments of crab will be necessary for Pelagic Pollock IFQs, nor will apportionments of salmon and herring be necessary for Non-Pelagic Pollock IFQs. Once the total apportionment is set by the Council in the annual "Spec" process, IBQs will be issued to IFQ holders. These IBQs will allow individual operators to fish in closure areas. Once an individual's IBQ for herring is reached, they may no longer operate in the Herring closures areas. Similarly attainment by an individual of their IBQ for crab and salmon species will require that any additional fishing for pollock will be outside the closure area.

i. **Bycatch of Halibut.**

i. A non-gear specific bycatch apportionment of halibut will be made for each inshore/offshore sector and season based on bycatch rates in previous years. Bycatch of halibut in either pelagic or non-pelagic trawls will be counted against an individual's IBQ. Once an IBQ is taken, the individual may no longer use non-pelagic trawls. The remaining non-pelagic IFQ may be temporarily redefined as pelagic IFQ. Additional halibut will be counted but will not cause a closure for the individual.

j. **Summary of New Bycatch Apportionments**

Table 7 below shows the 109 new apportionments which would be needed to implement this system. This assumes that the standard for "significant" bycatch was 1% of the TAC of the groundfish bycatch species based on Table 4 in Section 3. It may be that bycatch of certain species only occurs in one season, in which case apportionments for both seasons may not be necessary.

Table 7 Bycatch Apportionments Created by Hypothetical Example Pollock IFQ System 2

Bycatch Species	Non-Pelagic				Pelagic			
	A Season		B Season		A Season		B Season	
	Inshore	Offshore	Inshore	Offshore	Inshore	Offshore	Inshore	Offshore
Pacific Cod	✔	✔	✔	✔	✔	✔	✔	✔
Yellowfin Sole								
Greenland Turbot					✔	✔	✔	✔
Arrowtooth	✔	✔	✔	✔	✔	✔	✔	✔
Rock Sole	✔	✔	✔	✔				
Flathead Sole	✔	✔	✔	✔	✔	✔	✔	✔
Other Flatfish	✔	✔	✔	✔	✔	✔	✔	✔
Sablefish								
True POP					✔	✔	✔	✔
Other POP								
Sharpchin/Northern								
Shortraker/Rougheye								
Other Rockfish					✔	✔	✔	✔
Atka Mackerel					✔	✔	✔	✔
Squid					✔	✔	✔	✔
Other Groundfish	✔	✔	✔	✔	✔	✔	✔	✔
Prohibited Species								
Herring	✔	✔	✔	✔	✔	✔	✔	✔
Halibut	✔	✔	✔	✔	✔	✔	✔	✔
Red King Crab	✔	✔	✔	✔				
Blue King Crab	✔	✔	✔	✔				
Bairdi Tanner Crab	✔	✔	✔	✔				
Opilio Tanner Crab	✔	✔	✔	✔				
Chum Salmon	✔	✔	✔	✔	✔	✔	✔	✔
King Salmon					✔	✔	✔	✔
Pollock	✔ A single "Bycatch" Only Apportionment for Other Groundfish Targets							

k. **Transferability of Pollock IFQs** (Assuming that transferability of pollock QS/IFQs is allowed, transferability issues specific to this system are numerous.) These issues are outlined below.

i. Permanent v. Temporary Transfers. Allowing temporary transfers of IFQs good only for the current year (i.e., leasing of QS) would tend to enhance the likelihood that IFQ holders would be able to harvest all of their IFQs.

ii. Separability of IFQs by season and or gear. May a person transfer only B season QS/IFQs and retain only A season QS/IFQ? Some vessels would have little use for B season shares while others would have little use for A season shares. Similarly may a person transfer only non-pelagic QS/IFQ and retain only pelagic QS/IFQ. Depending on the initial allocation scheme

non-pelagic IFQs may have been issued to vessels which prefer to use pelagic gear. Similarly some vessels which prefer non-pelagic gear may have been issued pelagic gear IFQs. Allowing these transfers make it more likely that each IFQ holder will be able to catch all of their IFQs.

iii. Bundling of IBQs with IFQs. Allowing individual to buy additional shares of a single bycatch species will likely enhance the ability of IFQ holders to catch all of the IFQs allotted to them.

3. **EXAMPLE POLLOCK IFQ SYSTEM 3:** A System with "moderately strong" guarantees for harvest of Pollock IFQs, but one which eliminates the use of Non-Pelagic Gear in the Pollock IFQ fishery. IFQ holders will be relatively unsusceptible to externalities from other fisheries or from other IFQ holders. It is unlikely that other fisheries will directly impact Pollock IFQ fisheries. Overall the system is highly defined, but because the bycatch in the pelagic pollock trawl fisheries is less pervasive, the system is less complex than System 2. Additionally, a "Non-pelagic Trawl Pollock Bycatch Apportionment" is made for use by non-IFQ holders and IFQ holders using non-pelagic gear in other targets.

a. **Pollock IFQ definition and Applicability:**

i. IFQs will apply to all pollock caught (whether retained or discarded) with pelagic trawls whether or not pollock is the target. Only pelagic gear may be used to target pollock. IFQ holders may also participate in other groundfish target fisheries with non-pelagic gear. IFQ holders, while participating in other groundfish target fisheries with non-pelagic gear, may not retain pollock in excess of the directed fishing standards. All pollock caught with non-pelagic gear (whether retained or discarded) will not count against IFQs, but rather against the Non-pelagic Trawl Pollock Bycatch Apportionment.

ii. Attainment of a pollock IFQ will mean that additional fishing with pelagic trawls, whether fishing in a pollock target, or not will be prohibited.

iii. Separate Pollock Permanent QS and Annual IFQs are defined as follows:

(1) Inshore A season. (IAQS/IAIFQ)
(2) Inshore B season. (IBQS/IBIFQ)
(3) Offshore A season. (OAQS/OAIFQ)
(4) Offshore B season. (OBQS/OBIFQ)

b. **Inshore/Offshore**

i. QS/IFQs will be issued with Inshore/Offshore designations. Current Inshore/Offshore TAC allocations will be maintained (i.e. 35/65).

c. **A and B season splits.**

i. Separate QS/IFQs will be issued with A and B season designation. A and B season apportionments for inshore determined in the annual TAC setting process.

d. **Non-Pelagic Trawling vs. Pelagic Trawling**

i. Only pelagic trawls may be used in the pollock IFQ fisheries.

ii. All pollock caught in any target fishery with pelagic trawl gear whether retained or discarded will be counted against pollock IFQs.

iii. Vessels using non-pelagic trawls may not retain pollock in amounts exceeding the directed fishing standards for pollock.

e. **IFQ Calculations**

i. An individual's Inshore A season IFQ will be determined as follows:

IAIFQ = (IAQS ÷ IAQS Pool) × (IATAC), where IATAC is the inshore A season TAC of pollock adjusted for CDQs and the Non-pelagic Trawl Pollock Bycatch Apportionment.

