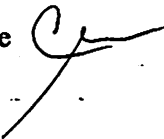


MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke   
Executive Director

DATE: April 8, 1996

SUBJECT: Improved Retention/Improved Utilization (IR/IU)

ESTIMATED TIME

3 HOURS

**ACTION REQUIRED**

Receive progress report on analysis, review report of the IR/IU Committee, and provide guidance as necessary to analysts.

**BACKGROUND**

In December 1995 the Council reviewed preliminary analyses on the IR/IU program and finalized the alternatives for formal analysis. That list of alternatives is included as Item C-5(a). The preliminary analyses identified several implementation issues, for both the retention and utilization aspects of the program, which required further development and resolution. To assist in addressing these implementation issues the Council appointed a Committee with representation of the major industry and public sectors involved. As discussed by the Council at the January 1996 meeting, the Council would review the Committee's findings and then provide any necessary redirection to the analysts, with the intent of having an analysis completed for review in June and a final decision in September.

This Committee spent a total of five days, over two separate meetings, accomplishing significant resolution of many of these complex issues. Their report is contained under Item C-5(b), and will be summarized by Committee Chair Joe Kyle. Lead analyst on the project, Dr. Lew Queirolo, will present some of his preliminary findings to the Council and identify areas where he would like further guidance. The Council should be made aware of two particular issues which will affect the depth and scope of the analysis.

The first issue concerns the availability of economic data. As part of the Committee process, an information collection process was initiated to gather industry input on capacity indicators, processing through-put limits, capital investment requirements, market responses, and technological responses. Unfortunately this initiative had to be canceled because we lack OMB clearance. The analysis will have to make certain assumptions and will be somewhat less empirical as a result.

The other issue is that of allowing limited processing by catcher vessels - originally discussed when the Council approved its License Limitation program (with catcher and catcher/processor license designations), the Council decided to consider this issue in the context of the IR/IU initiative. A separate discussion paper relative to this issue was prepared for the December 1995 meeting, but time constraints did not allow the Council to address the implementation issues raised, or to provide further guidance for the analysts. Therefore, this issue is not included

in the overall IR/IU analysis being prepared for the June 1996 meeting. However, it can be addressed subsequently, in a separate analysis, and still be resolved prior to 1998 implementation of the License Limitation program.

For reference, Item C-5(c) contains the preliminary analyses prepared by NMFS for the December 1995 meeting. Item C-5(d) contains correspondence received on this issue. Item C-5(e) summarizes recent proposed changes to the Magnuson Act that concern bycatch and waste reduction.

## EXECUTIVE SUMMARY

### **IMPROVED RETENTION/UTILIZATION COMMITTEE REPORT** (full report is attached)

The primary purpose of this Committee was to work through the implementational issues which have been identified for the proposed alternatives, to identify any additional implementational issues which need to be considered, and to provide information and industry perspective to the analysts working on this project. Pervasive throughout our meetings was a recognition by Committee members of the necessity of addressing the waste and discard issue, and a hope that this can be accomplished in a way that the industry can live with. The Committee believes that this initiative, and the attendant analyses, need to be considered in a comprehensive manner, keeping all other major Council initiatives and regulations in mind as we develop the specifics of the IR/IU program. Examples of considerations include observer program requirements and VIP program.

For specific implementation issues, the following recommendations are made:

#### Bleeding or dumping of codends

The consensus of the Committee is that all 'dumping' or 'bleeding' of codends in IR/IU regulated fisheries should be prohibited. If bleeding is necessary to avoid placing a vessel in peril, due to safety or stability considerations, each occurrence must be logged in the vessel's permanent record, along with the extenuating circumstances necessitating the event. An estimate of the quantity and species composition of the groundfish should also be provided. Hook shaking and outright dumping of codends would be prohibited. No similar type of implementation issue can be envisioned for pot gear fisheries at this time.

#### Retention Options - target vs species based

The firm consensus of the Committee is that Retention Option 2 is the way to go, that the target based retention options should be eliminated from further consideration, and that the analysis should proceed with only Retention Option 2 - the 4 species would be retained regardless of target fishery. The Committee believes that the information provided to date allows for this decision to be made up front, prior to completion of the formal analyses of the overall program. In fact, making this decision up front will allow for timely completion of a more thorough analysis of the overall program.

#### Monitoring and Enforcement

The consensus of the Committee is that we have to accept the fact that only a base level enforcement program is likely to be doable, so that's what we will have to live with. Under this scenario, current observer requirements will be what is used for purposes of this program, and the Committee recommends that any additional observer requirements be analyzed not in the context of this program alone, but in the context of all other fisheries management programs and regulations. This is essentially the status quo in terms of observer coverage. Enforcement and monitoring would consist

of back-calculated PRRs and other secondary data for estimating catch and discards. This implies largely voluntary compliance, particularly for unobserved vessels, though this is not really any different from other regulations.

### Interaction with Regulatory Discards

The Committee concurred with the conclusion that Directed Fishing Standards (DFS) shall always supersede "retention" requirements. When any of these four species is designated to be in a "*bycatch only*" status, as defined under DFS, then all catches of the designated species must be retained up to specified bycatch amounts. The balance of the catch of species so designated must be discarded in compliance with DFS requirements. When any of these four species is in "*prohibited*" status, under DFS, all catches of that (those) species must be discarded. Therefore, any apparent conflict between IR requirements to "retain" and DFS requirements to "discard" will be resolved by requiring retention to the maximum extent consistent with DFS discard requirements.

### Contaminated or Damaged Fish

The Committee believes that an outright prohibition on discards, whether damaged or contaminated, is the only way to proceed. With respect to relatively minor "leakage", such as the occasional fish mangled by processing machinery, the apparent consensus was that, "no accounting was practical, nor needed". For larger losses, for example, if a hydraulic line were to break, spraying a load of fish with fluid, these fish might be discarded (perhaps subject to EPA or DEQ limits, due to the oiling). In such an instance, the discard event would have to be logged in the vessel's logbook, along with the quantity, species composition, and extenuating circumstances.

### Defining Utilization

This was the single major issue with which the Committee grappled. Central to the discussions were the issues of: (1) where fish meal fits into the overall definition of utilization, (2) the appropriateness and benefits of requiring specific product forms for human consumption, (3) the ability of individual vessels/plants to conform to retention and utilization requirements, (4) ultimate disposition of fish and fish products, and (5) methods for determining compliance with whatever option is eventually chosen by the Council.

If vessels are strictly prohibited from discarding P.cod, pollock, rock sole, or yellowfin sole, then it follows logically that processors (e.g., motherships, shoreside plants) will be required to accept any deliveries of these four species offered to them. If this is not the case, then rejection of a delivery would be effectively "discarding". There has to be at least a "primary" point of delivery opportunity, otherwise the IR/IU proposal is potentially meaningless.

The Committee was divided on the fundamental policy question of whether utilization should be defined in terms of human consumption (Utilization Option 2), whether there should be limits on meal production (Option 3), or whether each operation should be allowed to define utilization in their own terms (Option 1). The detailed report contains a list of several points which the Committee feels need to be considered in arriving at that decision. The Committee spent much of its time developing

approaches to deal with whichever option is chosen by the Council. The following paragraphs summarize these approaches:

Relevant to Option 1, a basic 15% PRR would be applied to determine compliance. This number was chosen because it represents the PRR for pollock deep-skin fillets, and is one of the lowest of all primary product forms. Under Option 3, the same 15% could be applied to all product other than the allowable meal percentage, though the Committee's discussions assumed that this Option would simply place some limit on the amount of meal, and not mandate the 15% PRR for the remainder. For Option 2, which necessitates an explicit list of acceptable products, the primary product list from Dr. Queirolo's draft analysis would be used as the starting point for acceptable products. The associated (in regulation) PRRs for each product form would be used to backcast compliance for both the retention and utilization aspects of this program.

Further, the Committee discussed the issue of what must be done with that product once a vessel has satisfied the utilization requirement. For example, we cannot force someone to buy all of these products, nor can we force the product to be stored indefinitely. Enforcement representatives advised the Committee that tracking the utilization requirement would likely end at the point of the verification of utilization- they cannot track it all the way into households, for example. The recommendation of the Committee is that we go so far as to say that the product must be either transferred to another vessel for transshipment out of the EEZ, or delivered on-shore.

#### Potential Phase-in for Flatfish

Although the Council has identified four species for inclusion in this program, the Committee discussed at length some potential implementation problems for the flatfish species. While there are generic implementation problems which cut across all four species, there are additional, specific problems associated with the flatfish species. After lengthy discussions, which included enforcement considerations, the Committee recommends to the Council that we move as quickly as is feasible with Improved Retention/Utilization, that the Committee has identified factors which may impede effective implementation for some species (particularly flatfish), and we recommend that the Council weigh these factors in deciding how fast and fully to proceed with each of the four species in question. One approach could include a phase-in for the flatfish species over a period of 2-5 years, while implementation of 100% retention moves forward for pollock and cod. An alternate approach would be to simply delay implementation of the flatfish portion for some period of time, though the Committee did not necessarily endorse this approach.

#### Limited Processing Allowance for Catcher Vessels

Some Committee members feel that this issue should be dealt with as part of this package, not as a follow-up analysis, though the consensus of the Committee is that it could be dealt with separately, and should not hold up the basic IR/IU program implementation. As a Committee, we feel that the only really viable option is Option 3, which allows a very specific amount of processing.

### Additional Issues Identified

One of the other primary objectives of the Committee was to identify any additional implementation concerns, or issues, which should be addressed in the analyses. These are detailed in the final section of the full report. Some of the major issues are summarized here:

1. Interaction with the moratorium/License limitation program, particularly regarding the ability to upgrade/expand vessel to accommodate meal plants or other processing/storage requirements. The analysts indicate that the upgrade provisions of the moratorium and License Limitation program will be assumed to be in place for purposes of evaluating this program.
2. Desire to look at underlying philosophy of DAP development - the concern here is that this program could encourage shipment of fish overseas, discard overseas, reduction in value added processing, and an employment transfer overseas.
3. Impacts to VIP program - VIP implications should be examined comprehensively; i.e., in terms of the IR/IU program and other management actions.
4. Potential unintended consequence related to PSC management - PSC monitoring is by target fishery, while this program will result in targets changing relative to what otherwise would have occurred (they are now forced to retain everything, thereby changing their target designation). The Committee feels that this is a significant issue, and requests that the NMFS in-season management division help the analysts in addressing this issue. We need some idea of how this issue might play out, and how we might adjust the program to accommodate this concern.
5. The issue of whether onshore processors are under federal jurisdiction in the context of IR/IU regulations was raised by the Committee. The Committee assumes that the State of Alaska will implement mirror regulations to accomplish the intent of this program.
6. Potential impacts to the GOA fisheries by making fishing in the BSAI relatively more expensive. It is possible that this program, if applied to only the BSAI, could result in substantial impacts to the GOA fisheries.
7. In terms of pollock fisheries, the most impacted sector is likely to be smaller (200') fillet CPs without meal plants. Generally speaking, the smaller H&G CPs will be the most adversely affected industry sector under this program - they do not have the capacity to meal their fish, and in the case of rock sole for example, they have no markets for small male rock sole. The relative disadvantage would be exacerbated if others are allowed to simply meal their additional fish.

## **NPFMC's IMPROVED RETENTION/UTILIZATION COMMITTEE**

Detailed Report to the Council  
February 27-28 and March 25-27, 1996

The Committee met twice since the January 1996 Council meeting and this report covers the findings across both meetings - major points of discussion and Committee recommendation are found in **bold print**; the following persons were in attendance at one or both of the meetings:

### Committee Members Present:

Joe Kyle, Chairman	Chris Blackburn	Paul MacGregor	Arni Thompson
John Henderschedt	Lisa Polito	Bob Mikol	Steve Hughes
Thorn Smith	John Iani	Vince Curry	

### Staff/Agency Present:

Clarence Pautzke	Chris Oliver	Lew Queirolo	Jay Ginter
Dave Colpo	Steve Meyer	Bill Karp	Bill Anderson
Pat Livingston	Earl Krygier	Seth Macinko	Connie Sathre

### Other Attendees:

Craig Cross	Brent Paine	Pete Nicklason	Todd Clark
Jim McManus	Mike Szymanski	Jan Jacobs	Mark Kandianis
John Gauvin	Bill Atkinson	Peter Richardson	John Bruce
Laure Jansen	Tim Meintz	Sewall Maddocks	Ron Rogness
Denise Fredette	Teresa Kandianis	Janet Smoker	Don Iverson
Rob Gudmundson	Christian Asay		

## INTRODUCTION

Chairman Joe Kyle called the meeting to order at 9:00 am on February 27, starting with a discussion of the purpose and scope of this Committee meeting. Council Executive Director Clarence Pautzke provided an overview for the Committee including the history of the IR/IU issue, the list of current alternatives being evaluated, and the primary task for the Committee - to work through the implementational issues which have been identified for the proposed alternatives, to identify any additional implementational issues which need to be considered, and to provide information and industry perspective to the analysts working on this project.

Committee members each provided their general thoughts on this issue as a prelude to detailed discussions on specific topics. **Pervasive throughout our meetings was a recognition by Committee members of the necessity of addressing the waste and discard issue, and a hope that this can be accomplished in a way that the industry can live with. The Committee believes that this initiative, and the attendant analyses, need to be considered in a comprehensive manner,**

**keeping all other major Council initiatives and regulations in mind as we develop the specifics of the IR/IU program. Examples of considerations include observer program requirements and VIP program.**

Dr. Lew Queirolo then provided the Committee with an overview of the implementation issues identified to date, and potential options for dealing with those implementation issues. These issues fell generally into two categories, retention and utilization issues, with some overlap between the two. The Committee discussed each of these in detail - a summary of the major points of discussion, and Committee recommendations on each issue follows. In general, monitoring and enforcement were preeminent issues underlying the entire program, and therefore seemed to dictate some options over others in our discussions.

### **IMPLEMENTATION ISSUES - RETENTION ASPECT**

#### **Bleeding of codends/shaking of hooks**

Bleeding of codends occurs primarily for reasons of (1) exceeding 'intended catch', or exceeding the hold capacity of the vessel, (2) the net is simply too heavy to be raised to the deck, or (3) vessel safety/stability. It was noted that bleeding of codends is partially a function of the race for fish, and usually occurs only when fishing is very good. It is primarily a concern for smaller catcher vessels, and only during pollock fishing, so overall it is not a significant source of total discards; however, the vessels which are more prone to bleed codends have limited observer coverage currently. The Committee noted that outright dumping can, at times, have advantages - for example, if a test tow comes up with a large number of halibut or other PSC species, it might be prudent to dump the entire bag, thereby minimizing PSC mortality. However, the Committee felt that an allowance for such situations would create an unacceptable loophole.

**The consensus of the Committee is that all 'dumping' or 'bleeding' of codends in IR/IU regulated fisheries should be prohibited. If bleeding is necessary to avoid placing a vessel in peril, due to safety or stability consideration, each occurrence should be logged in the vessel's permanent record, along with the extenuating circumstances necessitating the event. An estimate of the quantity and species composition of the groundfish should also be provided. It may not always be clear that an emergency exists. It may be hard to determine when there is or is not a vessel safety issue. Only the skipper, not an observer, may be in a position to make this call. A regulation prohibiting the practice would provide some incentive (that is not currently there) to not overfill a net, or to not put that last tow in the water to begin with. Enforcement of a bleeding prohibition will be tough -it is basically an honor system. An investigation will be mounted by NMFS Enforcement if and when it appears appropriate, in response to evidence that indicates there was no real safety issue.**

Hook shaking and outright dumping of codends would be prohibited. No similar type of implementation issue can be envisioned for pot gear fisheries at this time.

#### **Defining participation in IR/IU fisheries**



Because some of the main alternatives stipulate retention only while engaged in target fishing for a particular species, this issue is of critical importance; i.e., how does NMFS determine whether and when a vessel is subject to the retention requirement, and for what species? Dr. Queirolo explained an assumed protocol which would be used for defining targets (see Attachment 1). This is a bit different than is done currently, and would ultimately require a regulation change. It was pointed out that, because some options do not apply to all species, these options could increase discards of non-subject species in an attempt to 'get the right catch composition'; i.e., strategic behavior by the fleet has to be considered. However, because we're dealing with the 'big 4', in terms of species covered by the program, it may be difficult to strategically monkey with the system. NMFS Enforcement and Coast Guard representatives advised the Committee that Retention Option 2 (species as opposed to target based - all four species must be retained wherever they occur) makes the most sense, and is by far the most efficient and least costly option to monitor and enforce (as well as to analyze).

**The firm consensus of the Committee is that Retention Option 2 is the way to go, that the target based retention options should be eliminated from further consideration, and that the analysis should proceed with only Retention Option 2 - the 4 species would be retained regardless of target fishery.**

The Committee believes that the information provided to date allows for this decision to be made up front, prior to completion of the formal analyses of the overall program. In fact, making this decision up front will allow for timely completion of a more thorough analysis of the overall program. The question arose whether IFQ fisheries for halibut and sablefish would be included, noting that there is already a retention mandate for cod and rockfish in those fisheries. The assumption of the Committee is that this program would apply to all BSAI groundfish fisheries, including sablefish, and BSAI halibut IFQ fisheries.

### Monitoring and enforcement

The Committee recognizes that this may be the most critical issue to deal with in making this program work. For the Committee (and likely for the Council) the issue largely boils down to the question "Are we willing to live with a simple enforcement system which catches only egregious violators, or, do we want to strive for perfection?" Intrinsic to this question is who is going to monitor and enforce the provisions, at what cost, and who will pay those costs. NMFS current policy is that observers will not be tasked with monitoring compliance of this program, and we may need to assume that separate compliance monitors will be needed for purposes of this program. It may be that some form of 'hybrid' observer/monitor position can be created to accomplish basic observer program objectives as well as compliance with the IR/IU program. Whether they are separate monitors or cross-trained observers, the number of positions and attendant costs will increase.

**The consensus of the Committee is that we have to accept the fact that only a base level enforcement program is likely to be doable, so that's what we will have to live with. Under this scenario, current observer requirements will be what are used for purposes of this program, and the Committee recommends that any additional observer requirements be analyzed not in the context of this program alone, but in the context of all other fisheries management**

## programs and regulations.

This is essentially the status quo in terms of observer coverage. Enforcement and monitoring would consist of back-calculated PRRs and other secondary data for estimating catch and discards. This implies largely voluntary compliance, particularly for unobserved vessels, though this is not really any different from other regulations. Some concern is expressed that this might be creating a 'double standard'; i.e., those with greater observer coverage may be held to a higher standard. At this end of the monitoring spectrum, retention compliance would be monitored, using current practices and resources, primarily through the use of "secondary" data sources. That is, when a vessel is boarded logbooks will be inspected and compared to catch (and product) onboard, or reported as transferred. In the case of product, by utilizing standard NMFS PRRs, a round weight equivalent catch estimate will be derived. If the several catch estimates are in agreement, "retention" compliance is assumed. Additionally, NMFS will screen observer catch estimate and vessel catch reports to identify "possible" violations of the retention requirement for further investigation. (See also discussion of Compliance with IU.)