ii. Other IFQ calculations will be similar.

f. **Bycatch of Pollock in Other Groundfish Target Fisheries:**

i. A separate apportionment of pollock for use as bycatch in the non-pelagic trawl open access groundfish target fisheries will be deducted from the pollock TAC prior to the annual issuance of IFQs. The Bycatch Pollock Apportionment will not contain Inshore/Offshore or A/B designations. This apportionment will be based on previous years bycatch rates. All "bycatch" of pollock whether retained or discarded, and whether caught by IFQ holders or non-IFQ holders will be counted against this apportionment when non-pelagic trawls are used. "Bycatch" pollock is defined as an amount of retained pollock which does not exceed the directed fishing standard for the target fishery. This apportionment will be managed in two stages. Initially, pollock may be retained in other groundfish target fisheries, but only at levels below directed fishing standards (i.e., as bycatch only). At such point as NMFS deems necessary, pollock will be declared a PSC in other groundfish trawl target fisheries. Once pollock is a PSC it may no longer be retained. The attainment of the Bycatch Pollock Apportionment will not close any fisheries. All pollock IFQ fisheries will be unaffected.

ii. All bycatch of pollock in other pelagic trawl target fisheries will be counted against pollock IFQs.

iii. Attainment of a pollock IFQ will mean that additional fishing with pelagic trawls, whether fishing in a pollock target, or not will be prohibited.

iv. **Directed Fishing Standards.** In order to accommodate high natural bycatch rates of pollock in other non-pelagic trawl target fisheries, the directed fishing standards for pollock in other target fisheries could perhaps be adjusted upward, so as to discourage regulatory discards.

g. **Bycatch of Other Groundfish in Pollock IFQ Fisheries.**

i. Separate apportionments of groundfish target species which are taken in significant amounts in pelagic trawl pollock target fisheries will be made by season and inshore/offshore sector. The amounts of each apportionment will be based on the bycatch rates in previous years, adjusted as deemed necessary to promote Council goals and objectives.

ii. These apportionments will be allocated to QS/IFQ holders in the form of IBQs. Attainment of an IBQ will close the Pollock IFQ fishery to the vessel, unless additional Pelagic IBQs are acquired.

iii. All groundfish whether retained or discarded, which are caught while the IFQ holder is in a pollock IFQ fishery will be counted against IBQs.

iv. **Directed Fishing Standards.**

(1) IFQ holders in pollock target fisheries, may retain IBQ species in excess of directed fishing standards as long they control sufficient IBQs for those species, whether retained or discarded.

h. **Bycatch of Crab, Salmon, and Herring.**

i. Bycatch apportionments of king salmon, chum salmon, and herring will be calculated based on bycatch rates in previous years in pelagic pollock fisheries by inshore/offshore sector and season. It is likely that no apportionments of crab will be necessary for Pelagic Pollock IFQs. Once the total apportionment is set by the Council in the annual "Spec" process, IBQs will be issued to IFQ holders. These IBQs will allow individual operators to fish in closure areas. Once an individual's IBQ for herring is reached, the Herring area will be closed to the vessel. Similarly, attainment by an individual of their IBQ for salmon species will mean that additional IFQ fishing will be outside the closure area. Crab bycatch will be limited by a continuation of the current regulations prohibiting more than 20 crab on board at any time the vessel in engaged in a pollock IFQ fishery.

i. **Bycatch of Halibut.**

i. A PSC cap of halibut will be made for the Pollock IFQs fisheries. This apportionment will be considerably less than is currently set aside the "Pollock/Atka mackerel/Other Groundfish Halibut PSC Cap," as only pelagic trawls will be allowed in the IFQ fishery. The cap will be set at a level which discourages on bottom fishing with pelagic gear, but large enough to allow the full prosecution of a midwater pollock fishery. Additionally a new open access cap "Atka mackerel/Other Groundfish" will also be established. IBQs for halibut will be issued to holders of Pollock IFQs. Once those IBQs are used, the individual may no longer participate in pollock target fisheries. Remaining pollock IFQs may be used in other pelagic trawl target fisheries.

j. **Summary of New Bycatch Apportionments**

The table below shows the 58 new apportionments which would be needed to implement this system assuming a "1% of TAC" standard for "significant" bycatch. It may be that bycatch of certain species only occurs in one season, in which case apportionments for both seasons may not be necessary.

Table 8 Bycatch Apportionments Created by Hypothetical Example Pollock IFQ System 3

Bycatch Species	A Season		B Season	
	Inshore	Offshore	Inshore	Offshore
Pacific Cod	✔	✔	✔	✔
Yellowfin Sole				
Greenland Turbot	✔	✔	✔	✔
Arrowtooth	✔	✔	✔	✔
Rock Sole				
Flathead Sole	✔	✔	✔	✔
Other Flatfish	✔	✔	✔	✔
Sablefish				
True POP	✔	✔	✔	✔
Other POP				
Sharpchin/Northern				
Shortraker/Rougheye				
Other Rockfish	✔	✔	✔	✔
Atka Mackerel	✔	✔	✔	✔
Squid	✔	✔	✔	✔
Other Groundfish	✔	✔	✔	✔
Prohibited Species				
Herring	✔	✔	✔	✔
Halibut	✔	✔	✔	✔
Red King Crab				
Blue King Crab				
Bairdi Tanner Crab				
Opilio Tanner Crab				
Chum Salmon	✔	✔	✔	✔
King Salmon	✔	✔	✔	✔
Halibut	✔ A new apportionment of Halibut PSC for "Atka mackerel/Other Groundfish" targets will replace the previous "Bottom Pollock/Atka mackerel/Other Groundfish" apportionment.			
Pollock	✔ A single "Bycatch" Only Apportionment for Non-Pelagic Trawl Groundfish Targets			

k. **Transferability of Pollock IFQs** (Assuming that transferability of pollock QS/IFQs are allowed, transferability issues specific to this system are numerous.) These issues are outlined below.
   i. Permanent v. Temporary Transfers. Allowing temporary transfers of IFQs good only for the current year (i.e., leasing of QS) would tend to enhance the likelihood that IFQ holders would be able to harvest all of their IFQs.
   ii. Separability of IFQs by season. May a person transfer only B season QS/IFQs and retain only A season QS/IFQ? Some vessels would have little use for B season shares while others would have little use for A season shares. Allowing these transfers will make it more likely that each IFQ holder will be able to catch all of their IFQs.
   iii. Bundling of IBQs with IFQs. Allowing individual to buy additional shares of groundfish, salmon, or halibut IBQs will likely enhance the ability of IFQ holders to catch all of the IFQs allotted to them in an efficient manner.