Notwithstanding the discussion above, the Committee requests that the analyses continue to examine a range of potential enforcement plans for this program. In this case the analysis would examine the following ends of the spectrum: (1) the basic plan relying on PRRs that catches the 'egregious' violators, and (2) a 'cadillac' plan which essentially doubles the current coverage levels (currently at 30% and 100%). The latter plan should not be identified as a Committee recommendation, and may not be feasible, but is put forward in order to provide an upper bound reference point. The Committee also discussed the possibility of an iron-clad program with at-sea monitors that provide 100% coverage (of all hauls and sets) for all vessels (or increased observer coverage up to that level). Such a program would obviously constitute the 'upper bound' in terms of the possible range of monitoring programs; however, there was a recognition by the Committee that this extreme is not likely to be a viable alternative at this time.

There was also discussion of how the additional coverage would/should be distributed. For example, it may be that there are certain fisheries which need the additional coverage more than, say, mid-water pollock fisheries. The Committee recognized that this may be a follow-up issue for future discussions, but did not attempt to resolve the distribution on coverage issue at this time.

### Conflicts with existing regulatory discard rules

Obvious contradictions will arise between current regulations and those imposed to implement the IR/IU program, such as a Catch 22 situation where you may be required to discard and retain at the same time. **The Committee concurred with the conclusion that Directed Fishing Standards (DFS) shall always supersede "retention" requirements.** Specifically, whenever fishing for P.cod, pollock, rock sole, or yellowfin sole is "open", all catches of any of these four species must be retained. When any of these four species is designated to be in a "bycatch only" status, as defined under DFS, then all catches of the designated species must be retained up to specified bycatch amounts. The balance of the catch of species so designated must be discarded in compliance with DFS requirements. When any of these four species is in "prohibited" status, under DFS, all catches of that (those) species must be discarded. Therefore, any apparent conflict between IR requirements

to "retain" and DFS requirements to "discard" will be resolved by requiring retention to the maximum extent consistent with DFS discard requirements. The Committee notes that this situation somewhat reduces the potential 'savings' from this program.

#### Dealing with Contaminated or Damaged fish

There will be instances where fish are spoiled or otherwise contaminated, or damaged beyond salvage, and there needs to be some allowance to discard in these situations. The magnitude of this type of discard is expected to be very low, and may only constitute 'noise in the system'; however, there needs to be an established mechanism to address the issue. **The Committee believes that an outright prohibition on discards, whether damaged or contaminated, is the only way to proceed.** With respect to relatively minor "leakage", such as the occasional fish mangled by processing machinery, the apparent consensus was that, "no accounting was practical, nor needed". For larger losses, for example, if a hydraulic line were to break, spraying a load of fish with fluid, these fish might be discarded (perhaps subject to EPA or DEQ limits, due to the oiling). In such an instance, the discard event would have to be logged in the vessel's logbook, along with the quantity, species composition, and extenuating circumstances.

#### IMPLEMENTATION ISSUES - UTILIZATION ASPECT

A general discussion of the utilization aspect of this program preceded discussions of the specific implementational issues and included the following themes: (1) It was clarified by Committee that offal (frames, heads, guts, etc) is not considered discards, and does not have to be further processed or retained. The retention/utilization initiative is directed at whole fish currently being entirely discarded. (2) Actual facts and realities of the fisheries should constitute the frame of reference for developing the specifics of this program - not the plethora of mis-information currently circulating in the press and other venues. (3) In terms of defining utilization, rather than mandate specific product forms, or human consumptive forms, it may be better to allow each operation some flexibility to respond to the general requirements in the best way for that operation (there was not consensus on this issue - see further discussion under 'Defining Utilization'). (4) Depending on the specifics of the retention/utilization requirements, the program could work to the disadvantage of smaller operations (and the advantage of large operators) and not be very effective in actually slowing down the fisheries.

#### Need for Additional Processing capacity

Many vessels do not currently 'process', based on definitions of processing, but if required to do so would invoke load line requirements, and the question of whether processing capacity could be added (noting that delivery for onshore processing is an option under this program). In either case, additional hold capacity could be required, bringing up some of the same concerns. These concerns are also valid for existing processing vessels. Moratorium/License Limitation upgrade restrictions are also a concern, given that those programs may limit the ability of a vessel to make the necessary modifications to comply with the IR/IU requirements.

The addition of a meal plant is a primary issue, but there are other alternatives to meal, such as whole

freezing, other processing, etc., which raise similar concerns. In all cases, whether meal or other product form is produced, the issue of additional storage is considered to be a major problem for many vessels. In connection with this capacity issue (and related to jurisdiction over onshore processors) arises another issue which has to be considered. Specifically, if vessels are strictly prohibited from discarding P.cod, pollock, rock sole, or yellowfin sole, then it follows logically that **processors (e.g., motherships, shoreside plants) will be required to accept any deliveries of these four species offered to them.** This was discussed and recognized by the Committee, though concern was expressed that we could not mandate payment by the processor for that fish. If this is not the case, then rejection of a delivery would be effectively "discarding". There has to be at least a "primary" point of delivery opportunity, otherwise the IR/TU proposal is potentially meaningless.

### DEFINING UTILIZATION

The Committee grappled with the fundamental issue of defining 'utilization', and related to that concept, the definition of 'suitable for human consumption'. For example, is utilization based on some level of processing, some specific product form, and does it also imply some final disposition such as delivery or sale? **The Committee was divided on the fundamental policy question of whether utilization should be defined in terms of human consumption (Utilization Option 2), whether there should be limits on meal production (Option 3), or whether each operation should be allowed to define utilization in their own terms (Option 1).** Fundamental to this discussion is the issue of fish meal (and bait), and whether utilization Options 2 and 3 (which either mandate a minimum for human consumption or limit the amount of meal produced) should seriously be pursued any further. Currently, everything other than meal or bait is regarded as 'for human consumption'. It is difficult to predict what will be produced in the future by individual operations (its a moving target) - some members argued that we should leave it at some commercial use, which would allow for meal and/or other products. On the other hand, the issue in the press is meals, not meal - therefore we should adopt human consumption standards. There was no agreement by the Committee on this critical issue, but a recognition that the analysis should go forward with all of the options at this time. As such, the Committee spent their time developing approaches which would work under either of the options, and identifying the pros and cons of either option.

#### Points for consideration

The following points were made by Committee members, relative to the issue of defining human consumption:

1. If you do not mandate human product forms, then the playing field is uneven; i.e., some small operations cannot make fish meal, and would be forced to make human consumptive products, while others can continue to simply make fish meal (for these vessels, discarding is the equivalent of making meal). This gets back to the issue of generally disadvantaging small vessels, and reallocating to large offshore vessels or to vessels which deliver onshore (not just small CPs, but catcher vessels as well may not have anyone willing to take everything they bring in). So, those with access to meal plants win, but at a loss of value added. These vessels could become catcher vessels, but there are not necessarily buyers for them, not to mention the radical business/economic changes this would impose to those vessels.

2. The State of Alaska already has a 'policy', if not a regulation, relative to the roe-stripping amendment which says we must "maximize" the human consumptive products from pollock. This statute allows for meal production, but also differentiates between human consumptive forms and fish meal.
3. Simply allowing it all to go to meal may not reduce the pace of the fishery, but will disadvantage many of the smaller Catcher Processors, particularly H&G vessels.
4. Mandating specific product forms would inhibit development of new and additional uses.
5. If we do not mandate human consumptive forms, meal output is self-regulating for the onshore sector. If we do, then we would be regulating that amount.
6. Requiring and specifying human consumptive form does not guarantee it will be sold and ultimately used as such.
7. If specific product forms are mandated, small catcher vessels are also disadvantaged in the sense that they will be required to sort species in a way that they currently do not (this is related to the overall flexibility issue as well).
8. Other jurisdictions may have to be considered in terms of regulating product forms by fishermen for sale. FDA does apply now in the form of seafood inspectors, and stricter rules apply for domestic markets than for foreign markets. However, this is really inspecting for contamination, not for specific product forms. There is a list of products for export purposes (cod stomachs was recently added to this list). Differences in foreign and domestic may be important; for example, fish meal is used for human consumption in some countries. Further, the guidelines and regulations for processing are vastly different for fish meal, and on various grades of meal, depending on whether it is for human consumption or not.
9. There is an argument that meal is indirectly for human consumption, in that it goes into aquaculture operations, for example. Pet food may be another option to consider.
10. One of the primary reasons the Council has embarked on this initiative is to force operations to do something other than what is purely economical - this tends to support the idea of dictating product forms.

The remainder of this section describes a mechanism by which the utilization standard would be 'enforced'. The Committee believes that this approach will work for any of the Options - 1, 2, or 3. Regardless of the amount which might be allowed to go to fish meal, the concept of utilization still needs to be defined relative to the remaining, non-meal (or non-bait) product. For example, could a vessel simply freeze fish in a block (a legal form of processing) and then throw it over the side? The Committee believes this type of activity would be contrary to the intent and spirit of the program and has to be prohibited. The Committee originally discussed the idea of applying a 15% PRR, for each of the subject species, but across all product forms, to determine whether an operation had satisfied the utilization aspect of this program. However, after further discussion, and in order to better

accommodate the Options which specify acceptable product forms, the Committee recommends the following:

**Relevant to Option 1, the basic 15% PRR would be applied to determine compliance. Under Option 3, the same 15% could be applied to all product other than the allowable meal percentage, though the Committee's discussions assumed that this Option would simply place some limit on the amount of meal, and not mandate the 15% PRR for the remainder. For Option 2, which necessitates an explicit list of acceptable products, the primary product list from Dr. Queirolo's draft analysis would be used as the starting point for acceptable products. The associated (in regulation) PRRs for each product form would be used to backcast compliance for both the retention and utilization aspects of this program.**

The following simplified example may help illustrate the concept:

100 mt total of fish brought on board, with 4 associated primary products and their PRRs:

50 mt	H&G	@	50%	=	25 mt
25 mt	filets	@	20%	=	5 mt
10 mt	mince	@	25%	=	2.5 mt
<u>15 mt</u>	round	@	100%	=	<u>15 mt</u>
100 mt					49.5 mt

Monitoring of compliance for both retention and utilization can be accomplished via the numbers above. Two aspects of the utilization monitoring and enforcement issue were discussed at length by the group. The first involved the procedures surrounding at-sea boardings or plant inspections. In the case of an enforcement boarding, round weights reported in the vessel/plant log would be compared to the round weight equivalent catch estimates obtained by boarding officers through the "back casting" from primary product weights using standardized PRRs. If the two sources of catch estimates for the species of concern were within acceptable error limits, retention compliance would be confirmed. Given that 'retention' compliance, compliance with utilization requirements would be assessed as follows: the sum of all primary product forms, by species, is compared to the estimated total round weight of catch (either from logbook or 'retention' backcast) using the authorized PRRs for each primary product form. If the product weight exceeds the combined percentage of estimated round weight catch, 'utilization' compliance is assumed (15% PRR overall for Option 1). Under Option 2, the specific PRR for each primary product form would have to be satisfied.

The second mechanism for monitoring IU compliance would rest upon the use of secondary data. NMFS Weekly Product Reports, by processor, would be evaluated, using standardized PRRs, to derive round weight catch estimates for the species of concern. It has been proposed that these catch estimates would be compared to the equivalent NMFS Blend estimates for each processor. If deviations, beyond some expected level, appear between the two estimates, NMFS enforcement would undertake an investigation to assess the reason for the inconsistency, and take any appropriate administrative or legal action.

One concern with the use of this indirect method is that roughly half of the catch estimates in the

NMFS Blend files are composed of data provided by the processor, itself. Therefore, reliance on the Blend to reveal utilization inconsistencies may be unreliable, since presumably a processor would not knowingly report to NMFS substantially different estimates of catch and production, given that the two estimates would inevitably be the basis for monitoring comparisons. Therefore, if this secondary monitoring procedure is to be employed, it will be necessary to employ the "observer catch estimate", in place of the Blend estimate, whenever IU monitoring is done. The obvious shortcoming of this requirement is that, not all operations required to adhere to IR/IU standards have observer coverage. Under the Committee's 'cadillac' monitoring proposal, this would be somewhat less of a problem than under the status quo, since the former calls for '200%' on all vessels currently required to have 100% coverage, and 60% coverage on all vessels which currently have 30% coverage. Still, all boats under 60' remain unobserved (and thus unmonitorable via secondary data) and vessels over 60' but 125' or less are unobserved (and thus unmonitored) for 40% of the time. The working group (and the Council) may wish to give this issue additional thought.

Further, the Committee discussed the issue of what must be done with that product once a vessel has satisfied the utilization requirement. For example, we cannot force someone to buy all of these products, nor can we force the product to be stored indefinitely. Enforcement representatives advised the Committee that tracking the utilization requirement would likely end at the point of the verification of utilization- they cannot track it all the way into households, for example. **The recommendation of the Committee is that we go so far as to say that the product must be either transferred to another vessel for transshipment out of the EEZ, or delivered on-shore.**

#### POTENTIAL PHASE-IN FOR FLATFISH SPECIES

Although the Council has identified four species for inclusion in this program, the Committee discussed at length some potential implementation problems for the flatfish species. For example, while pollock and cod retention has no insurmountable obstacles, the flatfish fleet gets a 'double whammy' - they have to keep all their pollock and cod, and all their previously discarded flatfish. A phase-in period for flatfish, where something less than 100% retention is required, may make more sense, even with the imperfect enforcement considerations. While there are generic implementation problems which cut across all four species, there are additional, specific problems associated with the flatfish species. As discussed by the Committee, a phase-in for flatfish would mean only a phase-in for retention of flatfish - they would still be required to retain pollock and cod for example. Enforcement representatives reiterated their earlier concerns with a phase-in approach - i.e., the ability to tell whether they have met whatever retention percentage is required. With an outright ban on discarding, it is much easier to tell if someone has violated the regulations.

Because a large part of enforcement will be based on observations (from observers, crew, other vessels, flyovers, etc.) anything less than 100% will reduce the enforceability of this program. Counter to this point is the fact that many vessels will be unobserved anyway, the program will likely only catch egregious violators, and a reduced level of enforceability for flatfish fisheries may not be an unacceptable situation. It is also pointed out that flatfish, unlike pollock and cod, are not fully utilized species at the current time, and that there are limited markets available. Finally, some of these flatfish species could be returned to the water alive. All of this discussion resulted in the following recommendation from the Committee:

**The Committee recommends to the Council that we move as quickly as is feasible with Improved Retention/Utilization, that the Committee has identified factors which may impede effective implementation for some species (particularly flatfish), and we recommend that the Council weigh these factors in deciding how fast and fully to proceed with each of the four species in question. One approach could include a phase-in for the flatfish species over a period of 2-5 years, while implementation of 100% retention moves forward for pollock and cod.**

An alternate approach would be to simply delay implementation of the flatfish portion for some period of time, though the Committee did not necessarily endorse this approach.

### Limited Processing Allowance for Catcher Vessels

When the Council approved the License Limitation program they imposed license designations of 'catcher vessel' and 'catcher/processor vessel', based on activities in 1994 and 1995. They further requested that the issue of allowing some amount of processing by catcher vessels be considered in the context of the IR/IU proposal. A preliminary examination of issues was prepared by NMFS for the Council's December 1995 meeting, but was not addressed by the Council. Because the analysts need direction on several policy aspects, the Committee was advised by the analysts that the issue of allowing limited processing by catcher vessels would not be dealt with in the current analysis, but would have to be dealt with in a subsequent analysis. Council staff advised that, under this scenario, the issue could be dealt with in time for 1998 implementation, in conjunction with the License Limitation program.

However, some Committee members feel that this issue should be dealt with as part of this package, not as a follow-up analysis, though the consensus of the Committee is that it could be dealt with separately, and should not hold up the basic IR/IU program implementation. As a Committee, we feel that the only really viable option was Option 3, which allows a very specific amount of processing.

### ADDITIONAL CONCERNS IDENTIFIED BY COMMITTEE

One of the other primary objectives of the Committee was to identify any additional implementation concerns, or issues, which should be addressed in the analyses. The following is a list of those items:

1. Interaction with the moratorium/License limitation program, particularly regarding the ability to upgrade/expand vessel to accommodate meal plants or other processing/storage requirements. It may be that some vessels will need to undergo modification in order to comply with the provisions of Improved retention and utilization. The analysts indicate that the upgrade provisions of the moratorium and License Limitation program will be assumed to be in place for purposes of evaluating this program.
2. Desire to look at DAP development and how the underlying philosophy relates to the current issue, particularly the freezing of fish blocks and shipping to Korea for processing (and



subsequent discard outside the U.S.). The concern here is that this program could encourage shipment of fish overseas, discard overseas, reduction in value added processing, and an employment transfer overseas.

3. Impacts to VIP program if one fleet response is to use larger mesh; related to this is NMFS' ability to implement the revised VIP standards currently being considered - that is based on retained catch. VIP implications should be examined comprehensively; i.e., in terms of the IR/IU program and other management actions.
4. Somewhat analogous to the VIP issue, is a potential unintended consequence related to PSC management. PSC monitoring is by target fishery, while this program will result in targets changing relative to what otherwise would have occurred (they are now forced to retain everything, thereby changing their target designation). **The Committee feels that this is a significant issue, and requests that the NMFS in-season management division help the analysts in addressing this issue. We need some idea of how this issue might play out, and how we might adjust the program to accommodate this concern.**
5. The issue of whether onshore processors are under federal jurisdiction in the context of IR/IU regulations was raised by the Committee. A letter was sent to NOAA-GC on this issue, and the NOAA-GC representative at this meeting reaffirmed the earlier finding that onshore processors would have to be regulated by the State of Alaska, perhaps through mirror regulations.
6. Potential impacts to the GOA fisheries by making fishing in the BSAI relatively more expensive. In a related discussion, the Committee notes that boats that fish in the BSAI and deliver to the GOA would still be required to conform to the IR/IU regulations - it is assumed these regulations would apply to fish caught in the BSAI. It is possible that this program, if applied to only the BSAI, could result in substantial impacts to the GOA fisheries.
7. The Committee notes that some sectors may not be fully represented on the Committee, particularly the 'pocket freezer trawlers' under 125'. Some industry members from that sector were in attendance at this meeting and will continue to be notified of future meetings and developments.
8. In terms of pollock fisheries, the most impacted sector is likely to be smaller (200') fillet CPs without meal plants. Generally speaking, the smaller H&G CPs will be the most adversely affected industry sector under this program - they do not have the capacity to meal their fish, and in the case of rock sole for example, they have no markets for small male rock sole. The relative disadvantage would be exacerbated if others are allowed to simply meal their additional fish. Retaining pollock or cod in a flatfish fishery, for example, will also change the target fishery designation with potentially significant PSC implications as discussed above.
9. The Committee discussed the legalities of dictating which product forms can, or must, be produced by a fishing/processing operation. No resolution of this question was made, but the Committee wishes for this issue to be noted.

10. Because an information gathering exercise by the analysts was cancelled due to OMB concerns, the Committee discussed the implications of this lack of data to the analysis. The Committee recognizes that, without this detailed information which includes costs of operations and capacity projections for each sector, the analysis will have to make certain assumptions and be more of a qualitative treatment than would otherwise have occurred. The Committee supports a more long-term, institutionalized data collection effort to support all future analyses of proposed management programs. Such a data collection program should be designed with the input of the industry to avoid unnecessary paperwork.

BSAI Improved Retention/Utilization

1. Improved Retention/Utilization in BSAI Groundfish Fisheries

**Retention Option 1 (Target Fishery Based):**

Subject Fisheries (includes all gear types in these fisheries)

1. pollock (bottom and mid-water)
2. rock sole
3. Pacific cod
4. yellowfin sole

Suboption A:

100% retention standard applies only to target species in the respective fisheries.

Suboption B:

100% retention standard applies to all target species (i.e., pollock, rock sole, p. cod, and yellowfin) taken in each of the respective fisheries.