4. **EXAMPLE POLLOCK IFQ SYSTEM 4:** A System with "moderately strong" guarantees for harvest of Pollock IFQs. IFQ holders will be relatively unsusceptible to externalities from other fisheries or from other Pollock IFQ holders. It is unlikely that other fisheries will directly impact Pollock IFQ fisheries. This system does not eliminate 'non-pelagic' trawling, but provides incentives to do so. Neither IFQs or IBQs will be designated with a gear type, but attainment of the IFQ or of any IBQ will prohibit further fishing for pollock. Though the system is quite defined, somewhat complex, and includes many changes to the current management system, we have attempted to simplify wherever possible, while still maintaining moderate system definition.

   a. **Pollock IFQ definition and Applicability:**
      i. IFQs will apply to all pollock caught in pollock target fisheries, whether retained or discarded.
      ii. Separate Pollock Permanent QS and Annual IFQs are defined as follows:
         (1) Inshore A season. (IAQS/IAIFQ)
         (2) Inshore B season. (IBQS/IBIFQ)
         (3) Offshore A season. (OAQS/OAIFQ)
         (4) Offshore B season. (OBQS/OBIFQ)
      iii. QS/IFQ will be calculated and allocated based on past activities between pelagic and non-pelagic trawling, with bycatch apportionments of both PSC and non-PSC species based on same proportions. However, there will be no 'pelagic' or 'non-pelagic' labels on the IFQs or IBQs.

   b. **Inshore/Offshore**
      i. QS/IFQs will be issued with Inshore/Offshore designations. Current Inshore/Offshore TAC allocations will be maintained (i.e. 35/65).

   c. **A and B season splits.**
      i. Separate QS/IFQs will be issued with A and B season designation. A and B season apportionments for inshore determined in the annual TAC setting process.
      ii. Calculation of initial allocations may not need to be made on past A/B activity, as the pelagic/non-pelagic aspects of the issuance may effectively accomplish this split (This assumes that non-pelagic activities have historically taken place in the B season.)

   d. **Non-Pelagic Trawling vs. Pelagic Trawling**
      i. The IFQ holder will have the option to use pelagic or non-pelagic trawl gear. IBQs however, will be issued to promote the use of pelagic trawls. A typical allocation of IBQs would be sufficient to harvest approximately 4% of the IFQs with non-pelagic trawls (the current percent of non-pelagic trawl pollock according to data in Section 3.) If the IFQ holder reaches a IBQ,

then no further target fishing for pollock is allowed.

e. **IFQ Calculations**

i. An individual's Inshore A season Pelagic IFQ will be determined as follows:

IAIFQ = (IAQS ÷ IAQSPool) × (IATAC), where IATAC is the inshore A season apportionment of pelagic pollock adjusted for CDQs and Pollock Bycatch Apportionment.

ii. Other IFQ calculations will be similar.

f. **Bycatch of Pollock in Other Groundfish Target Fisheries:**

i. A separate apportionment of pollock for use as bycatch in other open access groundfish target fisheries will be deducted from the pollock TAC prior to the annual issuance of IFQs. The Bycatch Pollock Apportionment will not contain Inshore/Offshore or A/B designations. This apportionment will be based on previous years bycatch rates. All "bycatch" pollock whether retained or discarded, will be counted against this apportionment. "Bycatch" pollock is defined as an amount of retained pollock which does not exceed the directed fishing standard for the target fishery. This apportionment will be managed in two stages. Initially, pollock may be retained in other groundfish target fisheries, but only at levels below directed fishing standards (i.e., as bycatch only). At such point as NMFS deems necessary, pollock will be declared a PSC in other groundfish trawl target fisheries. Once pollock is a PSC it may no longer be retained. The attainment of the Bycatch Pollock Apportionment will not close any fisheries. All pollock IFQ fisheries will be unaffected.

ii. Catches of Pollock (whether discarded or retained) by IFQ holders participating in other groundfish target fisheries will accrue to the "Bycatch Apportionment" as long as the retained amount of pollock does not exceed the directed fishing standard. Otherwise, all pollock catches will apply to the pollock IFQ.

g. **Bycatch of Other Groundfish in Pollock IFQ Fisheries.**

i. Separate apportionments of groundfish target species which are taken in significant amounts in pollock target fisheries will be made by season and inshore/offshore sector. The amounts of each apportionment will be based on the combined pelagic/non-pelagic trawl bycatch rates in previous years, adjusted as deemed necessary to promote Council goals and objectives.

ii. These apportionments will be allocated to QS/IFQ holders in the form of IBQs. Attainment of a IBQ will mean the individual may no longer harvest pollock in the IFQ fishery, unless additional IBQ are acquired.

iii. All groundfish whether retained or discarded, which are caught while the IFQ holder is in a pollock target fishery will be counted against IBQs.

iv. An operator can harvest all of his IFQ with non-pelagic gear as long as the IBQs are not exceeded. However, because IBQs are calculated on the traditional pelagic/non-pelagic proportions, an operator will have a greater guarantee of harvesting his total pollock IFQs if he uses pelagic gear. The total IBQ amounts issued in subsequent years may be reduced by the Council, thereby effecting a reduction in bycatch of both PSC and non-PSC species.

v. **Directed Fishing Standards.**

(1) IFQ holders in pollock target fisheries, may retain IBQ species in excess of directed fishing standards as long they control sufficient IBQs for those species, whether retained or discarded.

h. **Bycatch of Crab, Salmon, and Herring.**

i. Bycatch apportionments of king salmon, chum salmon, king crab, tanner crab, and herring will be calculated based on combined pelagic/non-pelagic bycatch rates in previous years by inshore/offshore sector and season. Once the total apportionment is set by the Council in the annual "Spec" process, IBQs without gear designations will be issued to IFQ holders. These

IBQs will allow individual operators to fish in closure areas. Once an individual's IBQ for herring is reached, they may no longer operate in the Herring closures areas. Similarly, attainment by an individual of their IBQ for crab and salmon species will require that any additional fishing for pollock will be outside the closure area.

i. **Bycatch of Halibut.**

i. A non-gear specific bycatch apportionment of halibut will be made for each inshore/offshore sector and season based on bycatch rates in previous years. Bycatch of halibut in pollock target fisheries, will be counted against the IBQ. Once an IBQ is taken, the individual may no longer target fish for pollock.

j. **Summary of New Bycatch Apportionments**

Table 9 below shows the 77 new apportionments which would be needed to implement this system. This assumes that the standard for "significant" bycatch was 1% of the TAC of the groundfish bycatch species based on Table 4 in Section 3. It may be that bycatch of certain species only occurs in one season, in which case apportionments for both seasons may not be necessary.