**Retention Option 2 (Species Based):**

100% retention of all subject species in all BSAI groundfish fisheries

Subject Species

1. pollock
2. rock sole
3. Pacific cod
4. yellowfin sole

**Utilization Options:**

Option 1: Target species/subject species may be processed into any form. Product form could be meal or any other form, regardless of whether or not product is fit for human consumption.

Option 2: Target species/subject species must be processed into human consumptive form, based on a percentage of total round weight of harvest of target/subject species. Options for analysis of the minimum percentage of target species harvest which must be processed for human consumption are:

- Suboption A: 50%
- Suboption B: 70%
- Suboption C: 90%

Option 3: Reduction of target/subject species harvests to meal is limited to a maximum meal production rate for each target/subject species. Options for analysis of the maximum meal rate are:

Suboption A: 50%

Suboption B: 30%

Suboption C: 10%

2. Limited Processing for Catcher Vessels

~~Option 1:~~ To allow processing of bycatch amounts of any groundfish species up to the directed fishing standard.

~~Option 2:~~ To allow processing of targeted levels of species for which "restricted market opportunities" exist for catcher vessels.

Option 3: To allow processing of up to 5 mt round weight per day of any species for vessels under 60' and up to 18 mt round weight per day for vessels greater than 60'.

**Increased Retention/Increased Utilization Implementation Issues  
Associated with  
the BSAI Mid-water Pollock and BSAI Rock Sole Fisheries**

Prepared by the National Marine Fisheries Service  
Alaska Region  
Alaska Fisheries Science Center

**September 11, 1995**  
(revised)

## EXECUTIVE SUMMARY

### IMPLEMENTATION ISSUES RELATED TO THE PROPOSAL TO REQUIRE INCREASED RETENTION/INCREASED UTILIZATION

The following discussion is intended to briefly highlight "implementation" issues associated with the proposal to require increased retention and utilization of groundfish in the GOA and BSAI groundfish fisheries. Two specific fisheries, i.e., BSAI mid-water pollock, and BSAI rock sole, are treated as "case studies" for purposes of evaluating the specific elements of the Increased Retention/Increased Utilization (IR/IU) proposal. A detailed treatment of each element of the IR/IU proposal is contained in the body of the assessment document. Readers wishing a more extensive discussion of any aspect of the implementation assessment are directed to the relevant section of the main text.

#### DISCARDS

Discards of groundfish may occur in a variety of ways, at various times, and numerous locations from vessels and processing plants. These may include:

- \* "codend bleeding" - discards from a net before it is brought onboard the vessel;
- \* discards from the deck before fish are transferred into the hold;
- \* discards from several locations below deck, including multiple discharge chutes for whole fish and processing waste;
- \* discards from shorebased processing plants after fish are landed by catcher vessels.

#### COMPLIANCE MONITORING WITH AN "INCREASED RETENTION" REQUIREMENT

\* As envisioned, monitoring of compliance with an increased retention program would rely upon NMFS-certified observers. However, current levels of observer coverage, with existing sampling, monitoring, and data collection priorities, will *not* permit the additional duties of monitoring retention standards. In addition, monitoring a retention standard that is "less than 100% retention" is *not* possible with existing observer sampling.

In the face of reduced staff and increasing workloads, the NMFS Observer Program is having difficulty carrying out current scientific and monitoring responsibilities. No additional resources are expected in the near future.

Most observers onboard vessels are fully subscribed with current duties and are unable to take on any additional tasks without changing priorities, which means eliminating other duties and responsibilities. Therefore, observer monitoring of 100% retention requirements *cannot* be accomplished without either additional observers and support personnel, or a reallocation of existing resources (or both).

According to NMFS Observer Program managers, without adequate observer monitoring of discards, NMFS expects to be unable to assure compliance with the IR regulations, as proposed. Adequate monitoring

could require multiple observers on all vessels capable of carrying observers, including those which are currently unobserved or only partially observed. One suggestion was that such a program would require two compliance monitors, in addition to the current scientific monitor, on each operation that fishes and/or processes more than eight to twelve hours each day. Even for vessels that do not operate on an "around-the-clock" basis, one observer may not be adequate.

It should be noted that this finding is not unique to an IR/IU program. It nonetheless represents an implementation issue of concern for the Council's proposal. Observers collect a variety of data which are used to serve multiple objectives. Their primary data collection activities are to: 1) record fishing effort and estimate catch size; 2) sample to estimate catch composition; 3) monitor for the incidental take of marine mammals; 4) gather data on the size and age composition of catch; 5) estimate the incidence of Pacific halibut, salmon, herring, king crab, and Tanner crab bycatch; and 6) report on the possible violation of U.S. fishing regulations.

*The Council is advised that, under current circumstances, observer monitoring of IR requirements cannot be accomplished. The Council may, therefore, wish to consider, 1) what level of compliance monitoring they seek, 2) whether additional observer coverage can be required for implementation and monitoring of the IR proposal, 3) how current observer resources and responsibilities may be reorganized and re-prioritized, 4) how and to whom any additional observer coverage would be applied, 5) how the additional coverage would be paid for, and 6) what changes in fishing and processing operations would be mandated to reduce the monitoring burden on observers?*

#### ENFORCEMENT OF AN "INCREASED RETENTION" REQUIREMENT

\* Rigorous enforcement of an increased retention requirement would rely principally upon monitoring by NMFS-certified observers and follow-up by enforcement personnel. It would be incumbent upon these individuals to provide the evidentiary basis for assuring compliance or allowing prosecution of non-compliance. It is the conclusion of NMFS Alaska Enforcement Division that, "Absent a true 'full retention' requirement, wherein no discards of ANY whole fish are permitted, a retention requirement (as proposed in the Council motion) is probably unenforceable."

In effect, if some species can continue to be discarded in-the-round at the discretion of the operator, e.g., arrowtooth, "other" groundfish, etc., and some species are required to be discarded (as under DFS bycatch-only or prohibited status), the "burden of proof" placed upon agents to document violations of a retention standard could effectively make bringing a successful case impossible.

Non-compliance could be expected to be very substantial for unobserved or partially observed operations, and even aboard vessels and at plants with observer coverage, since one observer cannot be present at all times or at all locations. From the standpoint of field enforcement, an increased retention program would have to be regarded as, in effect, "voluntary", according to the NMFS Enforcement Office.

Enforceability of any given management program, e.g., IR/IU, can be regarded as inversely related to the level and precision of compliance desired. If a high degree of IR/IU compliance, enforceable through successful prosecution, is demanded then this objective probably cannot be achieved without 'full' retention. However, if a more modest objective of assuring the detection and successful prosecution of gross violations of an IR regulation, is acceptable to the Council, then enforcement may be more likely.

If the Council concludes that the objectives of an IR/IU requirement can be substantially achieved by a program with a high probability of detecting gross violations and egregious departures from the IR/IU regulatory requirements, then a monitorable and enforceable program might be developed. One possible model for such a program is outlined briefly below, and treated in greater detail in the body of the document.

One option for developing a standardized procedure to estimate discards from processor vessels would be to combine information from the observer's estimates of total catch weight and species composition with processor reports of processed product weight back-calculated to the round weight equivalent of retained groundfish using standard product recovery rates (PRRs). In other words, the discards for each species would be determined by subtracting the round weight equivalent of processed product as reported by the processor from the observer's total catch estimate.

This option has several potential difficulties which are described in more detail in the text. First, it relies on combining catch information from different sources (observer and processor) which will lead to conflicting conclusions in some cases. Second, with existing observer coverage levels, it will be possible to apply this method only to the observed hauls and not to all catch of the vessel. Finally, standard PRRs would be used to determine individual vessel performance, which is likely to be controversial.

***The Council is advised that, in the absence of an absolute "Full Retention" requirement, field enforcement, i.e., reliance on "real time" observer and agent monitoring, of the retention proposal is probably not possible. The Council may, therefore, wish to consider whether, 1) the objectives of the increased retention proposal can be substantially met through a less rigorous enforcement program that may detect gross violations of IR/IU requirements, or 2) to require that ALL discarding of any species (perhaps including PSC species) be prohibited.***



## OTHER IMPLEMENTATION ISSUES

Several other issues arise in assessing the mechanics of an IR/IU program; they include the following:

- \* Retention standards as proposed will be in conflict with existing inseason management requirements to discard groundfish harvests that exceed Directed Fishing Standards limits (DFS).

Mandatory retention of specific groundfish species to reduce discards would be *secondary* to other NMFS regulations that require discard of catch exceeding DFS threshold levels (retainable bycatch-only amounts) or discard of species on "prohibited" status because their TAC has been reached. This would, however, result in increased complexity for monitoring and enforcing IR compliance, perhaps beyond the limitations of available resources.

- \* The option of "phasing in" retention standards would require monitoring of variable retention or discard rates, i.e., not whether all of the catch of a particular species had been retained, but rather the specific *proportion* that had been retained (50%, 70%, etc.).

The option to phase-in retention standards over a three year period would require NMFS to monitor "discard rates" on each target species, rather than monitoring whether all fish of a particular species were retained or not. The impracticality of monitoring discard rate standards under the existing priorities for observer data collection has been discussed in the previous section. Given current levels of observer and enforcement coverage, the complexity of the present observer's task, and the nature of monitoring "discard rates", a phase-in procedure for implementation of retention standards does *not* appear practical.

- \* While the Council identified two fisheries as case studies for assessing implementation issues for an IR/IU program, it is apparent that implementation of such a program could *not* be undertaken piece-meal. That is, the potential exists for vessels in an IR/IU regulated fishery to increase their bycatch, or manipulate catch composition, to effectively exempt themselves from IR/IU requirements. This "loophole" might actually be perceived as inducing *additional* bycatch, rather than reducing it.

An example of the implementation quandary, cited above, might be the mid-water pollock fishery. Pelagic pollock fishing is defined as having a total catch composition of 95% pollock or more. If IR/IU requirements were adopted for the BSAI mid-water pollock fishery, but not simultaneously for say the BSAI bottom pollock fishery, it would be a relatively simple matter for an operation to manipulate catch composition, perhaps by fishing "hard-on-bottom" to acquire a total catch composition of less than 95% pollock, discard the additional unwanted catch, and be exempted from the IR/IU rules.

Similar scenarios can be envisioned for other fisheries, if implementation were done on a fishery-by-fishery basis. Undesired and unanticipated consequences may emerge as a result of this implementation procedure.

- \* U.S. Coast Guard regulations pertaining to vessel stability define a "Fish Processing Vessel" to mean a vessel that commercially prepares fish or fish products, other than by gutting, decapitating, gilling, skinning, shucking, icing, freezing, or brine chilling (see FR Vol.56, No.157, August 14, 1991).

H&G processing vessels, which make up the vast majority of the operations in the BSAI rock sole fishery, are by definition exempted from the stringent Coast Guard stability and "load line" regulations. Should the adoption of IR/IU requirements for the BSAI rock sole fishery make necessary acquisition by the H&G fleet of additional processing equipment or capacity, such as filleting machines, meal plants, etc., all such vessels would be required to meet "load line" standards. Meeting "load line" requirements is a complex, time

consuming, and very expensive process, according to Coast Guard sources. In some cases, for some vessels, attainment of "load line" certification may not be possible short of major reconstruction.

The operational and economic burden of adopting IR/IU requirements under these circumstances may fall disproportionately upon one segment of the domestic fleet, i.e., small H&G vessels. There may be Regulatory Flexibility Act implications associated with this action which the Council may wish to consider.

***The Council may wish to weigh the equity issue associated with implementation of the IR/IU proposal in this and similar fisheries.***

\* Current authority may not permit the Council to regulate, monitor, and enforce IR/IU requirements on the "onshore" sector of the domestic groundfish industry. NOAA General Counsel has been asked to examine this issue.

For purposes of the case study on BSAI rock sole, this may not represent a significant concern. Currently, this fishery is virtually entirely "at-sea." It is a relevant implementation consideration for the BSAI mid-water pollock fishery, however, and probably will be for many other BSAI and GOA groundfish fisheries which may become the subjects of IR/IU regulation.

***As above, the Council may wish to weigh the equity issue associated with implementation of the IR/IU proposal in this and similar fisheries, if having the State of Alaska impose equivalent requirements on inshore and onshore processors is not a viable remedy.***

\* U.S. EPA and/or Alaska DEC regulations and restrictions on fish processing waste discharging, ocean dumping, and landfilling, may impose operational limitations which some inshore and onshore processors cannot meet and remain economically viable. Likewise, EPA Clean Water Act and Ocean Dumping Act regulations may not provide authority to fully regulate disposal of processing waste, surplus product, and by-products by motherships and catcher/processors in the EEZ.

While a legal determination of the various authorities to control discharging, dumping, or landfilling of fish processing waste or surplus product has not been completed, there appears to be some doubt as to the adequacy of current regulations. Implementation of an IR/IU program may require the Council's explicit treatment of "disposal authority".

\* An IU requirement that a minimum percent of retained groundfish catch be processed "for human consumption" will require explicit specification of which product forms "are", and which "are not", acceptable outputs under this standard, and an explicit definition of what constitutes compliance with this requirement.

Since these definitions represent the foundation upon which "regulatory compliance" will be judged, developing a standardized process for establishing and maintaining this listing will be a key implementation issue.

In the extreme, the Council might conclude (perhaps with some justification) that, "If the product is not on the approved products list, it does not qualify". However, many products which are economically very important to the U.S. industry today, were not regarded as "products suited for human consumption" only a few years ago. Had strict prohibitions on their production been imposed, market opportunities could have been foregone, with very substantial economic consequences for domestic producers.

***Because monitoring and control of utilization are not contemplated (and probably not feasible) beyond primary processing, the Council may wish to consider how such products will be treated for compliance monitoring and enforcement, should these latter obstacles be overcome. [This may require certified seafood inspectors. Some question exists as to whether at-sea processors are capable of accommodating these additional personnel.]***

- \* The effectiveness of the "retention" requirement can be substantially decreased, or even negated, without a strict definition of what constitutes "utilization."

A very narrow interpretation of what constitutes compliance with the IU requirement could be excessively burdensome, impair new product development, and adversely effect the domestic industry's ability to access markets. A very broad interpretation could result in the circumventing of the IR requirement, and the effective negation of any potential benefits from an increased retention and utilization program.

An important part of an IR/IU program will involve defining how "utilization" will be measured. Two possible methods of compliance monitoring are evaluated in this document. Due to potential deficiencies with each, however, a preferred alternative has not been identified.

***The Council may wish to consider how narrowly or broadly they will define acceptable "utilization," for purposes of judging compliance with the IU portion of the proposal. They may also wish to identify a "preferred alternative" for assessing compliance.***

## **Increased Retention/Increased Utilization Implementation Issues Associated with the BSAI Mid-water Pollock and BSAI Rock Sole Fisheries**

### **INTRODUCTION**

On December 9, 1994, the North Pacific Fishery Management Council debated and then unanimously approved a motion to develop a set of options on two subject fisheries that would be used to outline the mechanics of implementing a "retention/utilization" program. The Council identified the two subject fisheries for assessment as, 1) the BSAI rock sole fishery, and 2) the BSAI mid-water pollock fishery. The Council requested that this document flesh out the specifics of how a "retention - utilization" program would work, looking at the various pros and cons. However, this document was not expected to contain a significant amount of cost-benefit analysis; material the Council concluded was more properly reserved for an EA/RIR.

The objective of the Council in proposing an initial assessment of an "Increased Retention/Increased Utilization" (IR/IU) regulation appears to center on the concern that, under present regulations, groundfish catches are being "underutilized", resulting in discard levels which are perceived to be unacceptably high. An IR/IU amendment would be expected to provide an incentive for fishermen to avoid unwanted catch, increase utilization of fish that are taken, and thus reduce discards. Without reference to an explicit preference as to whether reduction is achieved by bycatch avoidance or increased utilization, the Council's objective implicitly suggests that either is equally valuable.

The motion, adopted in December, identifies two "Retention Options", i.e., Option 1 - Status Quo, and Option 2 - Prohibit Discards of Target Groundfish. Under retention Option 2, two suboptions are specified, i.e., Suboption A - retention standards apply only to the *target* species in the subject fishery, and Suboption B - retention standards apply to *all* target species harvested in the subject fishery.

Two "Time line Options" are specified in the motion. Option 1 - Effective date to achieve 100% retention, contains two suboptions, i.e., Suboption A: January 1, 1996, and Suboption B: January 1, 1997. Option 2 provides for a phase in over three years, to achieve 100% retention in the third year, beginning with an unspecified percentage in 1996, and 1997, and 100% retention in 1998.

Finally, the motion contains two "Utilization Options". The first, Option 1, is the Status Quo alternative, and provides that target species may be processed into any form. Product form could be meal or any other form, regardless of whether or not the product is fit for human consumption. Option 2 states that target species must be processed into human consumption form, based on a percentage of total round weight of harvest of target species. Under Option 2, three suboptions are identified. The suboptions for analysis of the minimum percentage of target species harvest which must be processed for human consumption are: Suboption A: 50%; Suboption B: 70%; and Suboption C: 90%.

### **INCREASED RETENTION REQUIREMENT**

As noted, in the IR/IU motion the Council specified that, for purposes of examining implementation procedures and mechanisms for various retention and utilization proposals, two subject fisheries should be employed. These are the BSAI mid-water pollock trawl fishery and the BSAI rock sole trawl fishery. In addition, the Council specified two "retention" options. The first (Option 1) is the "Status Quo, or No-Action" alternative, which would provide for no change in regulations governing groundfish discards in these fisheries. The second alternative (Option 2), would "*prohibit discards of target groundfish*".

Under Option 2, the Council further defined two "suboptions." The first, Suboption A, provides that, "*retention standards apply only to target species in the subject fishery.*" That is, for example, all pollock harvested in the BSAI mid-water pollock trawl fishery would be required to be retained, as would all rock sole harvested in the BSAI rock sole fishery. Under this suboption, any other species bycaught in the prosecution of the directed mid-water pollock fishery, or rock sole fishery, respectively, could be retained or discarded at the discretion of the operator (so long as all other laws and regulations governing retention and discards were observed, e.g., EPA discharge standards, PSC requirements, etc.).

Under Option 2, Suboption B, "*retention standards apply to all target species*" harvested in the subject fishery. This suboption specifies that "target species" shall be defined as in the CRP license program. In this way, the Council has provided for the continued discard of some species for which no viable economic use can be made at present, thus reducing the potential for imposition of an unreasonable economic burden on the fishery. This distinction may be somewhat arbitrary, however, because several other species which are not exempted may equally meet these criteria.

For purposes of the current assessment of Suboption B, it is assumed that all bycatch of groundfish species for which a TAC exists must be retained, with the exception of arrowtooth flounder and the "other" groundfish category.<sup>1</sup> All non-allocated species may continue to be discarded, and all Prohibited Species must be discarded, unless otherwise specifically provided for (e.g., retention of all salmon).

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<sup>1</sup>"Other" groundfish in the BSAI include sculpins, sharks, skates, eulachon, smelts, capelin, and octopus.

## DEFINING DISCARDS

Discards of whole fish from catcher vessels, processor vessels, and shoreside processing plants occur for the following reasons:

1. **economic discards:** the processor or vessel operator is permitted to retain the fish, but chooses not to for various reasons (retaining only the highest value fish, factory not equipped to process particular fish, markets not developed, etc.) - the majority of groundfish discards fall into this category;
2. **regulatory discards:** the processor or vessel operator is not permitted to retain a particular species of fish or shellfish because, 1) it is a prohibited species (salmon, crab, herring, halibut), 2) the directed fishery for a groundfish species has closed and only bycatch amounts may be retained, or 3) a groundfish TAC has been reached and additional catch of that species must be discarded.

Most discards in the BSAI pelagic pollock and rock sole fisheries, other than prohibited species, are "economic" rather than "regulatory". Historically, economic discards have been highest in association with the "roe" fishery, although regulatory changes which banned roe-stripping in the pollock fishery, and opened yellowfin sole and "other" flatfish fisheries simultaneously with rock sole, have modified this pattern somewhat. The "roe" season in both fisheries occurs early in the calendar year when relatively few groundfish species are on bycatch-only or prohibited status, thus potentially reducing the role of regulatory discards in the groundfish bycatch problem in the two case study fisheries.

**BSAI Mid-water pollock:** The pelagic pollock fishery is defined on the basis of a catch composition of 95% or more pollock (total non-pollock bycatch of 5% or less). In actuality, the BSAI mid-water pollock fishery has historically recorded catches of 98% to 99% pollock. Unless retention is prohibited due to a TAC being reached, the 95% threshold in this fishery should allow for retention of all bycatch of other groundfish species.

**BSAI Rock Sole:** Traditionally, substantial quantities of yellowfin sole and "other" flatfish were routinely discarded during the rock sole roe fishery, ostensibly because the season openings for the respective fisheries did not coincide. In 1994, season-opening date changes for yellowfin sole and "other" flatfish reduced the possibility of regulatory discards of these flatfish in the roe rock sole fishery. Because of the substantial difference in "value" between yellowfin, "other" flatfish, and roe-bearing rock sole during this portion of the fishing year, it is likely that "regulatory" discarding of these flatfish species will be replaced with "economic" discarding in the absence of a retention requirement.

Regulatory discards of some groundfish may, nonetheless, occur in later season fisheries, such as the pollock "B"-season, or the post-roe rock sole season, as other groundfish TACs are reached. For example, Atka mackerel (4/9/94), sablefish (6/1/94), Greenland turbot (6/8/94), and Pacific cod (11/25/94) would have had to be discarded during at least part of the later season fisheries in 1994.<sup>2</sup>

The majority of discards from trawl vessels are made after the net has been brought onboard, as discarded fish are sorted from retained catch. However, some discards are made from the net before the fish are brought onboard. For example, "bleeding" of the codend is reportedly fairly common in the pollock catcher vessel fleet.<sup>3</sup> The pollock catcher vessels may "top off" to assure that their holds are as full as possible and discard fish in

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<sup>2</sup> Date indicates when the species was placed on "prohibited" status.

<sup>3</sup> "Bleeding" of the net reportedly occurs to some extent in all trawl fisheries.

excess of hold capacity. Bleeding also reportedly occurs if the net contains a large proportion of non-target species or fish of undesirable size. In other cases, it is reported, nets are bled in response to "trip limits" imposed by processors. Finally, in some cases and under some operating conditions, nets must be bled for vessel safety or stability reasons.

Fish bled from codends are considered discards and are required to be included in both the industry and observer estimates of total catch. However, accurate estimation of the species, size, quantity, and condition of fish discharged from a net before it is taken onboard a vessel is problematic, whether for an operator or an observer. Furthermore, when operations are unobserved, or only partially observed, confirmation that estimates of fish bled from nets are appropriately reported cannot be assured.

*The Council may wish consider whether mandatory retention requirements, as contained in the proposed action, will apply only to discards made after fish are brought onboard the vessel or to all categories of discards. In other words, is the intent to prohibit codend bleeding? Furthermore, the Council may wish to consider how, and if, such requirements will be applied to, and enforced upon, unobserved operations, or hauls.*

*Likewise, the Council may wish to consider whether exemptions will be given for diseased, contaminated, spoiled, or damaged fish. While this may create the potential for abuse, without such an exemption, will operators be asked to handle fish that should not be introduced into processing lines?*

## **CURRENT METHODS OF ESTIMATING CATCH AND DISCARDS**

The source of discard estimates depends on how total catch is estimated for a particular vessel or processor.

### **Catcher/Processors and Mothership/Processor Vessels**

**observer onboard:** The "blend" system is used to estimate total catch by species for catcher/processors and mothership/processor vessels with an observer onboard the vessel. Each week, NMFS compares the observer's report of total catch weight with an estimate derived from the processor's Weekly Production Report (WPR). In most cases, the blend selects the higher of these two total catch weight estimates and the associated information about species composition and the distribution between retained catch and discards. In other words, if the blend selects the observer's report, then discard estimates for that processor and week are based on the observer's estimate. If the blend selects the processor's report, discard estimates are based on the processor's WPR.

**without observer onboard:** NMFS uses the estimates of discards provided by the processor on the WPR.

**catcher vessels delivering to shoreside processing plants:** NMFS applies information about the weight and species composition of discards from observed catcher vessels to unobserved catcher vessels operating in the same area, using the same gear-type, and participating in the same directed fishery.

**shoreside processing plants:** For fish landed and then discarded from shoreside processing plants, NMFS uses information supplied by processors on WPRs about the weight and species composition of plant discards, regardless of whether the plant is observed or unobserved.

It is difficult to assess the accuracy of either industry or observer estimates. In the case of at-sea operators, neither source provides direct measurement of discards, and once the discards are made, estimates cannot be verified.

Onshore estimates, drawn from WPRs, are no better documented, since they depend solely on the data supplied by the operation, itself, and are filed with NMFS well after the discards have been sorted and disposed of, thus making physical verification impossible.



Observers have a "primary responsibility" to estimate the weight and species composition of the total catch to provide scientifically reliable information about fishing mortality. The disposition of catch between processed product or discards is, at present, regarded as "secondary information," and is provided by the observer on the basis of best available information. Several methods are used by the observer to estimate at-sea discards from trawl vessels:

1. if all of the catch of a particular species is being discarded, then discards equal the observer's estimate of total catch for that species;
2. the estimated round weight equivalent of retained catch based on production data can be subtracted from the observer's total catch estimate for a particular species (variation in product recovery rates will affect the accuracy of discard estimates using this method);
3. information about the minimum size of fish retained for processing combined with length frequency data collected by the observer can be used to estimate the proportion of the total catch discarded.

In addition to estimating the proportion of each species discarded from sampled hauls, the observer may extrapolate this information to unobserved hauls.

## **CATCH AND DISCARDS IN THE POLLOCK AND ROCK SOLE FISHERIES**

Catch and discard data from NMFS Alaska Region Blend Estimates, and NMFS Weekly Production Reports, have been employed in evaluating the implementation process for Option 2, and Suboptions A & B, and contrasting these with Option 1, the Status Quo alternative, for the two "case study" fisheries. Further, the fishing years 1993 and 1994 were selected, with the expectation that they most nearly reflect the current pattern of catch, utilization, and discards in these fisheries. Preliminary 1995 data through August 12 are also presented. [The following table reflects these "Blend" data for the BSAI mid-water pollock trawl fishery (Table 1.0).]

Table 1.0 Catch<sup>1</sup> and discards by groundfish species group in the BSAI pelagic pollock trawl fishery, 1993, 1994, and 1995\*

	Total catch			Discarded catch				
	Metric tons	Species comp.	Percent of all g.f. catch <sup>2</sup>	Metric tons	Species comp.	Discard rate	Percent discards to all g.f. discards <sup>2</sup>	Percent discards to all g.f. catch <sup>2</sup>
<b>1993</b>								
Pollock	1,227,495	98.6%	88.7%	41,359	73.0%	3.4%	36.9%	3.0%
Pacific cod	8,648	.7%	5.2%	7,052	12.5%	81.5%	19.0%	4.2%
Turbot	67	.0%	.8%	66	.1%	99.6%	3.7%	.8%
Rock sole	2,089	.2%	3.3%	2,068	3.7%	99.0%	5.0%	3.2%
Yellowfin	579	.0%	.5%	556	1.0%	96.0%	1.9%	.5%
Arrowtooth	557	.0%	6.0%	497	.9%	89.2%	5.8%	5.3%
Flat other	2,659	.2%	9.1%	2,508	4.4%	94.3%	13.1%	8.6%
Rockfish	234	.0%	.9%	227	.4%	96.9%	2.8%	.9%
Atka mack	35	.0%	1%	34	.1%	98.0%	.2%	.1%
Other	2,346	.2%	9.5%	2,252	4.0%	96.0%	9.9%	9.1%
Total	1,244,710	100.0%	66.0%	56,619	100.0%	4.5%	19.1%	3.0%
<b>1994</b>								
Pollock	1,208,573	99.0%	85.0%	20,855	72.6%	1.7%	19.1%	1.5%
Pacific cod	8,276	.7%	4.2%	4,953	17.2%	59.8%	14.8%	.5%
Sablefish	2	.0%	1%	1	.0%	37.6%	.5%	0%
Turbot	65	.0%	.6%	64	.2%	99.6%	2.0%	.6%
Rock sole	333	.0%	.5%	294	1.0%	88.2%	.7%	.5%
Yellowfin	148	.0%	.1%	126	.4%	85.7%	.3%	.1%
Arrowtooth	974	.1%	6.8%	853	3.0%	87.5%	6.2%	5.9%
Flat other	1,471	.1%	4.9%	892	3.1%	60.7%	4.8%	3.0%
Rockfish	91	.0%	.5%	61	.2%	66.8%	.9%	.3%
Atka mack	61	.0%	.1%	58	.2%	94.2%	.6%	.1%
Other	719	.1%	2.9%	568	2.0%	79.0%	2.4%	2.3%
Total	1,220,712	100.0%	61.2%	28,725	100.0%	2.4%	9.8%	1.4%
<b>1995</b>								
Pollock	545,849	98.8%	80.7%	17,274	79.7%	3.2%	28.0%	2.6%
Pacific cod	5,885	1.1%	3.1%	3,680	17.0%	62.5%	11.8%	1.9%
Turbot	5	.0%	.1%	5	.0%	98.2%	.3%	.1%
Rock sole	298	.1%	.6%	231	1.1%	77.4%	.8%	.5%
Yellowfin	27	.0%	.0%	27	.1%	100.0%	.2%	.0%
Arrowtooth	34	.0%	.5%	31	.1%	91.5%	.5%	.5%
Flat other	166	.0%	.7%	119	.5%	71.6%	.9%	.5%
Rockfish	80	.0%	.5%	59	.3%	74.0%	1.2%	.4%
Atka mack	33	.0%	.0%	24	.1%	72.6%	.2%	.0%
Other	244	.0%	1.0%	213	1.0%	87.5%	1.5%	.9%
Total	552,622	100.0%	48.4%	21,644	100.0%	3.9%	11.3%	1.9%

\*Source: NMFS Alaska Region blend estimates through August 12, 1995.

<sup>1</sup> "Catch" includes retained and discarded quantities.

<sup>2</sup> "All g.f." includes: BSAI inshore, offshore, all gear, all targets.

Based upon these data, the following "preliminary" conclusions may be drawn, with respect to the two "Retention Options," and implementation of Suboptions A or B.

### **BSAI Mid-water Pollock**

For the BSAI mid-water pollock trawl fishery, NMFS Weekly Production Reports indicate that 62 processors participated in the 1993 fishery (8 shoreside processing plants, 1 floating processor, 4 motherships, 49 trawl catcher/processors, of which 20 operated as both a catcher/processor and as a mothership). Forty-eight processors participated in the 1994 fishery (7 shoreside processors, 2 floating processors, 3 motherships, 36 catcher/processors, of which 12 operated as both a catcher/processor and as a mothership).

The NMFS blend catch and discard data indicate that, under the Status Quo alternative, the rate of discard in this fishery has been very low (see Table 1.0). Indeed, bycatch of groundfish species *other than* pollock is consistently quite small. In 1993, for example, 98.6% of the total catch in the mid-water pollock fishery was comprised of pollock. In 1994, 99% of the catch was pollock. Preliminary 1995 data suggest that 98.8% of the total catch in this fishery was composed of pollock.

Total discards in the BSAI mid-water pollock fishery, in 1993, accounted for 4.5% of catch, or 56,619 mt, out of a total harvest of 1,244,710 mt. However, arrowtooth and "other" groundfish (species for which no retention requirement is contemplated) accounted for 2,749 tons of this discard, in 1993. In 1994, total discards dropped to 28,725 mt, out of a total catch of 1,220,712 mt, a rate of less than 2.4%. In 1994, arrowtooth and the "other" groundfish species category accounted for 1,421 mt of the total discard. Preliminary 1995 data show an aggregate discard rate of approximately 4.0% through August 12, 1995.

It is significant to note that, based upon NMFS blend catch and discard data for all BSAI groundfish fisheries, the mid-water pollock fishery accounted for 66% of the total groundfish catch, by weight, in 1993, and 19% of the total discards. In 1994, these figures were just over 61% of the total BSAI groundfish catch, and 9.8% of the discards, by weight.

The distinction between *at-sea* and *onshore* operations may be characterized as follows (see Tables 1.1 and 1.2). In 1993, at-sea and onshore operators accounted for approximately 74% and 26% of total catch in the BSAI mid-water pollock fishery, respectively. In 1994, at-sea catches represented approximately 63.6% of total catch, with onshore accounting for the remaining 36.4%. Preliminary 1995 data, through August 12, suggest the at-sea catch was approximately 63.8% of the total, with inshore landings accounting for the remaining 36.2%.

Table 1.1 Catch<sup>1</sup> and discards by groundfish species group in the BSAI pelagic pollock at-sea processing trawl fishery, 1993, 1994, and 1995\*

	Total catch			Discarded catch				
	Metric tons	Species comp.	Percent of all g.f. catch <sup>2</sup>	Metric tons	Species comp.	Discard rate	Percent discards to all g.f. discards <sup>2</sup>	Percent discards to all g.f. catch <sup>2</sup>
<b>1993</b>								
Pollock	901,565	98.4%	65.1%	34,907	71.0%	3.9%	31.1%	2.5%
Pacific cod	7,041	.8%	4.2%	6,426	13.1%	91.3%	17.3%	3.8%
Turbot	33	.0%	.4%	33	.1%	99.7%	1.8%	.4%
Rock sole	2,033	.2%	3.2%	2,016	4.1%	99.1%	4.8%	3.1%
Yellowfin	579	.1%	.5%	556	1.1%	96.0%	1.9%	.5%
Arrowtooth	492	.1%	5.3%	451	.9%	91.6%	5.2%	4.9%
Flat other	2,510	.3%	8.6%	2,444	5.0%	97.4%	12.8%	8.4%
Rockfish	208	.0%	.8%	203	.4%	97.5%	2.5%	.8%
Atka mack	13	.0%	.0%	13	.0%	98.2%	.1%	.0%
Other	2,130	.2%	8.6%	2,114	4.3%	99.2%	9.2%	8.5%
Total	916,605	100.0%	48.6%	49,161	100.0%	5.4%	16.6%	2.6%
<b>1994</b>								
Pollock	768,914	99.0%	54.1%	16,438	70.8%	2.1%	15.2%	1.2%
Pacific cod	4,845	.6%	2.5%	4,230	18.2%	87.3%	12.6%	2.2%
Turbot	23	.0%	.2%	23	.1%	99.9%	.7%	.2%
Rock sole	317	.0%	.5%	289	1.2%	91.2%	.7%	.5%
Yellowfin	128	.0%	.1%	125	.5%	97.9%	.3%	.1%
Arrowtooth	822	.1%	5.7%	817	3.5%	99.4%	5.9%	5.7%
Flat other	968	.1%	3.3%	802	3.5%	82.9%	4.3%	2.7%
Rockfish	22	.0%	.1%	20	.1%	91.5%	.3%	.1%
Other	496	.1%	2.0%	488	2.1%	98.3%	2.1%	1.9%
Total	776,535	100.0%	38.9%	23,232	100.0%	3.0%	7.9%	1.2%
<b>1995</b>								
Pollock	349,026	98.9%	51.6%	14,236	79.9%	4.1%	23.1%	2.1%
Pacific cod	2,986	.8%	1.6%	2,938	16.5%	98.4%	9.5%	1.5%
Turbot	5	.0%	.1%	5	.0%	98.2%	.3%	.1%
Rock sole	282	.1%	.6%	215	1.2%	76.1%	.7%	.4%
Yellowfin	27	.0%	.0%	27	.2%	100.0%	.2%	.0%
Arrowtooth	31	.0%	.5%	31	.2%	100.0%	.5%	.5%
Flat other	107	.0%	.4%	105	.6%	98.1%	.8%	.4%
Rockfish	73	.0%	.5%	59	.3%	82.0%	1.2%	.4%
Atka mack	11	.0%	.0%	8	.0%	73.6%	.1%	.0%
Other	195	.1%	.8%	186	1.0%	95.4%	1.2%	.8%
Total	352,743	100.0%	30.9%	17,811	100.0%	5.0%	9.3%	1.6%

\*Source: NMFS Alaska Region blend estimates through August 12, 1995.

<sup>1</sup> Catch includes retained and discarded quantities.

<sup>2</sup> All g.f. includes: BSAI inshore, offshore, all gear, all targets.

Table 1.2 Catch<sup>1</sup> and discards by groundfish species group in the BSAI pelagic pollock on-shore processing trawl fishery, 1993, 1994, and 1995\*

	Total catch			Discarded catch				
	Metric tons	Species comp.	Percent of all g.f. catch <sup>2</sup>	Metric tons	Species comp.	Discard rate	Percent discards to all g.f. discards <sup>2</sup>	Percent discards to all g.f. catch <sup>2</sup>
<b>1993</b>								
Pollock	325,930	99.3%	23.5%	6,452	86.5%	2.0%	5.8%	.5%
Pacific cod	1,607	.5%	1.0%	626	8.4%	39.0%	1.7%	.4%
Turbot	34	.0%	.4%	34	.5%	99.4%	1.9%	.4%
Rock sole	56	.0%	.1%	53	.7%	93.5%	.1%	.1%
Arrowtooth	65	.0%	.7%	46	.6%	70.3%	.5%	.5%
Flat other	148	.0%	.5%	63	.8%	42.6%	.3%	.2%
Rockfish	26	.0%	.1%	24	.3%	92.3%	.3%	.1%
Atka mack	22	.0%	.0%	22	.3%	97.9%	.1%	.0%
Other	216	.1%	.9%	139	1.9%	64.2%	.6%	.6%
Total	328,104	100.0%	17.4%	7,458	100.0%	2.3%	2.5%	.4%
<b>1994</b>								
Pollock	439,658	99.0%	30.9%	4,417	80.4%	1.0%	4.1%	.3%
Pacific cod	3,431	.8%	1.7%	723	13.2%	21.1%	2.2%	.4%
Sablefish	1	.0%	.1%	0	.0%	31.9%	.4%	.0%
Turbot	41	.0%	.4%	41	.7%	99.3%	1.3%	.4%
Rock sole	16	.0%	.0%	5	.1%	29.4%	.0%	.0%
Yellowfin	19	.0%	.0%	1	.0%	5.2%	.0%	.0%
Arrowtooth	152	.0%	1.1%	36	.7%	23.7%	.3%	.3%
Flat other	503	.1%	1.7%	91	1.6%	18.0%	.5%	.3%
Rockfish	69	.0%	.4%	41	.7%	58.9%	.6%	.2%
Atka mack	61	.0%	.1%	57	1.0%	94.2%	.6%	.1%
Other	223	.1%	.9%	81	1.5%	36.2%	.3%	.3%
Total	444,176	100.0%	22.3%	5,492	100.0%	1.2%	1.9%	.3%
<b>1995</b>								
Pollock	196,823	98.5%	29.1%	3,038	78.8%	1.5%	4.9%	.4%
Pacific cod	2,899	1.5%	1.5%	742	19.3%	25.6%	2.4%	.4%
Rock sole	16	.0%	.0%	16	.4%	100.0%	.1%	.0%
Flat other	59	.0%	.2%	14	.4%	23.3%	.1%	.1%
Atka mack	22	.0%	.0%	16	.4%	72.2%	.1%	.0%
Other	49	.0%	.2%	28	.7%	56.4%	.2%	.1%
Total	199,868	100.0%	17.5%	3,852	100.0%	1.9%	2.0%	.3%

\*Source: NMFS Alaska Region blend estimates through August 12, 1995.