Table 9 Bycatch Apportionments Created by Hypothetical Example Pollock IFQ System 4

Bycatch Species	A Season		B Season	
	Inshore	Offshore	Inshore	Offshore
Pacific Cod	✔	✔	✔	✔
Yellowfin Sole				
Greenland Turbot	✔	✔	✔	✔
Arrowtooth	✔	✔	✔	✔
Rock Sole	✔	✔	✔	✔
Flathead Sole	✔	✔	✔	✔
Other Flatfish	✔	✔	✔	✔
Sablefish				
True POP	✔	✔	✔	✔
Other POP				
Sharpchin/Northern				
Shortraker/Rougheye				
Other Rockfish	✔	✔	✔	✔
Atka Mackerel	✔	✔	✔	✔
Squid	✔	✔	✔	✔
Other Groundfish	✔	✔	✔	✔
Prohibited Species				
Herring	✔	✔	✔	✔
Halibut	✔	✔	✔	✔
Red King Crab	✔	✔	✔	✔
Blue King Crab	✔	✔	✔	✔
Bairdi Tanner Crab	✔	✔	✔	✔
Opilio Tanner Crab	✔	✔	✔	✔
Chum Salmon	✔	✔	✔	✔
King Salmon	✔	✔	✔	✔
Pollock	✔ A single "Bycatch" Only Apportionment for Other Groundfish Targets			

k. **Transferability of Pollock IFQs** (Assuming that transferability of pollock QS/IFQs is allowed, transferability issues specific to this system are numerous.) These issues are outlined below.

i. Permanent v. Temporary Transfers. Allowing temporary transfers of IFQs good only for the current year (i.e., leasing of QS) would tend to enhance the likelihood that IFQ holders would be able to harvest all of their IFQs.

ii. Separability of IFQs by season. May a person transfer only B season QS/IFQs and retain only A season QS/IFQ? Some vessels would have little use for B season shares while others would have little use for A season shares. Depending on the initial allocation scheme non-pelagic IFQs may have been issued to a vessel which might prefer to use pelagic gear. Similarly some vessels which prefer non-pelagic gear may have been issued pelagic gear IFQs. Allowing these transfers will make it more likely that each IFQ holder will be able to catch all of their IFQs. The designations of pelagic and non-pelagic pollock IFQs may eliminate, or mitigate, the need for A and B season designations.

iii. Bundling of IBQs with IFQs. Allowing individual to buy additional shares of a single bycatch species will likely enhance the ability of IFQ holders to catch all of the IFQs allotted to them.

A Discussion of Guaranteed Minimums in the Pollock IFQ Program

An option included in the proposed pollock IFQ program would allocate vessels a guaranteed percentage of their 1994 BSAI pollock catch. This minimum percentage, as proposed, would range from 75 to 95%. The remaining portion of the fishery would be allocated based on an individual's catch history prior to 1994. The pre 1994 catch history, as proposed, could go back as far as 1984 with various weighting schemes for different time periods.

A definition of the guaranteed minimum percentage of an individual's 1994 catch must be provided. The guaranteed minimum will allocate a percent of the TQSP (total quota share pool). If the Council selects 75% to be the guaranteed minimum percent, then 75% of the TQSP will be allocated based on 1994 catch. The remaining 25% of the TQSP will come from catch prior to 1994. The purpose of allocating a guaranteed minimum percent is to protect an individual's relative harvest position in relation to the 1994 pollock fishery. The guaranteed minimum does not give the right to catch a specific amount of BSAI pollock in future years. For example, should a future BSAI pollock TAC be larger than the 1994 TAC, an individual would be allocated IFQ for more than 75% of their 1994 catch. The opposite is also true. If the TAC in some future year is less than it was in 1994 the person will be issued IFQ for less than 75% of their 1994 catch. This is a common sense result when stocks fluctuate and an individual has the right to harvest a given percentage of the fishery.

Table 1 is a preliminary report of the catch of BSAI pollock vessels that "qualify" for the proposed license limitation program. If we assume that these are the vessels that would be included in the IFQ program, we can use this catch as an example of how a guaranteed minimum would work. The first column in Table 1 shows the years the vessel had trawl landings of BSAI pollock between 1992 and 1994. The second column shows the number of vessels that fished that combination of years. Columns three through five are the vessels estimated annual catch, based on the license limitation program data set. The sixth column sums the catch in 1992-94. Finally, the last three columns are the average catch by vessel for 1992, 1993, and 1994.

Table 1. Reported Trawl Gear Pollock Catch by Vessels that "Qualify" under the License Limitation Program.

Years Fished	Vessels	Metric Tons of Landings						
		1992	1993	1994	Total	1992 Avg	1993 Avg.	1994 Avg.
92	13	4,504	0	0	4,504	346	0	0
92 and 93	14	10,937	8,856	0	19,793	781	633	0
92, 93, and 94	123	1,174,619	1,160,609	1,212,209	3,547,437	9,550	9,436	9,855
92 and 94	5	4,068	0	1,562	5,630	814	0	312
93	7	0	832	0	832	0	119	0
93 and 94	9	0	30,709	29,586	60,295	0	3,412	3,287
94	10	0	0	2,462	2,462	0	0	246
Total	181	1,194,129	1,200,465	1,245,819	3,640,413	n/a	n/a	n/a

Next assume that we have the catch history of two vessels and a well defined program. This fictitious IFQ program will guarantee vessels that fished in 1994 75% of their 1994 catch. The remaining portion of the TQSP will be based on catch history from 1992 and 1993. Each of the vessels that we will study had exactly

the same total landings between 1992 and 1994. Each of the vessels catch history is presented in Table 2.

Table 2.

Vessel	1992	1993	1994	Total
A	0	1,000	1,000	2,000
B	1,000	1,000	0	2,000

Now we will calculate the number of QS that each of these vessels will receive. Vessel A fished in 1994 and will be issued QS based on 75% of his landings. That calculation yields 750 QS. The guaranteed minimum QS (MQS) for the entire fleet are 934,364. Therefore the remaining QS that will be issued as RQS must equal 311,455 (i.e. 25% of the total QS pool must be RQS). Table 1 shows that the catch in 1992 and 1993 summed to 2,394,594 (1,194,129 + 1,200,465) metric tons. To make the RQS equal 311,455, each metric ton of landings during those years would equal 0.13 RQS. So, the owner of vessel A would have earned 130 RQS. Adding his MQS and RQS gives a total of 880 QS. Vessel B did not make any BSAI pollock landings in 1994 so does not receive any MQS. He does get RQS for both his 1992 and 1993 catch. The 2,000 metric tons of catch equates to 260 (2000*0.13) QS. Now we can calculate the metric tons of IFQ that our two vessels owners would receive if the TAC fell to 1.2 million metric tons. This calculation yields (1,200,00/1,245,819) * 880 = 848 for vessel A and (1,200,00/1,245,819) * 260= 250 QS for vessel B. A summary of these results are listed in Table 3.

Table 3.

Vessel	MQS	RQS	Total QS	Metric Tons of IFQ (TAC=1.2 million mt)
A	750	130	880	848
B	0	260	260	250

This example shows the impact that not having reported any pollock catch in 1994 can have on the distribution. If the guaranteed minimum was based on the most recent year of participation, and not just on 1994, these two vessels would have been issued the same amount of IFQ.

The above example points out the fact that an IFQ program that includes a guaranteed minimum reduces the need for extended catch histories. Because most of the QS are earned during the year(s) with the guaranteed minimum, including catch history with JV or DAP weights back to 1984 will have little impact on the final QS distribution.