<sup>1</sup> Catch includes retained and discarded quantities.

<sup>2</sup> All g.f. includes: BSAI inshore, offshore, all gear, all targets.

Composition of the catch was very similar in both sectors, with at-sea reporting 98.4%, 99%, and 98.9% pollock composition in 1993, 1994, and 1995, respectively; and onshore reporting 99.3%, 99.0%, and 98.5% pollock, respectively, for the same three years. Discard rates for pollock were somewhat higher in each year for the at-sea operators, as compared to onshore operations, although both were relatively low (i.e., in the range of 1% to 4%). Onshore plants appear, in general, to discard other groundfish bycatch at lower rates than at-sea operations.

### Option 1

Retention of the Status Quo option in the BSAI mid-water pollock trawl fishery would, presumably, result in continued groundfish bycatch discards on the order of those observed in recent years in this fishery. Despite the low bycatch rates in this fishery, mid-water pollock accounts for approximately 19% of all pollock discards and just under 10% of all groundfish discards reported in groundfish fisheries in the BSAI, in 1994 (the last year for which complete data are available).

### Option 2

Adoption of Option 2 would prohibit discards of "target" groundfish. Under Option 2, the Council specified Suboptions A and B, each of which defines more precisely "what may and may not be discarded."

#### Suboption A

As applied to the BSAI mid-water pollock fishery, Suboption A would require that all pollock harvested in this fishery be retained. Any other species incidentally caught while taking pollock could continue to be disposed of as the operator chose, including discarding in the round.<sup>4</sup> Based upon the blend catch and discard data, cited above, BSAI mid-water pollock operators discarded approximately 41,359 mt of pollock in 1993; 20,855 mt of pollock in 1994; and 17,274 mt of pollock in 1995 (through August 12). Had Suboption A been in place in this fishery in those years, these discards would have been prohibited.

Because the mid-water pollock fishery is highly selective in terms of catch composition, with pollock consistently accounting for more than 98% of total catch, the provisions of Suboption A which, in this case, prohibit discarding of pollock, can potentially be expected to significantly reduce total discards in this fishery, as compared to the status quo baseline. In 1993, for example, a prohibition on discarding of pollock could have reduced total bycatch discards in this fishery by more than 73%, from 56,619 mt to 15,260 mt. In 1994, discards could have declined by a similar percentage, from 28,725 mt to 7,870 mt. Through August 12, 1995, total discards could have been reduced by nearly 80%, from 21,664 mt to 4,370 mt. Of the remaining discards in 1993, 2,749 mt were composed of arrowtooth flounder and "other" groundfish. In 1994, arrowtooth and the "other" groundfish category accounted for 1,421 mt of discard. In 1995, arrowtooth and "other" groundfish made up about 244 mt of the total discards. Eliminating arrowtooth and "other" groundfish from the total suggests that, had Suboption A been in place, "economic discards of concern" (as defined in the IR/IU proposal) in this fishery could have been reduced to approximately 12,511 mt, 6,449 mt, and 4,126 mt, in 1993, 1994, and 1995 (through

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Operators would, of course, be required to comply with all other regulations governing disposal, e.g., PSC regulations, EPA discharge requirements, etc., as well as specific retention requirements such as those currently governing the retention of all Pacific salmon bycatch.

August 12) respectively, or approximately a 78% reduction in each of the years 1993 and 1994, and more than an 80% reduction in 1995 (through August 12).<sup>5</sup>

### Suboption B

Under the proposed Suboption B, the *retention standard* would be extended to include all "allocated species," except arrowtooth and the "other" groundfish category. In the case of the BSAI mid-water pollock trawl fishery, adoption of Suboption B would not be expected to result in substantial additional reductions in discards over the improvements cited under Suboption A.

This is so precisely because of the highly species selective nature of this fishery. As the data indicate, in 1993, 1994, and (preliminary) 1995 the catch composition in this fishery was consistently over 98% (and often more than 99%) pollock.

Based on the catch and discard data cited above, had Suboption B been in place in this fishery, total discards could have been reduced by 53,870 mt, 28,725 mt, and 21,420 mt, respectively, for 1993, 1994, and 1995 (through August 12), as compared to the Status Quo option. This potentially represents more than a 95% reduction in total discards in each year, again, as compared to the status quo. Adoption of Suboption B could potentially have reduced "*economic discards of concern*" by approximately an additional 23%, i.e., 12,511 mt in 1993, and 6,449 mt in 1994, as compared to levels achieved under Suboption A, in this fishery. [The preliminary 1995 numbers, i.e., 4,126 mt, yield an additional 19.1% reduction over Suboption A.]

While some improvement in bycatch avoidance may be induced by adoption of retention requirements, it is unlikely that all bycatch can be eliminated. The relative success of bycatch avoidance will also presumably vary by season and area. Nonetheless, for the foreseeable future at least, bycatches of non-target groundfish will continue to be associated with the groundfish trawl fishery.

### Reduction Capacity

It is assumed for purposes of the following discussion that, if an operator had fish meal production capacity, that operator would have produced some quantity of meal at some time during the fishing year. It need not have been pollock meal in the pollock fishery, or rock sole meal in the rock sole fishery, but if an operator produced any meal, from any source, it is assumed the operation has meal capacity; otherwise not.

Based upon NMFS Weekly Production Reports, for both onshore and at-sea processors, it appears that approximately 49% of the operations participating in the mid-water pollock fishery, or 31 out of 63 operations, had fish meal capacity, in 1993. In 1994, the percentage rose only very slightly to 50%, or 24 operators out of 48.

It is revealing to note that of the 62 processors participating in the 1993 fishery, meal production was reported by 4 of the 8 shoreside processing plants, the 1 floating processor, all 4 motherships, and 14 of 49 trawl

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To the extent that harvesters are able to avoid bycatches of unwanted fish, these discard estimates may be further reduced by imposition of a "retention" requirement. At present, no empirical data are available with which to assess this potentiality. Presumably, adjustments to a "retention" requirement would occur over time as fishermen learn new techniques, or adjust fishing practices, patterns, and areas. It may require the observation of these operations over several seasons under a "retention" requirement before such information could be obtained, however.

catcher/processors. In 1994, meal production was reported by 6 of the 7 shoreside processing plants, the 2 floating processors, all 3 motherships, and 13 of the 36 catcher/processors.

Most of the surimi catcher/processors operating in the BSAI mid-water pollock fishery have meal capacity. Fillet and H&G operations may not currently possess this technology, and would face the prospects of either acquiring meal plants (or ready access to such capacity)<sup>6</sup>, finding some viable alternative means of handling bycatch, or leaving the fishery.

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In theory, access to fish meal reduction capacity may be provided by transferring catch to another vessel designed and equipped for this purpose. Reportedly, the *M/V Arctic V* is configured as a floating meal reduction plant. It currently supports the *Arctic Enterprise*, an inshore processing vessel, which does not have meal capability.

According to those familiar with this operation, the process requires that the *Arctic V* be continuously moored along side the *Arctic Enterprise* in relatively sheltered waters. The *Enterprise* reportedly fully occupies the capacity of the meal plant vessel. No other equivalent meal reduction vessels operate in the North Pacific. Several very large factory reduction vessels exist worldwide, but all are under foreign flag, e.g., Poland, The Russian Republic, and could not be brought in to the fishery to operate in the U.S. EEZ, except through a formal joint-venture agreement.

Catch destined for meal reduction could be retained and delivered by the fishing vessel itself to onshore meal plants, although logistical and operational costs could be very substantial. In some cases, this operational requirement could make participation in the fishery economically infeasible. Alternatively, bycatch might be transferred to another vessel for transport to an onshore meal plant. This too presents safety and logistical problems which may not be easily overcome, given existing technology.

Each of these methods represent alternatives to acquiring fish meal capacity by an individual vessel. The logistics, practicality, and relative cost, however, have not been evaluated in this assessment. Industry sources who have begun to examine these options suggest that technical problems may be substantial.



## Other Regulatory Considerations

Other considerations may impair or prevent some operators from acquiring the capacity to meet the IR/IU requirements. For example, U.S. Coast Guard vessel stability and "load line" regulations may prevent smaller vessels in the fleet from acquiring the machinery and equipment necessary to remain an economically and/or operationally viable participant in this fishery.

U.S. EPA or Alaska DEC regulations and restrictions on waste disposal, ocean dumping, and landfilling, may impose limits which some inshore or onshore operators cannot meet and remain economically viable. Likewise, EPA "ocean dumping" regulations may not provide authority to fully regulate processing waste, surplus product, and by-product disposal by motherships and catcher/processors in the EEZ. Unfortunately, insufficient information with which to conduct an analysis on these aspects of the proposed IR/IU action is currently unavailable.

## BSAI Rock Sole

Catch and discard data from NMFS Alaska Region Blend Estimates, and NMFS Weekly Production Reports, have been employed in evaluating the implementation process for Option 2, Suboptions A & B, and contrasting these with Option 1, the Status Quo alternative, for the rock sole fishery. Further, the fishing years 1993, 1994, and 1995 (through August 12) were selected, with the expectation that they most nearly reflect the current pattern of catch, utilization, and discards in this fishery. The definition of "rock sole" target fishery, as employed in the present assessment, differs from that used by the Alaska Region, in as much as the "other-flatfish" species complex is not included. The following table reflects these "Blend" data for the BSAI rock sole fishery (Table 2.0).

NMFS Weekly Production Reports indicate that, in 1993, 38 operators participated in the BSAI rock sole fishery, at some time during the fishing year. In 1994, that number fell to 33. For the BSAI rock sole trawl fishery, the NMFS blend catch and discard data indicate that, under Option 1 (the Status Quo), the rate of discard in this fishery is relatively high (see Table 2.0). Indeed, bycatch of groundfish species of *other than* rock sole has historically been quite high as a percent of total catch. In 1993, 46.3% of the total catch in the rock sole fishery was comprised of groundfish species other than rock sole, i.e., 53.7% of the catch was rock sole. In 1994, 54.7% of the catch was rock sole, with the remaining 45.3% composed of groundfish other than rock sole. In 1995, through August 12, 52.9% of the total catch was rock sole.

It is significant to note that, based upon NMFS blend catch and discard data for all BSAI groundfish fisheries, the rock sole fishery accounted for just over 3.8% of the total BSAI groundfish catch, by weight, in 1993, and 17.2% of the total discards. In 1994, these figures were 3.7% of the BSAI total groundfish catch, and 17.4% of the total discards, by weight.

Total discards in the BSAI rock sole fishery, in 1993 and 1994, accounted for approximately 70.2% and 69.6% of catch, in 1993 and 1994, respectively. Preliminary data for 1995 indicate a total discard rate of 55.6%. It may be revealing to note that the discards in the BSAI rock sole fishery, some 51,116 mt, nearly reached the total discards of 56,619 mt in the BSAI mid-water pollock fishery in 1993, despite the fact that total catch in the rock sole fishery was under 72,800 mt, while the mid-water pollock fishery harvested more than 1,244,700 mt. In 1994, the disparity was even greater, with discards in the rock sole fishery of 51,335 mt out of a total catch of 73,778 mt, as compared to mid-water pollock discards of 28,725 mt from a catch of 1,220,712 mt. In the preliminary data for 1995, rock sole discards of 24,941 mt, actually *exceeded* the mid-water pollock fishery's

discards of 21,644 mt. This, despite total catches in the rock sole fishery of 46,640 mt, as compared to 552,662 mt in mid-water pollock (through August 12).

In some cases the physical comparison of discards are misleading, especially if value per unit of discard varies by species. For example, a metric ton of pollock discard would not be equivalent, in any way but its weight, to a metric ton of, say, male rock sole discard. Pollock TAC is fully subscribed and there are high valued, well established markets for this species. Male rock sole, on the other hand, do not, as yet, represent a highly valued product, and the rock sole TAC has not been fully utilized, historically.<sup>7</sup> Therefore, to implicitly equate the discard (or savings) of a ton of pollock with a ton of male rock sole, may be misleading. Indeed, the Council has implicitly recognized that this is so, by exempting such species as "arrowtooth" from the retention requirement, owing to its low relative value and limited use, as compared to other groundfish species.

Arrowtooth and "other" groundfish (species for which no retention requirement is contemplated) accounted for 2,964 mt of the discard in the rock sole fishery, in 1993. In 1994, arrowtooth and the "other" groundfish species category accounted for 3,309 mt of total discard. Through August 12, 1995, these species accounted for 2,210 mt of total discards.

Historically, the BSAI rock sole fishery has been essentially an "at-sea" fishery, with no appreciable onshore participation. Whether this pattern will be sustained in the future will, presumably, depend upon a number of factors, including market considerations, the availability and timing of other fisheries, and the cost of complying with any increased retention/increased utilization requirements established by the Council. At the present time, the BSAI rock sole fishery is primarily an H&G "catcher/processor" fishery, although some participation by smaller catcher boats supporting one or more "motherships" may change this pattern.

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<sup>7</sup> In 1995, the BSAI rock sole ITAC was taken, although reportedly much of the catch continued to be discarded. At this writing, action to release "reserves" to the rock sole TAC is under consideration.

Table 2.0 Catch<sup>1</sup> and discards by groundfish species group in the BSAI rock sole at-sea processing trawl fishery, 1993-1995

	Total catch			Discarded catch				
	Metric tons	Species comp.	Percent of all g.f. catch <sup>2</sup>	Metric tons	Species comp.	Discard rate	Percent discards to all g.f. discards <sup>2</sup>	Percent discards to all g.f. catch <sup>2</sup>
1993								
Pollock	15,761	21.7%	1.1%	14,617	28.6%	92.7%	13.1%	1.1%
Pacific cod	7,138	9.8%	4.3%	5,101	10.0%	71.5%	13.8%	3.0%
Turbot	9	.0%	.1%	9	.0%	100.0%	.5%	.1%
Rock sole	39,115	53.7%	60.9%	22,945	44.9%	58.7%	55.1%	35.7%
Yellowfin	3,935	5.4%	3.7%	2,309	4.5%	58.7%	8.0%	2.2%
Arrowtooth	554	.8%	6.0%	554	1.1%	100.0%	6.4%	6.0%
Flat other	3,812	5.2%	13.1%	3,166	6.2%	83.1%	16.5%	10.9%
Rockfish	5	.0%	.0%	5	.0%	100.0%	.1%	.0%
Other	2,456	3.4%	9.5%	2,410	4.7%	98.1%	10.4%	9.3%
Total	72,784	100.0%	3.9%	51,116	100.0%	70.2%	17.2%	2.7%
1994								
Pollock	15,402	20.9%	1.1%	14,432	28.1%	93.7%	13.3%	1.0%
Pacific cod	5,649	7.7%	2.9%	3,766	7.3%	66.7%	11.2%	1.9%
Turbot	9	.0%	.1%	9	.0%	100.0%	.3%	.1%
Rock sole	40,380	54.7%	66.7%	23,572	45.9%	58.4%	59.5%	38.9%
Yellowfin	5,372	7.3%	3.7%	3,509	6.8%	65.3%	9.5%	2.4%
Arrowtooth	621	.8%	4.4%	621	1.2%	100.0%	4.5%	4.4%
Flat other	3,584	4.9%	12.0%	2,738	5.3%	76.4%	14.6%	9.2%
Rockfish	1	.0%	.0%	1	.0%	100.0%	.0%	.0%
Other	2,761	3.7%	10.3%	2,688	5.2%	97.3%	11.5%	10.0%
Total	73,778	100.0%	3.7%	51,335	100.0%	69.6%	17.4%	2.6%
1995								
Pollock	6,884	14.8%	1.0%	5,952	22.9%	86.5%	9.7%	.9%
Pacific cod	8,135	17.4%	4.3%	4,336	16.7%	53.3%	14.0%	2.3%
Turbot	3	.0%	.0%	3	.0%	100.0%	.2%	.0%
Rock sole	26,221	56.2%	52.9%	12,505	48.2%	47.7%	42.1%	25.2%
Yellowfin	2,416	5.2%	3.7%	765	2.9%	31.7%	5.4%	1.2%
Arrowtooth	174	.4%	2.7%	170	.7%	98.1%	2.7%	2.7%
Flat other	1,782	3.8%	7.5%	1,196	4.6%	67.1%	9.3%	5.0%
Other	1,026	2.2%	4.3%	1,014	3.9%	98.9%	6.7%	4.2%
Total	46,640	100.0%	4.1%	25,941	100.0%	55.6%	13.5%	2.3%

Source: NMFS Alaska Region blend estimates through August 12, 1995.

Note: The "rock sole" target, as employed in this assessments, differs from the Region's definition in that it does not include the "other-flatfish" species complex.

<sup>1</sup> "Catch" includes retained and discarded quantities.

<sup>2</sup> "All g.f." includes: BSAI inshore, offshore, all gear, all targets.

### Option 1

Retention of the Status Quo option in the BSAI rock sole trawl fishery would, presumably, result in continued groundfish bycatch discards on the order of those observed in recent years in this fishery.

### Option 2

Option 2, as proposed by the Council, would prohibit discards of "target" groundfish. Suboptions A and B each define, more precisely, which bycatch species may and may not be discarded.

With reported rates of total discards on the order of 70% of total catch in the BSAI rock sole fishery (55.6% in 1995, through August 12), it seems, at least potentially, that substantial improvements in the rate of bycatch discards can be anticipated, should a "retention option" be adopted.

Arrowtooth flounder and the "other" groundfish category accounted for only approximately 3% to 5% of total catch, by weight, in the BSAI rock sole fishery. If arrowtooth and "other" groundfish are eliminated from the discard totals, the estimated aggregate discard rate for the BSAI rock sole trawl fishery was still on the order of 69% of total catch in 1993, and 68.2% in 1994 (54.5% through August 12, 1995).

### Suboption A

As applied to the BSAI rock sole fishery, Suboption A would require that all rock sole harvested in this fishery be retained, while any other species incidentally caught while taking rock sole could continue to be disposed of as the operator chose, including discarding in the round.<sup>8</sup> Based upon the blend catch and discard data presented in Table 2.0 above, BSAI rock sole operators discarded approximately 22,945 mt of rock sole in 1993; 23,572 mt of rock sole in 1994; and 12,505 mt in 1995 (through August 12). Had Suboption A been in place in this fishery in those years, these discards would have been prohibited. In this case, barring substantial changes in catch composition or total harvest<sup>9</sup>, total discards could potentially have been 28,171 mt, 27,763 mt, and 13,436 mt, respectively, in 1993, 1994, and 1995 (through August 12). This would represent just over a 55% reduction in total discards in the BSAI rock sole fishery in 1993, a 54% reduction in 1994, and approximately a 52% reduction in 1995.