AMERICAN SEAFOODS COMPANY

Mr. Rick Lauber, Chairman
North Pacific Fisheries Management Council
605 West 4th Ave., Suite 306
Anchorage, Ak. 99501-2252

January 2nd, 1996

RE: CRP/pollock-only ITQs, agenda item C-5 (a)

Dear Mr. Lauber,

I am writing on behalf of American Seafoods Company to comment on the issue of pollock ITQs which is on the agenda for the January, 1996 council meeting. This is an appropriate time to consider an ITQ system for the pollock fishery. Inshore-Offshore is now in place, providing some stability through 1998. Coupled with License Limitation and an ITQ program, we have an opportunity to achieve the bridge to Comprehensive Rationalization envisioned 4 years ago when the NPFMC identified ITQs as the single most effective solution to the significant problems facing our North Pacific fisheries.

Now that Improved Retention/Utilization is actively being developed, it's time to turn to a more comprehensive solution to reducing bycatch and discards. The Moratorium, Inshore/Offshore, License Limitation, and Improved Retention/Utilization are all short-term solutions to the problems of overcapitalization, the consequent "race for the fish", long-term stability, bycatch, and discards.

As one example of the result of open-access fishery management, take a look at the company that harvests the largest percentage of pollock in the Bering Sea, American Seafoods. To adapt to the derby style pollock fishery, we have modified our vessels over the last several years to at least double our harvesting and processing capacity of pollock. We, like other companies, base our fishing strategy on maximizing revenue per day, rather than revenue per ton of fish harvested. Fisheries under open-access management have become time-driven and as a result our focus is on

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productivity, in a value-driven ITQ fishery the resource becomes the most important commodity, as it should be. American Seafoods probably has the most to lose in an ITQ fishery because our competitive advantage would be eliminated. Nevertheless, we still feel that an ITQ system would provide quantum improvements, not only for American Seafoods but for all other participants in the fishery. The rising tide of ITQs will lift all boats.

Under an ITQ system, each fish becomes considerably more valuable for several reasons. When a vessel knows what amount of fish it has available to harvest per year, a fundamental shift in attitude towards the resource takes place. What that vessel doesn't harvest today will still be there tomorrow, contrary to what happens in derby fisheries. It should come as no surprise to any of us that derby-style fisheries management has resulted in fishing practices that don't fully utilize all of the harvest. The current management system is analogous to driving a car with one foot on the brake and one foot on the gas-restrictive regulations are in direct conflict with "damn the torpedoes full speed ahead" open access management. In an ITQ fishery, not unlike the CDQ pollock fishery, vessels have the time and the incentive to get the maximum value from each fish caught. Strategies will be based on; fishing during the times of year with the highest recovery rates, having the time to produce the highest value-added products possible, getting the most product out of the quota harvested, product quality, and market timing. By eliminating the incredible competitive pressure of derby fisheries management, fishing practices that reduce bycatch and discards become much easier to implement.

But maybe most important of all, in an ITQ system, fishery resources acquire a value which goes beyond the short-term harvest value. When fishermen have a stake in their fishery then they will act responsibly to preserve and enchance both their own and the resources' best long-term interests, their goals are congruent with that of the environment. Percentage shares in healthy fisheries will be worth much more than shares in depleted, unhealthy fisheries. ITQs complement the fact that anyone who has a long-term investment and committment to this industry is an environmentalist by the real definition of the term. This is particularly true of the fishermen whose very existence depends on a healthy ecosystem.

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We have an opportunity to create a pelagic, pollock-only ITQ fishery which, if it includes full retention, will be a major step forward in responsible fisheries management. If we are really serious about improving conditions in the pollock fishery then it is time to make the committment to ITQs. There are numerous examples of ITQ systems that have been in place many years now-New Zealand groundfish, Atlantic wreckfish, B.C. halibut, the Bering Sea CDQ pollock program, and North Pacific halibut/sablefish IFQs. Let's adopt the best features of each, learn from their mistakes, and craft an ITQ program that works for everyone. Catch history that recognizes the participation and contribution of the existing fleet should be considered, in addition to processor shares or a two-pie quota system.

The basic concepts of ITQs, a combination of privatization and individual accountability, can be seen in many examples throughout other U.S. industries today. It's a recurring theme that has proven itself time and time again. I encourage the Council to get out of the politics of deciding who should be winners or losers in allocation battles and implement a true market-based management system. Surely you would all rather spend your valuable and limited time on conservation issues?

Thank you for your time.

Sincerely,

Jan L. Jacobs
Fleet Manager
American Seafoods Co.

Congress of the United States

Washington, D.C. 20515

Rolland Schmitten
Assistant Administrator
National Marine Fisheries Service
1335 East-West Highway
Silver Spring, Maryland 20910-3282

December 22, 1995

Dear Rollie:

House and Senate conferees included instructions in the FY1996 Commerce Appropriations conference report regarding the red snapper individual transferable quota (ITQ) program. We write to bring these instructions to your attention, and to strongly express our view that no further work should be done to implement this ITQ program or to develop other new ITQ programs at this time.

The House of Representatives has passed a provision as part its bill to reauthorize the Magnuson Act (H.R. 39) which would prohibit transferable quotas. The Senate Oceans and Fisheries Subcommittee will consider the entire ITQ issue early next year as part of the Senate's Magnuson reauthorization bill (S. 39). We are opposed to any effort to develop new ITQ programs or to implement the red snapper ITQ program until after this reauthorization is completed. Despite the temporary veto of the Commerce Appropriations bill and pending action on the Magnuson bill, the industry, regional fishery management councils, and the National Marine Fisheries Service (NMFS) have been effectively put on notice that the Magnuson Act may be amended to limit or restrict ITQs.

Despite recent NMFS actions regarding ITQs, we have worked cooperatively over the years to assure that the agency has sufficient funds to properly conserve and manage the nation's fisheries. The work NMFS does on behalf of the fishing industry is very important to us. But, ITQs have been one of the most controversial fishery issues we have faced recently, and NMFS should not move forward with new ITQ programs or the implementation of the red snapper program until the legislative situation described above is resolved. We request that NMFS and the regional fishery management councils refrain from further work on the red snapper program or in developing new ITQ programs until the ITQ question is resolved by Congress.

Thank you for your immediate attention to this issue.

Sincerely,

BOB LIVINGSTON
Chairman
House Committee on
Appropriations

TED STEVENS
Member
Senate Committee on
Appropriations

ROM 1 of 2 C-5

DAVID HILLSTRAND
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HOMER, ALASKA 99603
(907) 235-8706

NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL
Attention: RICHARD LAUBER

AGENDA ITEM C-5 Comprehensive Rationalization Planning
(a) Pollock ITQ's
(b) Vessel Bycatch Allowance

1. I would recommend to not allow Pollock ITQ's to proceed until the council can do all of the fisheries that are in their jurisdiction at once. To do so would cause overcapitalization on other fisheries that are still open to increase ones catch.

a. If Pollock ITQ's proceed than a waiting period should be tied to them in which a vessel that fishes its ITQ is prohibited in fishing another fisheries for a time.
Options:
1. A vessel that fishes its Q's in a calendar year is prohibited from fishing in another fisheries for a period of 30-60 days.
2. A vessel that fishes its Q's in a calendar year is prohibited from fishing another gear type; such as; a vessel fishing trawl gear is prohibited from fishing longline or pot gear in that calendar year.

b. In the Pollock fisheries a vessel under an ITQ system can chose when to fish. There by maxing out its fishing potential. If ITQ's are that beneficial then those who want them should be willing to give up some flexibility while waiting for a full comprehensive plan.

c. The NPFMC should take note here that improved Retention and Utilization are discussed in a different agenda item and not in this item. ITQ's slow the fishery down, increase safety, but do not require the reduction of bycatch. I would recommend that the council keep its current agenda and discuss in order as they have; with improved retention and utilization requirements discussed first before ITQ's. This will clean the fisheries up first; which is the proper order of a comprehensive rationalization plan.

2. Vessel bycatch Allowances are better to proceed with than an ITQ system. VBA clean up the way we fish; which should be done first. VBA should be done in several steps.

a. First they should be done by vessels category such as onshore-offshore, and the percentages allocated to each already. This has been discussed by the NPFMC and should be again in VBA.

b. Second VBA should be split up between vessel sizes. The Council does not have observer coverage on vessels under 60' ft. which have a smaller bycatch than larger vessels and yet are calculated to have the same bycatch rate. The larger vessels have the ability to reduce their bycatch by the way they fish and by fishing together and avoiding areas of high bycatch. Splitting up the bycatch PSC between vessel sizes will lead to vessels working together in groups more effectively. It will also be a step to see if they can really reduce bycatch before rewarding a vessel with a large VBA bycatch of a PSC because of its previous fishing practice.

c. Enforcement of VBA of PSC will be a complicated system with having to monitor each vessels bycatch. Vessels under 125 ft. do not require observers for 30% of the time. I would encourage an increase in observer coverage under this system two full time observers on offshore possessors, and 100% on catcher vessels under this system. If it is going to be such a good idea and bring more economic benefits to those who want the system then they should have no problem with increased observer coverage! This will ensure that we have made progress, and will encourage the council to proceed further.

d. To proceed with giving VBA on vessels previous catch histories may be good in some fisheries but not in others. Pollock would be one, yet the P.Cod fisheries and the sole fisheries may need to be postpone because of bycatch problems where certain vessels have not had to slow down or worry about bycatch in their history of fishing. Or in the sole fisheries some vessels have not had markets. Again you may want to discuss item C-4 retention and utilization here first.

e. I would recommend a phase into VBA's. Enforcement would consider and have an easier time with spitting the bycatch of PSC among vessel sizes and categories first. A three year period of time would be important for trying first. At which time it can be reassessed. I believe you will gain more support from everyone interested if you proceed in a step by step plan.

David Hillstrand

David Hillstrand

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HAZEL LORRAINE
LESLIE LEE
LISA MELINDA
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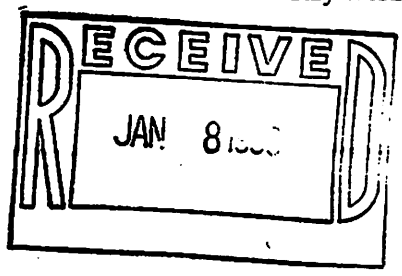
VANGUARD
VIKING EXPLORER



December 29, 1995

Rick Lauber, Chairman
North Pacific Fishery Management Council
PO Box 103136
Anchorage, Alaska 99510

Dear Rick:

I recently received a copy of a letter from Senator Ted Stevens and Representative Bob Livingston to Roland Schmitten, Assistant Administrator National Marine Fishery Service dated December 22, 1995. The letter advises NMFS to stop any and all activities on a development or implementation of new ITQ programs and further states that the Magnuson Act may be amended to limit or restrict ITQ's. I would add from my own analysis that ITQ's are not going to be included as part of the reauthorization.

In any event I think the NPFMC would be well advised to begin energetic efforts to reduce over capitalization in the groundfish fishery in the region. We already have limited entry in the PFMC area. But in neither instance are there any mechanisms designed to actually reduce the effort and capitalization.

I think it is of the utmost importance that the NPFMC consider industry financed buy-back programs to complement the limited entry plan. I know of very few if any fishermen in the groundfish fishery who are opposed to an all inclusive, fairly administered buy-back program to be funded by uniform industry assessments on each vessel as a fixed percentage of their gross stocks or gross sales.

In todays climate it is unrealistic to look for any type of Government support or Government funding for such a program. Also philosophically I think the vast majority of fishermen would approve an industry driven program. This is our fishery. If there's anything wrong in it we should bear the responsibility of corrective actions.

But the industry cannot bring about regulations or create vehicles by which this type of fleet reduction can be achieved. It is the responsibility of the NPFMC and through legal oversight, the Department of Commerce to create the institution which with strong industry support begin to reduce the fleet.

In my opinion the National Marine Fishery Service has for too long attempted to pump air into a dead horse that never got off the ground; ITQ's (I apologize for the mixed metaphor). It seems to me now that we really do have to make an effort to reduce the size of the fleet.

Accordingly MTC members who are on the Advisory Panel will attempt to get this topic though the panel and to the Council for consideration. I do not think we can continue to afford the questionable luxury of having NMFS tell us that this is illegal or that it will require an amendment to the FCMA. I think it is about time that NMFS began to think positively about the welfare of the industry, the continued health of the resource and to advocate techniques that will foster both.

I would respectfully remind the Council again that needed fishery regulations in the past have often gotten lost or have been ignored (the moratorium, the minimum mesh size, etc., etc.) and that it seems that issues or ideas hang before the Council for a long time before they get resolved so all the more reason to start consideration of what may become industry supported buy-back plans now as you pursue limited entry. Limited entry without a means of reducing overcapitalization can do little to reduce fleet size.

Thank you very much for your interest.

Sincerely yours,

R. Barry Fisher
President MTC

cc: MTC Directors
Bob Mace

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MISS SARAH
MISS SUE
NEW LIFE
PACIFIC
PACIFIC FUTURE
PACIFIC RAM
PEGASUS
PERSEVERANCE
PERSISTENCE
PIONEER
RAVEN
ROSELLA
SEADAWN
SEEKER
VANGUARD
VIKING EXPLORER

January 11, 1996

The Honorable Slade Gorton
The Honorable Patty Murray
United States Senate
Washington, D.C. 20510

Dear Senators Gorton and Murray:

Midwater Trawlers Cooperative is extremely concerned with the pressure that is being put on you elected representatives to consider the adoption or the rejection of Individual Transferrable Quotas (ITQ's) as the exclusive fishery management tool by which fishing effort could be reduced and over capitalization of the fishing fleets diminished in Alaska.