Because the BSAI rock sole fishery is relatively species *non-selective* in terms of catch composition, with rock sole accounting for only approximately 54% to 55% of total catch, the provisions of Suboption A which, in this

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<sup>8</sup> Operators would, of course, be required to comply with all other regulations governing disposal, e.g., EPA discharge requirements, PSC regulations, etc., as well as specific retention requirements such as those currently governing the retention of all Pacific salmon bycatch.

<sup>9</sup> Note that if it were technically (and economically) feasible for rock sole harvesters to alter their catch composition to avoid fish which they did not wish to catch, one would expect the adoption of a "retention requirement" to provide an incentive to undertake those actions. However, no empirically reliable data confirming the ability of fishermen to achieve this result, nor indications of how catch composition might be changed, exists at present. Indeed, it may be necessary for the rock sole fishery to operate for several seasons under a "retention requirement" before such empirical data could be compiled.

case, prohibit only the discarding of rock sole, may not reduce total discards in this fishery to the extent, for example, that Suboption A could in the mid-water pollock fishery, *ceteris paribus*.

#### Suboption B

Under the proposed Suboption B, the retention standard would be extended to include all "allocated species," except arrowtooth and the "other" groundfish category. In the case of the BSAI rock sole trawl fishery, adoption of Suboption B could potentially be expected to result in substantial reductions in discards over the improvements cited under Suboption A. This is so precisely because of the relatively non-selective nature of this fishery. As the data indicate, in 1993 and 1994, the catch composition in this fishery was consistently in the 54% rock sole range. Even with the deletion of arrowtooth and the "other" groundfish categories from the discard totals, substantial amounts of non-rock sole groundfish could be required to be retained under Suboption B, potentially yielding substantial decreases in total discards in this fishery, as compared to either the status quo or Suboption A.

Based on the catch and discard data cited in Table 2:0, had Suboption B been in place in this fishery, total discards could have been reduced by 48,152 mt, 48,026 mt, and 24,757 mt, respectively for 1993, 1994, and 1995 (through August 12), as compared to the Status Quo. This would have represented just slightly more than a 94% reduction in total discards in 1993, just over 93.5% in 1994, and nearly 95.5% through August 12, 1995, again, as compared to the Status Quo alternative. Adoption of Suboption B could have reduced "economic discards of concern" by approximately an additional 52.3%, 50.9%, and 49.5%, respectively, over levels achieved under Suboption A, in this fishery, in these years.

#### Other Regulatory Considerations

Another consideration in assessing the implications of adopting a retention standard in the BSAI rock sole fishery centers on the size and configuration of the existing fleet. Because most of the operations in the BSAI rock sole fishery are "small- to medium-sized" vessels limited to H&G operations, available space in their production facilities is severely limited. Providing for extensive additional processing capability, e.g., filleting lines, meal plants, is probably physically impractical. It may also be "technically" infeasible, under current Federal Regulations.<sup>10</sup>

Very few of the vessels which currently participate in the BSAI rock sole fishery have the capability to do more than H&G processing. Virtually none have, for example, meal reduction capability. As noted earlier, U.S. Coast Guard "load line" and vessel stability regulations effectively preclude acquisition of additional processing capacity by most of this fleet. That is, because most of the vessels operating in the BSAI rock sole fishery at present are relatively small H&G boats, and therefore exempted from "load line" regulations, retro-fitting for almost any other processing capability, e.g., meal, fillets, etc., may not be possible, under U.S. Coast Guard vessel stability "load line" regulations. Therefore, retention and utilization requirements may place an insurmountable barrier before many of the current participants in this fishery. This operational constraint will fall disproportionately on the segment of the domestic industry made up of small vessels.

U.S. EPA "ocean dumping" regulations may not provide authority to fully regulate processing waste, surplus product, and by-product disposal by motherships and catcher/processors in the EEZ. Unfortunately, insufficient

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<sup>10</sup> Specifically, a vessel engaged in heading and gutting of fish is not technically a fish processing vessel, and therefore not subject to the stringent U.S. Coast Guard vessel stability requirements which apply to "fish processing vessels" (see Federal Register/ Vol. 56, No. 157/ August 14, 1991).

information with which to conduct an analysis on these aspects of the proposed IR/IU action is currently available.

## DEFINING PARTICIPATION IN "DIRECTED FISHERIES"

The terms *target fishery*, *directed fishery*, or *fishery category* generally refer to the primary species or species group being harvested and retained by a fishing vessel. Applying retention/utilization standards to specific directed fisheries, such as rock sole or pelagic pollock, rather than to all groundfish fisheries requires a definition for the individual target fisheries. These definitions can be based on either:

- (1) specific standards for retained catch composition as defined by *Directed Fishing Standards*; or
- (2) the dominant species, as used to define fishery categories for *Prohibited Species Catch* (PSC) limits, the *Vessel Incentive Program* (VIP), and some observer coverage requirements under the Research Plan.

*Directed Fishing Standards*: NMFS has considered using directed fishing standards (DFS), or retainable bycatch amounts, to define whether a vessel was participating in an OPEN directed fishery. Currently, DFS are used to determine whether a vessel has exceeded the allowable bycatch of species for which the directed fishery is CLOSED. For example, once the directed fishery for rock sole closes, directed fishing standards are used to determine whether a vessel fishing in another flatfish fishery which is open at the time, say yellowfin sole, is retaining more than bycatch amounts of rock sole. In other words, these standards are used to determine if a vessel is directed fishing in a CLOSED fishery.

*The Dominant Species Rule*<sup>11</sup> is less complicated and follows the example of fisheries categories defined for several other fisheries management programs. Its application in the implementation of an IR/IU requirement is outlined below.

### BSAI Mid-water Pollock

Pelagic, or mid-water, pollock currently is defined as follows in regulation:

*675.21(b)(iii)(A) defines the mid-water (or pelagic) pollock fishery as "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."*

Based upon a preliminary examination, it appears that the use of the "*dominant species rule*" definition in developing an IR/IU analysis is not without technical difficulties. Specifically, unless all BSAI trawl fisheries come under IR/IU regulation simultaneously, fishermen may be induced to undertake behavior to manipulate catch composition to "avoid" being categorized as participating in an IR/IU regulated fishery, thus exempting themselves from the retention requirements.

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<sup>11</sup> In the case of mid-water pollock, this rule is based on the dominant species in the total catch. In other fishery categories it is based on the dominant species in the retained catch.

For example, specifying IR/IU standards for only the "mid-water" pollock fishery means that vessel operators could intentionally increase their bycatch rate to slightly over 5%, be categorized in the "bottom pollock" fishery, and avoid the "mid-water" retention/utilization standards.

This option would, of course, only be operationally viable for vessels processing pollock while both the bottom and pelagic fisheries were simultaneously open. It is interesting to note, however, that historically the mid-water pollock and bottom pollock seasons have been substantially overlapping. Therefore, an operation which was effectively targeting pollock in a "mid-water" mode, could strategically drop the gear "hard on bottom" to acquire a total catch composition which was just below the 95% pollock threshold, thus effectively exempting itself from the IR/IU regulations on "mid-water" trawling.

If a vessel exceeded the bycatch rate standard for the pelagic pollock fishery when the bottom pollock fishery was closed, it would be in violation of the prohibition on bottom trawling for pollock. If, on the other hand, the operation changed its catch composition enough to avoid the pollock bottom trawl fishery, thus qualifying for inclusion in another open groundfish fishery, it likely would not be catching enough pollock to support its processing needs, although this is an empirical question and could vary from operation to operation.

*The Council may, therefore, wish to consider adopting IR/IU standards for the pollock fishery as a whole, rather than specifying "mid-water" or "bottom" pollock, separately. Adoption of an "inclusive" pollock IR/IU program may have other structural, economic, and regulatory implications not anticipated or evaluated in the present assessment.*

#### **BSAI Rock Sole**

Rock sole currently is not defined as a unique fishery category based on the dominant retained species rule. Flatfish species or species groups generally have been aggregated by the Council in other management programs because of the mixed species nature of these fisheries, and to reduce the need for vessels fishing in one flatfish fishery to be required to discard their bycatch of other flatfish species. For example, rock sole is included in the "rock sole/flathead sole/other flatfish" category for purposes of PSC limit apportionment and monitoring; in the "flatfish" category for observer coverage requirements; and in the "other trawl" group for the Vessel Incentive Program.

To specify "rock sole" as a unique fishery category using the "dominant retained species rule" would require an additional fishery category to be added to NMFS regulations for purposes of the retention/utilization standards. This would result in an additional set of fisheries categories specifically to implement the retention/utilization standards, which would be in addition to the three sets of fisheries categories already in regulation.

*The Council may wish to consider applying IR/IU standards to an existing BSAI flatfish category, such as the "rock sole/flathead sole/other flatfish" designator used to monitor PSC limits. Adoption of this strategy will, however, bring a number of fisheries, in addition to the directed "rock sole" fishery identified in the Council proposal, under IR/IU restrictions. This may have other structural, economic, and regulatory implications not anticipated or evaluated in the present assessment.*

#### **MONITORING COMPLIANCE WITH INCREASED RETENTION STANDARDS**

The Council proposal includes two options with regard to groundfish retention. Sub-option A would require retention of all catch of pollock by vessels and processors participating in the pelagic pollock fisheries and all catch of rock sole by vessels and processors participating in the rock sole fishery.

Sub-option B would require retention of all groundfish, except arrowtooth flounder and "other" groundfish, captured during these two fisheries.

### Observer coverage

In recent years, only trawl catcher/processors categorized as having "100% observer coverage" have participated in the BSAI rock sole fishery. A mothership entering the flatfish fisheries in late 1994 was categorized as "100% observed", with unobserved catcher-vessels delivering unsorted codends. All catcher/processors and motherships participating in BSAI mid-water pollock fisheries in 1994 were categorized as "100% observed". Ninety-six catcher vessels delivered pollock to motherships, shoreside processing plants, and catcher/processors in 1994. Forty-nine of these vessels were not required to have observers because they delivered unsorted codends, 25 were categorized as having "30% observer coverage", and 22 were categorized as having "100% observer coverage".

The level of compliance with IR regulations may vary directly with the level of observer coverage. Significant portions of the industry are, at present, either unobserved or have an observer onboard only 30% of the time. Even operations classified as having "100% observer coverage" do not, in fact, have all hauls or deliveries monitored. Typically an observer samples and estimates the catch of only a portion of the hauls that the vessel makes. Further, because discards can take place at various sites on a vessel, it is not reasonable to expect an "on-duty" observer to monitor all discards.

In the face of reduced staff and increasing workloads, the NMFS observer program is having difficulty carrying out current scientific and monitoring responsibilities. However, no additional resources are expected in the near future.

Most observers onboard vessels are fully subscribed with current duties and are unable to take on any additional tasks without changing priorities, which means eliminating other duties and responsibilities. Therefore, observer monitoring of a 100% retention requirements cannot be accomplished without either additional observers and support personnel, or a reallocation of existing resources.

Without adequate observer monitoring of discards, NMFS expects to be unable to assure compliance with the increased retention regulations, as proposed. An observer's ability to monitor retention requirements depends upon, 1) what those specific requirements are, and 2) what level of monitoring is expected. Precisely what constitutes adequate monitoring, for purposes of the Council's IR/IU proposal, is currently undefined.

Depending upon the level of monitoring which is defined as "adequate", the proposed action could require multiple observers on all vessels physically capable of carrying observers, including those which are currently unobserved or only partially observed. Such a program could require two compliance monitors, in addition to the current scientific monitor, on each operation that fishes and/or processes more than eight to twelve hours each day.

Direct measurement of discards would require sorting and weighing discards by species. This approach does not appear to be feasible on processor vessels due to space constraints. Current procedures used by observers to



estimate discards would have to be changed if NMFS were to monitor discards at the level of an individual processor, on the basis of observer data. These changed procedures would likely require modifications in the way processors currently handle fish. Clearly, improved discard estimation would require substantial changes in both vessel and Observer Program operations.

*The Council may wish to define what level of monitoring shall be deemed "adequate" with respect to compliance with the IR/IU proposal.*

*In addition, the Council may wish to consider whether additional observer coverage will be required for implementation and enforcement of the IR/IU proposal. If so, how and to whom will the additional coverage be applied?*

### **Enforceability**

Rigorous enforcement of an increased retention requirement would rely principally upon monitoring by NMFS-certified observers, and follow-up by enforcement personnel. It would be incumbent upon these individuals to provide the evidentiary basis for assuring compliance or allowing prosecution of non-compliance. It is the conclusion of NMFS Alaska Enforcement Division that, "*Absent a true 'full retention' requirement, wherein no discards of ANY whole fish are permitted, a retention requirement (as proposed in the Council motion) is probably unenforceable.*"

In effect, if some species can continue to be discarded in-the-round at the discretion of the operator (e.g., arrowtooth, "other" groundfish, etc.) and some species can be '*required*' to be discarded in-the-round (as under DFS *bycatch-only* or *prohibited* status), the "*burden of proof*" placed upon NMFS agents to document violations of a retention standard could effectively make bringing a successful case impossible.

Non-compliance could be expected to be very substantial for unobserved or partially observed operations. Even aboard vessels and at plants with observer coverage, non-compliance could present a serious problem, since one observer cannot be present at all times or at all locations. From the standpoint of *field enforcement*, an increased retention program would have to be regarded as, in effect, "*voluntary*", according to the NMFS Enforcement Office.

Enforceability of any given management program, e.g., IR/IU, can be regarded as inversely related to the level and precision of compliance desired. If a high degree of IR/IU compliance is demanded, enforceable through successful prosecution of any violation, then this objective probably cannot be achieved without "*true full retention*" (a requirement not contemplated in the Council's proposal).

If, alternatively, the Council concludes that the objectives of an IR/IU requirement can be *substantially* achieved by a more modest program, for example, one with a high probability of detecting gross violations and egregious departures from the IR/IU regulatory requirements, then a monitorable and enforceable program might be developed.

Under this scenario, compliance with increased retention standards could be evaluated based upon vessel and processor logbooks, WPRs and other landings records submitted to NMFS, and on observer reports. One option to estimate discards from processor vessels would be to combine information from the observer's estimates of total catch weight and species composition with processor reports of processed product weight, back-calculated

to the round weight equivalent of retained groundfish using standard product recovery rates (PRRs). In other words, the discards for each species would be determined by subtracting the estimated round weight equivalent of processed product, as reported by the processor, from the observer's total catch estimate.

This option has several difficulties. First, it relies on combining catch estimate information from different sources (observer and processor) which will lead to conflicting conclusions in some cases. For example, an observer's estimate of the total catch of a particular species could be less than the estimate of retained catch, based on applying standard PRRs to product weight. This result could occur due to; 1) expected sampling error in procedures used by the observer (density sampling, species composition sampling, etc.); 2) incorrect measurement of the volume of fish in a bin or the weight of fish in samples; or 3) the expected difference between individual vessel PRRs and the *NMFS Standard PRR*.<sup>12</sup>

Another difficulty in this method is that observer estimates of total catch and species composition are made on a haul-by-haul basis. Production data is reported daily and is not required to be tied to a specific haul, although record keeping and reporting requirements could be changed. Nonetheless, with existing observer coverage levels, it will be possible to apply this method only to the observed hauls and not to all catch of the vessel.<sup>13</sup>

Finally, the use of standard PRRs has been controversial in the past because individual vessel rates differ from the standard or average rate for the fleet. Vessels with PRRs better (higher) than the standard rate are attributed with more groundfish catch than they actually take and processors with PRRs less than the standard are attributed with less catch. The variation in actual PRRs may average out for purposes of monitoring fleet-wide quotas. In other words, the underestimates of catch on some vessels may be balanced by the over-estimates of catch on other vessels (although it would be impossible to confirm this). As standard PRRs are increasingly used to determine *individual* vessel performance, however, more controversy concerning their derivation and application can be expected.

#### Required discards under DFS

Mandatory retention of specific groundfish species to reduce discards, as under the Council's IR/IU proposal, would be *secondary* to other NMFS regulations that "*require*" discard of catch exceeding DFS threshold levels (retainable bycatch amounts) or discard of species on "*prohibited*" status because their TAC has been reached. This could result in increased complexity for monitoring and enforcing compliance, perhaps beyond the limitations of available resources.

Sub-option A *does not* pose any potential conflict with these requirements because, by definition, unlimited retention, for example, of pollock in the mid-water fishery, and rock sole in the rock sole fishery, are allowed while the respective directed fisheries are open.

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<sup>12</sup> The use of published NMFS Standard PRRs has developed to estimate total catch by processor vessels and because of the need to enforce regulations governing retained catch composition (e.g., DFSs and roe-stripping prohibitions) without the ability to provide accurate, reliable, and timely estimates of total or retained catch weight.

<sup>13</sup> Observers sample about 60 percent of hauls on observed trawl vessels.

Sub-option B *does* present a potential conflict, however. Under this sub-option, IR/IU will likely result in continued regulatory discards of some groundfish species despite "*increased retention*" regulations. First, it will continue to be the case that any groundfish species on "*prohibited species*" status **must** be discarded. This requirement will affect both the BSAI mid-water pollock and rock sole fisheries in a similar manner.

Second, it will continue to be required that catches in excess of "*retainable bycatch*" amounts of groundfish species on DFS "*bycatch-only*" status **must** be discarded. This requirement is not likely to affect retention requirements in the mid-water pollock fishery because low bycatch rates will rarely result in vessels exceeding DFS thresholds for other groundfish species. However, it is likely that regulatory discards will occur in the BSAI rock sole fishery to meet DFS thresholds.

Table 3 illustrates this situation with an example of catch during a rock sole fishing trip. Under the heading "*without increased retention*," is the hypothetical catch, retention, and discard of 100 metric tons of groundfish. Fishery status for all species in the catch is indicated as either "*open*" or "*bycatch-only*" status. Under the heading "*with increased retention*," the hypothetical catch is redistributed to show that:

1. all catch of groundfish, other than arrowtooth and "other" groundfish, for which the directed fishery is *open* **must** be retained;
2. catch of arrowtooth or "other" groundfish may be retained or discarded subject to other regulations;
3. catch of any groundfish species for which the directed fishery is *closed* (i.e., on *bycatch-only* status) **must** be retained until the DFS is reached. At that point, *all* additional bycatch of that species **must** be discarded.

In Table 3, groundfish species on *bycatch-only* status are shown in the bottom half of the table. Catch of Greenland turbot, rockfish, and Atka mackerel do not exceed DFS thresholds, so all of this catch must be retained. However, if all of the pollock catch of 20 mt were to be retained, the DFS threshold for pollock would be exceeded. The vessel may retain pollock up to 20% of the retained catch of other groundfish species for which the directed fishery is open ( $.2 \times 73.3 \text{ mt} = 14.66 \text{ mt}$ ). If we assume that the vessel **must** retain 14.65 mt of pollock under IR requirements (an amount equal to no more than 20%...), then it **must** discard the remainder to comply with DFS requirements (i.e., 5.35 mt). Arrowtooth flounder is not subject to mandatory retention under the IR/IU proposal, so may be discarded.

The example in Table 3 illustrates a simple case of one species for which the vessel operator **must** retain a portion of the catch to meet "*increased retention*" standards, while they **must** simultaneously discard the remainder to stay within DFS threshold levels under the pollock fishery closure. While the vessel operator's accounting in this example is exactly the same calculation that is currently required to maximize retention of species closed to directed fishing, the IR/IU proposal would make this process mandatory for all vessels in the rock sole fishery with respect to almost all groundfish species. As more fisheries are put on "*bycatch-only*" or "*prohibited species*" status, it becomes more complicated for the industry, observers, and NMFS to monitor the exact quantity of bycatch species that **must** be retained, and that which **must** be discarded. Continuous accounting must be made of, 1) the status of all groundfish fisheries (open, *bycatch-only*, or PSC status), 2) the vessel's retained catch composition, 3) how much of each species on *bycatch-only* status must be retained, and 4) at what point further catch of that species must be discarded to comply with DFS.