We, along with several other fishermens organizations have consistently urged North Pacific Fishery Management Council to get on with the job of fisheries management and the issuance of necessary fishery regulations. The real problems that the fisheries face, such as full utilization of all product landed, full retention of all product caught, effective bycatch methods and programs, utilization of gear development which would allow escapement of nontarget species, prohibited species and juveniles etc., etc., are not being addressed.

We have seen the NPFMC immobilized by constant argument over ITQ's. We were very pleased to see the Council, once having recognized the enormous amount of time and trouble that would be necessary to create an ITQ program turn then to a limited entry plan which would be much easier to institute.

A limited entry plan in itself will do little to reduce fleet size immediately. You should also bear in mind that all of the promises cast about in favor of ITQ's, such as better conservation, better product quality, etc. etc. cannot be accepted as given when one examines the ITQ programs already instituted in various other nations.

A limited entry plan needs an effective part which will almost immediately begin to reduce the size of the fleet. An industry wide buy-back program paid for by the industry is the only efficient and fair way to go in the two regions where we fish

(possibly also as a blueprint for the Nation). We in industry created the problem. We should bear a hand in the solution and not expect the American people to bear the cost.

You should know that those of us who fish in the Pacific fishery area quite some time ago recognized the need to limit the size of the fleet. We have a limited entry plan in effect. In meetings with the Council we have informed them that we want to institute a program whereby small assessments of 2 ½ to 3 ½ percent of the gross value of all of our sales should be forwarded to a non-profit organization or corporation funded by the industry to pool money to begin to buy out limited entry permits from people who wish to retire from the industry. The vessel would then be retired from the fishery.

Management agency personnel and our Representatives in Washington should realize full well that nobody is going to want to sell out or retire without there being some reasonable way of selling their property. A self funded buy-back program would accomplish this.

Inherent with either an ITQ program or a limited entry plan without buy-back provisions is the problem of a ballooning of value beyond normal market place prices for these vessels and/or vessel permits. We do not think the American people or people in the industry should have to live with or pay for these artificial price escalations.

We would ask you to support the work of the North Pacific Fishery Management Council which is currently pursuing establishment of a limited entry plan. We would ask you to inform NMFS that it retreat from its current practice of being a protagonist and attempting to influence Council deliberations. NMFS should revert to the role described in the FCMA as managers and regulators of fishery management plans that have been recommended by the Council and approved by the Secretary of Commerce.

Thank you very much for you interest.

Sincerely yours,

R. Barry Fisher

R. Barry Fisher

cc: Senator Stevens
Senator Hatfield
Congressman Young
Congressman Livingston
Rich Lauber, Chair NPFMC
MTC Board

ALASKA OCEAN SEAFOOD

LIMITED PARTNERSHIP

September 14, 1995

Mr. Richard Lauber, Chairman
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

Re: Agenda Item C-3(c) - BSAI Pollock IFQ's

Dear Mr. Lauber:

I am writing on behalf of Alaska Ocean Seafood Limited Partnership, which owns the surimi factory trawler ALASKA OCEAN.

My partners and I have long advocated establishment of an IFQ system for the Alaska groundfish fisheries, and we are pleased that the Council has now initiated the process for establishing such a system with respect to pollock. While the proposal that the Council has before it for analysis raises many important issues, our remarks here are confined to the single issue that we view as most important - initial allocations.

As the Council undoubtedly recognizes, one of the most difficult factors in designing an IFQ program is devising initial allocation parameters that will survive legal scrutiny and political pressure. The problems arising from allocation formulations result from the tendency of those formulations to create winners and losers - for some recipients to receive "windfalls" at the expense of other participants. We believe that winner-and-loser issues can be greatly minimized in the pollock fishery by a simple concept, discussed below.

I. OUR PROPOSAL.

We urge the Council to include in its analysis, and indeed to identify as its preferred alternative, the following concept:

> NO HARVESTING VESSEL SHALL RECEIVED LESS THAN NINETY-FIVE PERCENT (95%) OF ITS PERCENTAGE OF THE HARVEST DURING THE PERIOD JANUARY 1, 1991 THROUGH JUNE 24, 1992.

2415 T Avenue • P.O. Box 190 • Anacortes, WA 98221
Phone: (206) 293-6759 • Fax: (206) 293-6232 • Telex: 883481

NO PROCESSING SECTOR SHALL RECEIVE LESS THAN NINETY-FIVE PERCENT (95%) OF ITS PERCENTAGE OF POLLOCK RECEIVED DURING THE PERIOD JANUARY 1, 1991 THROUGH JUNE 24, 1992.

The reasoning underlying this concept is quite simple. 1991 is the first year in which pollock was 100% harvested and processed by domestic operation. It is therefore the first year in which the Magnuson Act's authority to allocation resources among U.S. fishermen comes into play, and it should serve as the base year for beginning allocation calculation. June 24, 1992 is, of course, the date announced by the Council beyond which harvests would likely not be counted in any future allocation schemes. therefore, harvests beyond that date should be irrelevant to allocation calculations.

The appeal of this concept is also quite straightforward - it leaves those who were harvesting and processing the resource at the time the Council "froze" the industry exactly where they were. There simply are no winners and losers. Thus there are no windfalls. Nor is there any threat to the economic well-being of crew members and others who would be losers under some of the other formulations contained in the proposal. In other words, the parameters are fair.

The legal and equitable soundness of this proposal can readily be seen by comparing it with some of the other alternatives that the Council now has before it for analysis.

II. ALLOCATION FORMULAS BASED ON EARLY CATCH HISTORY CANNOT WITHSTAND LEGAL SCRUTINY.

The proposal before the Council contains a number of options that would base the initial quota share allocation on early catch history. For ease of understanding, these comments address only Option A, though they are equally applicable to the other "early history" options.

Option A would calculate initial allocations based on catch history beginning in 1984. At the outset, we know of no particular legal or historical significance to that year, and are puzzled as to why that particular year was chosen. More importantly, the results of Option A would be untenable, as can be seen by examining its likely effects on three groups of industry participants: early entrants who continue to own and fish with the same vessels; current owners of early entrant vessels; and later entrants such as ALASKA OCEAN.

During the period we are proposing for the allocation base, all three of these groups had an equal opportunity to use their energies, skills, and capital to develop a catch history. Likewise, during that period, all three groups had an equal opportunity to demonstrate presence in and dependence on the fishery. Yet, Option A would have startlingly different consequences for each group.

A. Early Entrants.

These participants entered an industry devoid of the characteristics that now give rise to the need for an IFQ program. The industry was undercapitalized and non-competitive. Many of these entrants were "joint venture" harvesters who came to the pollock fishery to avoid bankruptcy in the crab industry and who enjoyed the full encouragement and support of our federal, state, and local governments to eliminate foreign fishing in U.S. waters. Others were factory trawlers who accumulated tremendous catch histories by enjoying year-round access to all areas of the BSAI, and in some instances, by engaging in the low-yield, high-value practice of roe stripping. And regardless of how their early catch histories were achieved, they have had more years of good, non-competitive fishing, which has enabled them to recoup their capital investments. As a result, during our proposed allocation period, despite greatly heightened competition, they were nonetheless able to maintain viable operations and their personnel remained gainfully employed.

Were Option A to be adopted, these participants would enjoy an incredible windfall. Their catch histories from early years, histories which have no bearing on the composition of the industry when it was frozen by the Moratorium cut-off date, would be used to provide them with allocations far in excess of the catches upon which they and their employees are dependent. Moreover, these excessive allocations in all likelihood would encourage these participants to develop additional capacity to realize the benefits of the larger allocations.

Such results simply cannot withstand scrutiny under the National Standards of the Magnuson Act. For example, the results would violate the fair and equitable criterion of National Standard 4 by giving this group an unwarranted windfall. Similarly, Option A would run afoul of National Standard 4's prohibition against acquisition of excessive shares by providing this group with allocations greatly in excess of their current catches.

Option A would encounter similar problems if measured against National Standard 5. Contrary to the Standard's ban on economic allocation as the sole purpose of a conservation and management measure, Option A would provide economic benefits to this group which this group does not need; thus the Option would provide an economic allocation to a particular segment of the industry and would do so without any offsetting benefit. Further, and again contrary to National Standard 5, Option A would create incentives for excessive investment in additional capacity. For this same reason, Option A is inconsistent with National Standard 7 as well.

B. Recent Purchasers of Early Entrant Vessels.

Were Option A to be adopted, its effects on this group, and concomitant unacceptability, would be virtually identical to the early entrant group. The unacceptable results would be exacerbated, however, by the fact that these participants did not even achieve the catch histories upon which their allocations would be based. (In fact, some early entrant vessel owners who achieved the catch history sold these vessels to invest in later entry vessels.)

C. Later Entrants.

These participants brought to the industry capital investments which have not yet been recouped. They created additional job opportunities in the fishery itself as well as in support industries. As with the other groups, the 1991-1992 dates reflect this group's participation in and dependence on the fishery.

Were Option A to be adopted, this group would receive allocations considerably smaller than their present catch. Catch would be reallocated to the early-entry and recent-purchaser groups who are not dependent on that catch. As a result, this group would face under-utilized capacity and a severe reduction in employment opportunities. Many would find that their operations are no longer economically viable.

Again, such results are contrary to the National Standards. With respect to National Standard 4, fairness and equity would be lost. Early entrants would receive a windfall allocation at the expense of this group. Employees of this group would be discriminated against in favor of employees of early entrants who are already gainfully employed. Employees in industries such as shipyards that service later entrants would suffer job losses with no concomitant benefit to anyone.

Similarly, National Standard 5 would be violated because Option A would result in an unwarranted economic allocation: Option A would ignore the capital investments undertaken by later entrants and the ability of quota share systems to affect the worth of assets, while providing bonus shares to earlier entrants whose capital investments already have been recouped.

III. ALLOCATION SHARES BASED ON POST-CUT-OFF-DATE CATCHES SHOULD NOT BE CONSIDERED.

Several Options contained in the current proposal would base or measure allocations against catches achieved in 1993 or 1994. the Council should not consider those Options.[1]

The public has been on notice for several years that the Council looks unfavorably at catch histories accumulated after June 24, 1992. There is no reason for the Council to deviate from that position, and to do so would only serve to reward the capital stuffing that has occurred in the industry since the cut-off date.[2]

Moreover, consideration of these Options will signal the industry that the Council may well tolerate and reward further capital stuffing that occurs during the Council's implementation process, and impression bolstered by many of the Council's recent decisions with respect to the License Limitation Program.

Inevitably, there must be some cut-off date beyond which catch history will not be considered. Logically and equitably, that date is June 24, 1992.

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[1]We recognize that inclusion of these Options is motivated, at least in part, by a desire to address the Magnuson Act's requirement to consider "present participation." However, nothing in the Act or its history requires that "present" be defined as strictly synonymous with "current." The Council and NMFS have already recognized this fact by approving the halibut-sablefish ITQ program, where allocations were based on catch histories ending in 1990 for a program that was not implemented until 1994.

[2] The only existing constraint on fleet expansion is the Moratorium, which forbids new vessel entries and limits increases in the size of existing vessels. There are no existing limitations on increasing vessel horsepower or processing capacity. As a result, the delays in implementing an IFQ system have served to exacerbate the race for fish: shore side and at sea processors alike have made and continue to make substantial investments - capital stuffing - to increase processing capacity, all in a race to accumulate catch history.

IV. CONCLUSION.

The Council's decision to begin the process of implementing a pollock IFQ is a significant step. It's importance will be greatly enhanced if the Council immediately focuses its attention and analysis toward adoption of our initial allocation proposal.

Sincerely,

Jeff Hendricks
General Manager

ARNI THOMSON

U.S. Department of Transportation
United States Coast Guard

Commander
Seventeenth Coast Guard District

P. O. Box 25517
Juneau, AK 99802-5517
Phone: (907) 463-2235

16240
January 19, 1996

Mr. Donald A. McCaughran, Director
International Pacific Halibut Commission
P. O. Box 95009
Seattle, WA 98145-2009

Dear Mr. McCaughran,

Thank you for the opportunity to provide a report on this first year of Individual Fishing Quotas (IFQ). My staff has compiled statistics on safety issues and "at sea" law enforcement issues.

Search and Rescue (SAR) cases, directly related to the Halibut/Sablefish IFQ fishery, were less than SAR cases from previous "derby" years. Data are provided comparing 1992 - 1994 derby years to the 1995 IFQ season. Although this shows a trend to a safer fishery, we must caution against drawing conclusions from such a short period. The drop in cases, when correlated to statements we have gathered from fishermen during boardings indicate that fisherman have been choosing periods of good weather to fish. This seems to confirm that the IFQ system does provide a framework where each fisherman has the greatest possible control over safety issues, can consider market variables, the size of their vessel and abilities of crews based on forecast weather. We will continue to collect and monitor safety data during the 1996 IFQ season.

Our "at sea" enforcement of the IFQ regulations was viewed as standard. Statistics showing the number of sightings and boardings are attached. They show an expected distribution across geographic areas. As expected, the Gulf of Alaska saw the highest concentration of longliner activity. This is where we concentrated our patrol activity to maximize compliance boardings. In doing this we worked closely with the National Marine Fisheries Enforcement office in Juneau, AK. This involved exchanges of information and coordination at all levels of enforcement throughout Alaska. We will continue this effort during the 1996 IFQ season.

We look forward to our continued work with you and your staff. If you have any questions concerning data in the attachments please feel free to contact LCDR Walt Hunnings (907) 463-2235.

W. H. Anderson
By Direction

ARN, THOMPSON
C-SA

Problem 1 Harvesting Capacity in Excess of that required to harvest the available resource.

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

Problem 3 Preemption conflicts between gear types.

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

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

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

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

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

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.

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

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.

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

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

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