Table 3.0 Hypothetical distribution of 100 metric tons of groundfish catch in a rock sole fishery, without and with an increased retention requirement.

Species	Status of Fishery	Without Increased Retention <sup>1/</sup>			With Increased Retention		
		Retained	Discarded	Total	Retained <sup>2/</sup>	Discarded	Total
Rock sole	open	21	31	52	52	0	52
Yellowfin sole	open	2	4	6	6	0	6
Other flatfish	open	3	4	7	7	0	7
P. cod	open	3	5	8	8	0	8
Sablefish	open	0.1	0.1	0.2	0.2	0	0.2
Other groundfish	open	0.1	3	3.1	0.1	3	3.1
Subtotal		29.2	47.1	76.3	73.3 <sup>3/</sup>	3	76.3
Pollock	byc <sup>4/</sup>	2	18	20	14.65	5.45 <sup>5/</sup>	20.1
Greenland turbot	byc	0.1	0.1	0.2	0.2	0	0.2
Rockfish	byc	0.5	0.1	0.6	0.6	0	0.6
Atka mackerel	byc	0.5	0.1	0.6	0.6	0	0.6
Arrowtooth	byc	0.3	2	2.3	0.3	2	2.3
Total		32.6	67.4	100	89.65	10.45	100.1

<sup>1/</sup> Only catch exceeding DFSs must be discarded.

<sup>2/</sup> Catch of all groundfish except arrowtooth flounder and "other" groundfish and that NOT exceeding DFSs must be retained.

<sup>3/</sup> amount of retained groundfish used to calculate retainable bycatch amounts for species on bycatch-only status.

<sup>4/</sup> bycatch-only status

<sup>5/</sup> amount of groundfish that must be discarded because retention would violate DFSs.

## Monitoring retention or discard rates

The Council proposal includes an option to "phase-in" retention standards over a three year period. This proposal would require NMFS to monitor discard rates - not just whether discards of a particular species had occurred, but the proportion of the total catch of each species that was discarded. Regardless of whether the method used to estimate discards is based solely on observer collected data or on a combination of observer reports of total catch and industry reports of processed product, monitoring discard rates is much more difficult than monitoring whether *any* discards of a particular species occurred. Given current levels of observer and enforcement coverage, the complexity of the observer's present task load, and the nature of monitoring "discard rates," a phase-in procedure for implementation of retention standards does not appear practical.

## INCREASED UTILIZATION

The Council's motion on utilization objectives was fairly general. An examination of the specific elements of the motion suggests that a range of regulatory approaches may provide "improvement" in the current rate of utilization consistent with the Council's objectives, but with varying tradeoffs. That is, the more complex and intrusive the program; the greater will be the expected increase in utilization compliance. However, with complexity also comes increased costs for administration, monitoring, and enforcement, as well as reductions in operational flexibility for the U.S. industry.

*The Council may wish to consider these tradeoffs in determining the specific form that "improved utilization" requirements might take.*

The Council proposal includes two options for IU requirements. Option 1 would place no requirements on which products would have to be produced from retained groundfish. Option 2 would require a designated portion of retained catch to be processed into products "for human consumption." The Council did not define what "for human consumption" means, within the context of its proposal. Under current regulation, everything except processing waste, fish meal, and bait is assumed to be "for human consumption."<sup>14</sup>

Adoption of Option 1 would only require that "some form of processing" be applied to all retained catch, without regard to specific product forms, output quantities, or product recovery rates (PRR).

Option 2 would be somewhat more restrictive, in as much as it would require certain levels of product output be achieved and, further, that a requisite percentage, i.e., 50%, 70%, 90%, of production be directed toward product forms "for human consumption." Even Option 2 provides some latitude, however, in the way these requirement might be interpreted.

Two possible IU approaches are characterized below. In a relatively simple program, the IU regulations could specify that 50%, 70%, or 90% of retained catch (or delivery) would have to be delivered into a plant, into a process, to develop a product form for human consumption. So long as the requisite percentage of the retained

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<sup>14</sup> For the remainder of the IU discussion, products assumed "not for human consumption" in the pollock and rock sole fisheries will focus on fish meal and by-products. Consideration of bait as a product not for human consumption probably would be more of an issue in fisheries such as, for example, Pacific cod.

catch was "delivered" into a process designed to produce a product form for human consumption, the IU requirement would, by definition, have been met.

In this IU procedure, no effort would be made to *"prescribe"* the specific product mix, output form, or PRR. Instead, the operator would be expected to "process" the delivered catch in the most efficient manner possible, given the technical, physical, and market limitations confronting the specific operation, and consistent with the requirement that the production be directed toward product forms *"for human consumption."*

One means of monitoring compliance in the above case, if detailed reliance upon product-specific PRR's is to be avoided, may be to define products that do not meet the requirement of *"for human consumption."* That is, if fish meal continues to be defined in regulation as a product *"not-for-human-consumption,"* or at least "grades" of fish meal are identified which differentiate between meal "for humans" and "not for humans", then a relatively efficient and effective means of monitoring utilization may rely on measuring round fish diverted into a reduction plant, and/or the output of fish meal "not-for-humans." That is, if, say 70% of the retained catch must enter a process, geared for production of a product form for human consumption, then no more than 30% of retained catch may be diverted into "not-for-humans" grade meal production. One option would be to monitor the output of this grade of fish meal, and back cast to round-weight, to certify that 30% or less of the retained catch was directed into meal production of this grade. By default, if 30% or less of catch went to meal "not-for-human consumption," 70% or more must have gone into processes geared to produce products *"for human consumption."*

There are, of course, limitations with this monitoring and enforcement scheme. First, because processing waste may also enter the meal reduction process, back-casting from fish meal "output" to round-weight "input" may be clouded. However, processors currently report the amounts of "processing waste" and "whole fish" diverted to meal plants as separate categories. While these reports are currently voluntary, accurate reports could be made mandatory. Although there would be an economic incentive to "bias" such reports, this incentive would be no greater than in other cases where the operator's data are relied upon for monitoring purposes.

Another drawback to this approach may be that, even with perfect compliance, under this arrangement it would, in theory, be sufficient to direct fish "into a process geared to produce a product for human consumption," then simply cut the fish in half and send both halves to the meal plant or grinder as processing waste. Because no mandatory PRR is imposed, and no direct output monitoring of products for human consumption is performed, this compliance monitoring approach could be circumvented in this way. However, since one of the principal reasons for requiring increased utilization seems to be to provide an economic incentive to the operator to avoid catching unwanted fish, the added cost of handling and *"processing"* these bycatches (even in this superficial manner) may, nonetheless, provide that incentive.

Use of this reporting method for monitoring IU compliance may be an acceptable option for analysis. For example, if all "round fish" diverted directly to meal is "accounted for" before entering the reduction process, then the proportion of meal deriving from round fish should be easily obtained. How unobserved or partially observed operations will be evaluated is less clear; however, this problem is not unique to this element of the IR/IU proposal.

Reliance on this method of monitoring IU compliance obviously assumes each operator has sufficient fish meal production capacity to accommodate reduction requirements. If this is not the case, either meal capacity would have to be added to the processing facility, or ready access to an alternative source of such capacity would be required, e.g., round fish destined for meal plants would have to be retained until they could be delivered to a

reduction plant. In the latter case, all such fish could be weighed to assure that no more than the permissible percentage of total retained catch was diverted to "not-for-humans" grade meal.

An alternative proposal for monitoring and enforcing compliance with IU requirements, which involves in some sense a more complex and certainly more intrusive procedure relying on PRR standards, can be envisioned. For example, NMFS could monitor compliance with Option 2 on the basis of processed product information submitted on processor's WPR. Standard PRR's would be used to back-calculate from processed product weight to round weight.

Two interpretations of the utilization standards could be made. The standards could be applied on a "*species by species*" basis, or on the "*total*" retained catch. If the standards are applied on a species by species basis, the round weight equivalent of products for human consumption would have to represent at least the requisite percentage, i.e., 50%, 70%, or 90%, of the estimated total catch of each species each week.

For example, assuming the "*species by species*" model, using the information presented in Table 3, 52 mt of rock sole would be required to be retained under IR provisions. Based on the processor's WPR, NMFS could verify that the round weight equivalent of processed products, defined as "*for human consumption*," was at least 26 mt (50% utilization), 36.4 mt (70%), or 46.8 mt (90%). A similar calculation would be made for each groundfish species in the catch, except arrowtooth flounder and the "other" groundfish category.

The utilization standard could also be applied to the "*total*" retained catch, rather than on a species by species basis. In this case, 50%, 70%, or 90% of the round weight equivalent of retained groundfish (except arrowtooth and "other" groundfish) would have to be processed into products "*for human consumption*". Again, using the example in Table 1, of the total catch of groundfish species that is retained (89.65 mt), either 44.9 (50%), 62.8 mt (70%), or 80.7 mt (90%) would have to be processed into products "*for human consumption*."

This second alternative, based upon "*total*" retained catch, would allow processors more flexibility to determine product mix, because a utilization rate higher than the standard in one species could offset lower utilization rates for other species.

## PRODUCTS FOR HUMAN CONSUMPTION

One important feature of the IR/IU proposal is the requirement that a specific percentage of retained catch (e.g., 50%, 70%, 90%) be directed toward the production of "*product forms for human consumption*." This provision would require an unambiguous regulatory definition of which specific products would qualify as "*product forms for human consumption*" and which would not.

The question arises then, who shall determine this qualifying product listing? Because technology and markets change over time, flexibility and responsiveness to such changes will be important to avoid imposing unanticipated, and unwarranted, economic costs on the domestic industry. It seems probable that some formal mechanism will have to be designed for monitoring, reviewing, and updating the "qualifying list".

***The Council may wish to consider how, when, and by whom the product list will be maintained?***

Since these definitions represent the foundation upon which "*regulatory compliance*" will be judged, it may be appropriate to make provisions for arbitration of disputes as to whether a particular product form, manufactured by a specific operator, meets the Council's definition. Because denial of inclusion of some specific product form

could impose penalties, and thus costs, on some operators, it seems that some mechanism for appeals of this kind may be required.

***Therefore, the Council may wish to consider, through what mechanism shall a disagreement be resolved?***

At one extreme, the Council might conclude, with some justification, that, "If the product is not on the list, it does not qualify." However, many products which are economically very important to the U.S. industry today, were not regarded as "products suited for human consumption" only a few years ago. Had strict prohibitions on their production been imposed, market opportunities could have been foregone, with very substantial economic consequences for domestic producers.

Even at present, some economically important processed forms are not directly converted into products for human consumption by their "primary" processor (e.g., fish frozen in-the-round), but have historically been destined for secondary processing plants where they were converted into "a product form for human consumption".

***Because monitoring and control of utilization are not contemplated (and probably not feasible) beyond primary processing, the Council may wish to consider how such products will be treated for compliance monitoring and enforcement?***

Perhaps a bill of sale stating the intended destination could be required; but absent follow-up monitoring and enforcement capability, that requirement would not be much of a deterrent. Indeed, for vertically integrated operations, with multi-national or geographically dispersed facilities, the "paper trail" exhibiting IU compliance would be virtually costless to provide.

It may be informative to note that, at least the following product forms are (or have been) reportedly produced, by U.S. operators, from North Pacific groundfish and marketed for "human consumption." These include, roe (both separate from and retained within the fish), fillets (both standard and "deep skin"), surimi (of varying grades and forms), H&G, stock fish, hard salted fish, fish in brine, heads, fish eyes, milt, stomachs, cheeks, tongues, fish in-the-round, fish oils and other solubles, bone meal, and whitefish meal. There are, presumably, other products which either already exist or, as cited above, may emerge over time.

Table 4 lists all product forms reported to NMFS from 1994 groundfish harvests off Alaska. Products are divided among *primary* and *ancillary* products; and *human* and *not-for-human* consumption forms, based on current definitions. The list of primary products includes products such as whole fish, headed-and-gutted, filleted, surimi, and minced fish. The proportion of the whole fish utilized in these products range from 13 percent to 100 percent. Ancillary products, such as roe, heads, cheeks, etc. currently are produced *in addition* to a primary product. For example, heads are an ancillary product to headed-and-gutted cod. However, unless specifically prohibited in the utilization regulations, processors could meet IU standards by producing *traditionally* ancillary products as their primary output form, which could use less than five percent of the whole fish.

As noted, at present, NMFS regulations provide that all forms of product output, except fish meal and production waste, are assumed to be "products for human consumption". Testimony was offered at the Seattle meeting of the NPFMC's IR/IU Industry Committee, in November 1994, that suggested, for some operators, fish meal and bone meal are being produced and marketed "for human consumption." Thus, it may be desirable (necessary) to either include meal in the "qualifying list," or differentiate between "grades" of fish meal, so as to avoid imposing unjustified and unanticipated economic costs on operators that do actually produce human-grade meal. [If fish meal is included in the list of "qualifying" products, there may be some doubt about the need or efficacy



of the requirement that a fixed percentage of catch be directed to the production of "*a product form for human consumption*." Presumably then, any and all of the above product forms would qualify, and only bait and processing waste would remain in the "*not-for-humans*" output category.]

Once a "*qualifying list*" is established, the next element in the regulatory program will involve provisions for tracking of production output, monitoring, and enforcement. At present, these functions rely primarily upon "back casting" from product weight to round weight. If a similar monitoring and enforcement strategy were adopted under the IR/IU regulations, employing "back casting" from individual product-outputs to round weight equivalents, it would be necessary to prescribe "acceptable" product recovery rates (PRR's) for all approved product forms.

Some PRR's would, by definition, be very low, e.g., heads, cheeks, milt. Others may be highly variable, e.g., roe, deep skin fillets. As was found in the *Pollock Roe Stripping Amendment* and the *Inshore/Offshore Amendment*, PRR's can be controversial, subject to manipulation and interpretation, and variable within and between operations, over time and species. These complexities may confound efforts to monitor compliance with the proposed utilization requirement, and in combination with the diversity of "*product forms for human consumption*", undermine the intent to significantly increase mandatory utilization of groundfish catch.

Adherence to this monitoring and enforcement strategy could require imposition of further limitations or restrictions on "*acceptable*" outputs, e.g., defining outputs which may be "*primary*" products, and those forms which may only be regarded as "*ancillary*", for purposes of meeting the utilization requirement.

Table 4 - Reported processed product for all groundfish retained and processed at-sea in the GOA and BSAI in 1994 (mt).

Product Form	PRR	Product Wt.	Round Wt.
<b>"Primary" products</b>			
Whole fish	1.0	54,338	54,338
Bled only	0.98	1	1
Gutted only	.80 - .90	12	17
H&G w/roe	.55 - .80	12,182	15,231
H&G western	.50 - .78	11,621	18,758
H&G eastern	.32 - .65	87,743	165,931
H&G tail removed	.44 - .62	3,064	5,002
Kirimi	0.48	17,251	35,914
Salted/split	0.45	61	134
Wings	0.32	373	1,164
Fillets w/skin, ribs	.32 - .45	564	1,320
Fillets w/skin, no ribs	.27 - .38	694	2,430
Fillets w/ribs, no skin	.25 - .35	130	497
Fillets, no skin, ribs	.21 - .25	25,685	143,195
Fillets, deep-skin	0.13	22,872	174,039
Surimi	.15 - .18	92,303	573,623
Minced	.22 - .50	12,771	30,866
Mantles	.75 - .85	0.2	0.2
Other retained		31	30
Total		341,695	1,222,490
<b>"Ancillary" products</b>			
Roe	0.08	8,718	1,556
Pectoral girdle	0.05	18	0
Heads	.15 - .20	73	0
Cheeks	0.05	8	0
Chins	0.05	72	0
Belly	.01 - .10	21	0
Fish oil	na	1,134	0
Milt	na	266	0
Stomachs	na	389	0
Total		10,701	1,556
<b>"Industrial" products</b>			
Bait (primary)	1.0	326	326
Fish meal (ancillary)	.17 - .22	22,839	0
(primary)	.17 - .22	2,816	16,486
Total		25,980	16,812
At-sea			
Total, all product forms		378,375	1,240,858

Table 4 (cont.) - For all groundfish processed by shoreside plants in the GOA and BSAI (mt).

Product Form	PRR	Product Wt.	Round Wt.
<b>"Primary" products</b>			
Whole fish	1.0	7,040	7,040
Bled only	0.98	828	835
Gutted only	.80 - .90	131	155
Gutted only	.80 - .90	100	117
H&G w/roe	.55 - .80	133	162
H&G western	.50 - .78	3,069	5,372
H&G eastern	.32 - .65	14,091	22,765
H&G tail removed	.44 - .62	184	304
Kirimi	0.48	268	543
Salted/split	0.45	4,300	9,477
Wings	0.32	2	6
Fillets w/skin, ribs	.32 - .45	116	332
Fillets w/skin, no ribs	.27 - .38	148	508
Fillets, no skin, ribs	.21 - .25	137	557
Fillets w/ribs, no skin	.25 - .35	226	842
Fillets, no skin, ribs	.21 - .25	24,273	126,699
Fillets, deep-skin	0.13	489	3,762
Surimi	.15 - .18	89,226	488,657
Minced	.22 - .50	2,590	1,171
Mantles	.75 - .85	2	2
Butterfly, no backbone	0.43	1	1
Other retained		0.01	0
Total		147,352	669,308
<b>"Ancillary" products</b>			
Roe	0.08	5,160	219
Pectoral girdle	0.05	22	0
Heads	.15 - .20	107	0
Chins	0.05	3	0
Belly	.01 - .10	28	1,106
Fish oil	na	8,021	0
Stomachs	na	10	0
Milt	na	408	0
Bones	na	4,061	0
Total		17,820	1,325
<b>"Industrial" products</b>			
Bait (primary)	1.0	932	932
Fish meal (ancillary)	.17 - .22	32,732	0
(primary)	.17 - .22	939	5,522
Total		34,603	6,454
<b>Shoreside</b>			
Total, all product forms		199,775	677,087
<b>AGGREGATE TOTAL</b>			
(At-sea and Shoreside)		578,150	1,917,945

## DISPOSITION AND DISPOSAL OF SURPLUS PRODUCT

Regulatory requirements for increased retention and increased utilization in a fishery implicitly raise questions about monitoring the disposition of production output. To paraphrase an old adage, *you may require that a product be produced from a given quantity of catch, but you can't always assure somebody will buy it.... and certainly not for a price that will cover all the production costs.* Expressed another way, while imposing retention and utilization requirements on groundfish harvesters and processors may reduce discards of fish *in-the-round* and, by extension, impose some costs associated with handling, processing, and storage (all of which may, it is hoped, induce harvesters to modify their behavior to avoid unwanted catches), it will almost certainly be true that some products will not find markets.

There may be several reasons for this. Some product may be "unsalable" as a result of inferior handling, processing, and storage. Certainly, some of the raw catch will be of the wrong size (too small or too large), given the operators "primary" mode of production. Some will be the wrong species, and thus not amenable to existing processing procedures or plant configuration. And still other bycatch will have attributes which do not meet "primary" product requirements, e.g., wrong sex, parasite infestation, or physically damaged.

It seems probable that individual operators, confronted with restrictive retention and utilization requirements, will assess their options, given the physical limitations of their plant, and the cost [in terms of, 1) handling, processing, storing, and marketing these "non-primary" products, and 2) the associated loss in "primary" product output], and then seek the least cost means of optimizing production, subject to these constraints.

This may mean "utilizing" bycatch to produce output that requires the lowest investment in processing and/or the least amount of post-production storage space. In some cases, at least in the shortrun, this may mean processing these "non-primary" products in the quickest, least costly way available, and then disposing of the "product" as efficiently as possible, while meeting the technical letter of all applicable laws and regulations.

### Mandatory Product Retention

Requiring that all products be retained until sold could present implementation problems. First, such a requirement might exceed monitoring and enforcement capabilities and authority, since all production would have to be tract beyond primary production.

*For an IR/IU FMP Amendment to achieve its goals, some provision governing the disposition and disposal of products resulting from IR/IU requirements will likely be needed. While not closing all possible loopholes associated with the disposition of retained bycatch, the Council may wish to consider, for example, requiring that all production of groundfish products within the EEZ be retained until either, 1) landed onshore, or 2) transferred at-sea to another vessel for transshipment out of the U.S. EEZ. While, in either case, it is possible that disposal of product will, nonetheless, take place, this provision does prevent the at-sea processor from directly and immediately "dumping" unwanted product.*

### Legal issues

The following conclusions with regard to NMFS authority over activities of processors are made in the NOAA GC opinion on limitations on roe stripping (December 1, 1989 - page 2):

\* There is (also) authority under the Act to limit wasteful practices by requiring at-sea processors to retain harvested fish rather than discarding them. At-sea processing is "fishing" subject to regulation under the Act.

\* There is authority -- though not as clear-cut -- to limit wasteful practices by requiring at-sea processors to utilize fish flesh for food products and fish meal. There have been no instances thus far of directly mandating what a processor does with legally processed fish for purposes of full utilization.

\* There is no authority to limit wasteful practices by regulating on-shore processors, because on-shore processors can be regulated only indirectly as an incidence of managing "fishing."

In other words, NMFS does not have the authority to mandate *catch utilization* standards for shoreside processors.

**The Council may wish to consider requesting that the State of Alaska implement parallel regulations to those proposed for at-sea processors, governing shoreside processors' catch utilization.**

**Document Prepared by**

**Lewis E. Queirolo  
Sally Bibb  
Dave A. Colpo  
Angie Greig  
William Karp  
Martin Loefflad  
Steve Meyer  
Kaja Brix  
Joe Terry**

**National Marine Fisheries Service  
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**An Examination of Permitting Limited Processing Upgrades**

**prepared by**

**Alaska Region - Alaska Fisheries Science Center  
National Marine Fisheries Service**

**December 1995**

## **An Examination of Permitting Limited Processing Upgrades**

In the Council debate over License Limitation for the BSAI and GOA groundfish fisheries, the issue of allowing limited processing of groundfish by vessels designated "catcher" under the program was raised. The Council rejected a series of amendments to the License Limitation proposal and voted, instead, to restrict the ability of "catcher" vessels to add processing capacity. Nonetheless, several Council members expressed a desire to obtain additional information about the implications of allowing some at-sea processing by designated catcher boats, within the context of an "Improved Retention/Utilization" program.

To this end, a preliminary analytical framework has been proposed which would permit an examination of the key questions raised in the Council-debate, and identify any additional considerations which might accompany such an analysis. The Council posed the following questions (contained in a letter, dated October 19, 1995, from Clarence Pautzke to Richard Marasco):

1. Should processing upgrades be allowed?
2. How much processing capacity should be allowed; 10 mt/day; 18 mt/day; an unlimited quantity?
3. Which species may be processed; all species, all but "the target" species; or all species except pollock and P. cod?

Answers to these questions depend upon the policy objectives of the Council. An examination of historical catch and discard data, by fishery and vessel "category," may provide insights necessary for the Council consideration of this issue. At a minimum, a preliminary examination of the available data will indicate whether the policy questions can, at present, be addressed, or whether additional information will have to be collected in order to evaluate the implications of each.

An analysis of the economic implications of allowing or prohibiting catcher vessels to upgrade would, perhaps, frame the initial enquiry as follows: "Assume that catcher boats are permitted to process some amount of their groundfish catch at-sea. What are the probable economic costs and benefits?"

To answer such a question empirically, one would turn to the historical catch record. By examining the data from the NMFS-observer program, Alaska fish ticket files, the Region's "Blend" files, and NMFS Weekly Processor Report files, it may be possible to create an empirical profile of each groundfish target fishery. This profile would contain the available information on:

1. The analytical "universe" of catcher boats, in the specific target fishery, for the period of analysis.

That is, how many catcher boats participated in a given target fishery, in a given period of time? It is this number which will define the initial population of "potentially affected entities," upon which the analysis would be based.

2. The number of catcher boats in each of three size categories (based on LOA).

These categories would coincide with the length thresholds for required observer coverage; i.e., vessels greater than or equal to 125'; vessels less than 125' but greater than or equal to 60'; and vessels under 60'.

3. The aggregate catch (estimated total catch if possible, landed catch if not) of all catcher vessels in the analytical "universe," by target fishery, by area, by vessel size category, by at-sea or onshore.

These data will provide an indication of the relative contribution to total harvest attributable to the "catcher boat" segment of the fishery.



4. The number of catcher vessels, by size category, by target fishery, which had observer coverage, during the base-period under analysis.

That is, what proportion of the total number of catcher vessels in the "universe" were observed, and at what level of coverage (e.g., 30%, 100%)?

5. The total catch of the observed vessels, by target fishery, by size category.

When compared to the total catch of the analytical "universe", a judgment can be made as to the proportion of the total catch by catcher vessels which is documented by observer coverage, and how much is not.

6. The composition, by species or species group, of the total catch of observed vessels, by fishery and vessel size category.

Any assessment of how much processing might be feasible by upgraded catcher boats, and for which groundfish species, is, in large part, dependent upon the availability of data on species composition and quantity in the total catch, by target fishery. Because observer data contain detailed information on catch composition, retention, and discards for the catcher boat sector, the relative size of the "observed" portion of the sector to the total size of the sector may suggest how much confidence one should place in the analytical findings. For example, if only 1 in 10 catcher vessels in a given target fishery had any observer coverage, the strength of the conclusions reached in an analysis might be lower than if, say, 7 of 10 boats had observers on-board. If, on the other hand, numerical coverage was relatively low, say 4 in 10, but those vessels with observers accounted for a significant portion of the total catch in that fishery, then somewhat greater confidence might be placed on the analytical findings. Thus, it becomes important to compare not only numbers of vessels but the relative share of the total catch between "observed" and "unobserved" segments.

A decision will have to be made as to the "appropriateness" of extrapolating from the data on observed vessels to unobserved vessels (or observed hauls to unobserved haul). This decision may vary by vessel size category within a given fishery, as well as from target fishery to target fishery. Once a judgment has been made about the adequacy of these empirical data (assuming that judgment supports proceeding to an analysis) an examination of the quantity and species mix of "bycatch" and "discards" in the respective fisheries can be made.

By examining the historical patterns of bycatch and discards, by target fishery and vessel size category, judgements may be possible concerning the "appropriate" size of processing upgrades to be authorized under the proposed action. This may also vary, by target fishery, catcher vessel size category, area, and (perhaps most importantly) the programmatic objectives of the Council. For example, assume that the objective of the Council is to provide an economic opportunity for traditional catcher-only vessels, in a given target fishery, to increase the "value-added" utilization of previously under- or unutilized bycatch species and reduce bycatch discards, while discouraging excessive growth in (especially at-sea) groundfish processing capacity. Then, if the historical record indicates that, for a given target fishery, the bycatch and discard of under-utilized species with "value-added potential" to catcher boats is, on average, say, five tons per day, round weight, a provision limiting processing upgrades on catcher vessels in this target fishery to 18 tons (or even 10 tons) per day may be inappropriately high.

Depending upon the number of catcher vessels in the fleet, such a provision may be contrary to the objective of discouraging excessive growth in processing capacity, and may be "unnecessary" to provide the value-added economic opportunity (and thus, reduction in discards) desired by the Council. On the other hand, if the historical record indicates that, on average, these boats have bycatch and discard levels of under-utilized species with "value-added potential" on the order of 20 tons per day, and the number of operations is relatively small, then limiting the processing upgrade to five tons per day probably will not produce the economic opportunity or reduction in discards potentially available through a more appropriate (i.e., somewhat higher) upgrade threshold.

These data should also reveal, for a given target fishery, which "under-utilized" species are present, and in what relative quantities, in the historical catch composition record. This information could indicate what discard savings might potentially be realized by the proposed action. But in addition, the relative quantities of these "under-utilized" species could be an important consideration in establishing the parameters of the "processing upgrade" program, for any given target fishery. If a given species, or species complex, is not present in significant quantities historically in a target fishery, the Council may wish to consider whether or not to authorize processing by catcher vessels of that species. To do so could induce covert targeting on a species not traditionally taken in that specific target fishery, perhaps increasing bycatch and discard of other species beyond historic levels by these vessels. In addition, if the species in question is utilized by other fisheries, authorization of its processing by catcher vessels not traditionally dependent on its catch could have unanticipated distributional impacts on other sectors of the domestic industry. The effective result could be a net increase in at-sea processing capacity, unrelated to the objective of providing some modest opportunity for catcher vessels to utilize their traditional bycatch discards.

The probable level of participation in an upgrade program cannot be precisely anticipated, *a priori*. Participation would likely vary, by target fishery, depending on, 1) the species or species groups authorized to be processed, 2) the authorized daily quantity of processing, 3) the average abundance of the "authorized" species or species groups present in the catch, 4) the presence of potential markets for the "authorized" species or species groups, 5) the unit value of the processed output, 6) the age, size, and configuration of the existing catcher boat fleet, 7) the regulatory constraints on "upgrading" the processing capacity of the specific vessel in question (e.g., load line certification), and 8) the cost of acquiring, installing, operating, and maintaining the necessary equipment to permit "limited processing" of under-utilized bycatch. It may only be possible, given information currently available on these operations, to project the "upper bound" of the potential increase in at-sea processing (and thus reduction in bycatch discarding) by catcher vessels.

It is assumed that by reviewing the catch, retention, and discard data for the "catcher" vessel fleet, by target fishery, the "appropriate" processing upgrade threshold will emerge. This should permit the Council to determine, on the basis of its objectives for the proposed action, "*Whether processing upgrades should be allowed,*" for a given target fishery; "*How much processing capacity should be allowed, 10 mt per day (round weight equivalent), 18 mt per day, or unlimited amounts?*"; and "*Which species may be processed . . .*"

#### **Preliminary Findings on the Issue of "Upgrading"**

A "preliminary" examination of the available data on BSAI groundfish catcher vessels was undertaken. Alaska fish ticket data files show the most complete "by vessel" catch data for this fleet. Using 1994 as the base year, a profile of catcher vessel activity in BSAI groundfish target fisheries was prepared (see Tables 1.0 and 1.1).

The cursory profile selected only records of catcher boat deliveries to "on-shore" processors, under the assumption that at-sea deliveries were "unsorted" codends, precluding the opportunity to undertake "value-added" processing of unused bycatch species, as proposed for the "upgrade" action. Only catch in the EEZ was included. All trawl gear types were combined into a single category. Prohibited species bycatch and non-TAC species were omitted. The "target" designation was made using the Alaska Region formula, but based upon vessel, processor, week, and gear-level of aggregation. Week ending date was derived from reported "landing date."

The calculation of "observed" percentages was obtained by flagging those fish ticket records that matched inseason observer data, by vessel, processor, week, BSAI, and gear. To these data was added "vessel length" information, from Federal permit data or Alaska vessel registration files. The estimates of observer coverage were measured in two ways. First, as the percentage of total weeks fished by the "target" catcher boat fleet and, second, as the percentage of total metric tons of catch for that fleet. The tonnage represents the fish ticket landed weight, expanded to round weight equivalent catch, using the Alaska Region's standard product recovery rates.

The "match" of inseason observer data to corresponding fish ticket records was not 100%.<sup>1</sup> Therefore, the reported "observed percentages" will potentially be slightly lower than the actual statistic. In categories where the number of weeks is relatively high, the difference may be 0-3 percentage points. For categories where there is less data, the difference may be 0-20 percentage points. At the same time, it must also be acknowledged that the "observer" statistics are *estimates*. Hauls which are observed are "sampled" and this sample is extrapolated to the balance of that particular haul. The fraction of the total haul sampled can be very small. In addition, on average, approximately 60% of all hauls made by a "100% observed" vessel are actually sampled. (The percent of total hauls sampled from the "30% fleet" is substantially lower, although the percentage of sampled hauls while the observer is on-board any given vessel may be more than 60%.) Therefore, on the basis of the extrapolated catch and composition estimates for *observed hauls*, an additional extrapolation is made to the balance of the hauls of the "observed" vessel which were unobserved. It is a measure of this latter "estimate" which appears in the tables.

As these preliminary data indicate, the level of observer coverage, either as a percentage of the number of vessels in the fleet or as a percentage of the total catch, varies significantly by target fishery and vessel size. For example, in the BSAI pelagic pollock fishery in 1994, approximately 61% of the catcher boat fleet's total weeks of operation were "observed." These "observed" weeks accounted for roughly 73% of the total catch. For the bottom pollock target, the "weeks observed" dropped to about 52%, while total catch "observed" was approximately 68%. In other fisheries, the available catch and composition data are much more limited.

It will be necessary to use these estimates on catch and composition to extrapolate from the "observed" to the "unobserved" segments of each target fishery, in order to empirically address the "Catcher Boat Upgrading" questions, posed by the Council. It must be understood that, in order for any quantitative evaluation to be conducted, a number of strictly limiting assumptions will have to be articulated and adopted.

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<sup>1</sup> The actual match between these two data sets was on the order of 89%.

**Table 1.0. -- Observer Coverage, by Target, BSAI, On-shore Delivery, 1994.**  
 (Catch in thousand metric tons).

Category	Number of vessels	Weeks fished	Weeks observed	Percent weeks observed	Catch	Observed catch	Percent catch observed
Pollock							
bottom	25	33	17	52%	9.5	6.5	68%
pelagic	77	891	547	61%	423.8	310.5	73%
Sable fish	48	87	6	7%	.4	.1	17%
Pacific cod	148	871	300	34%	59.9	34.3	57%
Rock sole	1	1	0	0%	-	-	-
Turbot	23	33	10	30%	.9	.3	36%
Yellowfin	16	42	25	60%	10.1	6.7	66%
Flat, other	2	2	1	50%	-	-	-
Rockfish	2	2	0	0%	-	-	-
Atka mack	1	3	0	0%	-	-	-

Note: Where categories contain 3 or fewer vessels, catch amounts are not reported.

**Table 1.1. -- Estimated Observer Coverage, by Target and Vessel Length, for BSAI, On-shore Delivery, 1994.**  
(Catch in thousand metric tons).

Category	Number of vessels	Weeks fished	Weeks observed	Percent weeks observed	Catch	Observed catch	Percent catch observed
<b>Pollock</b>							
bottom							
> 124	8	14	11	79%	5.2	4.6	88%
60-124	17	19	6	32%	4.3	1.9	44%
pelagic							
> 124	26	325	267	82%	216.6	194.9	90%
60-124	51	566	280	49%	207.2	115.6	56%
<b>Sable fish</b>							
> 124	1	1	0	0%	-	-	-
60-124	24	44	6	14%	.3	.1	22%
< 60	23	42	0	0%	.1	.0	0%
<b>Pacific cod</b>							
> 124	22	87	47	54%	13.2	7.8	59%
60-124	80	500	253	51%	45.3	26.5	59%
< 60	46	284	0	0%	1.4	.0	0%
<b>Rock sole</b>							
60-124	1	1	0	0%	-	-	-
<b>Turbot</b>							
> 124	1	1	1	100%	-	-	-
60-124	17	24	9	38%	.8	.3	41%
< 60	5	8	0	0%	.1	.0	0%
<b>Yellowfin</b>							
> 124	6	16	10	63%	4.3	3.2	76%
60-124	10	26	15	58%	5.8	3.5	60%
<b>Flat, other</b>							
60-124	2	2	1	50%	-	-	-
<b>Rockfish</b>							
60-124	1	1	.0	0%	-	-	-
< 60	1	1	0	0%	-	-	-
<b>Atka mack</b>							
> 124	1	3	0	0%	-	-	-

Note: Where categories contain 3 or fewer vessels, catch amounts are not reported.

Under the status quo, catcher boats are permitted to add processing capacity, subject to vessel stability requirements, load line restrictions, etc. Therefore, the following observations may apply equally to the "with" and "without" license limitation situation.

**How "Upgrading" Might Affect BSAI Pollock IR**

- \* Only the retention of pollock and P. cod is regulated under the IR Pollock Program.
- \* "Catcher boats" are not directly regulated under the proposed IR Program for BSAI Pollock.
- \* If a designated "catcher boat" adds processing equipment, it, in effect, become a "catcher/processor" (C/P) *for reporting purposes*.
  - \* This implies that the vessel would be required to, 1) maintain all records, including catch and production records, currently mandated in regulation for a C/P, 2) comply with all observer coverage requirements, and 3) meet all other applicable legal and regulatory requirements for C/P operation, e.g., EPA discharge requirements, U.S. Coast Guard load line certification, etc.
- \* If these "upgraded" operators (U/O) are permitted to process pollock (and P. cod) at-sea, and pollock is the dominant species in the total catch, these U/O are subject to all the IR provisions, e.g., must retain all pollock and cod.
  - \* Under this situation, the upgrade provision could, 1) increase total at-sea processing capacity for this (these) species, and 2) reduce the total supply of unprocessed pollock (P. cod) to shoreside processors.
- \* If pollock and P. cod were not permitted to be processed at-sea, under the "upgrade" provisions, then the processing activity of the U/O would not be governed by the BSAI Pollock IR Program.
  - \* Depending upon the number of vessels participating, the quantity of processing authorized, the capacity added, and the species processed, U/O could have unanticipated affects on existing target fisheries for some species or species groups.
- \* If pollock was not the dominant species in total catch, the activities of the U/O would not be regulated under BSAI Pollock IR.

**List of preparers:**

**Lewis E. Queirolo**  
**Alaska Regional Economist**  
**Alaska Fisheries Science Center**

**David A. Colpo**  
**Industry Economist**  
**Alaska Fisheries Science Center**

**Angie Greig**  
**Computer Specialist**  
**Alaska Fisheries Science Center**

# IMPROVED RETENTION - IMPROVED UTILIZATION in BSAI Groundfish Fisheries

Interim Report to the Council  
April 20, 1996

- \* "Species of Concern" - Alaska pollock, P.cod, Yellowfin, and Rock Sole
- \* New Targeting Protocol - Total Groundfish Catch Composition

## Retention

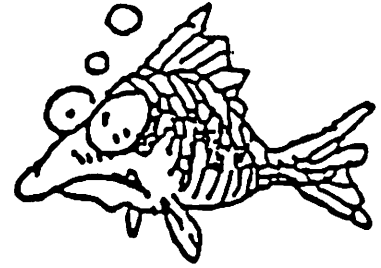
- \* IR Option 1 *"Target-Based"* Compliance Criteria
  - A. Suboption A - Retain 100% of "Target" Species catch
  - B. Suboption B - Retain 100% of catch of "Species of Concern"
- \* IR Option 2 *"Species-Based"* Compliance Criteria
- \* IR Monitoring and Enforcement
- \* Directed Fishing Standards - V.I.P. - Moratorium/License Limitation
- \* IR Phase-in

## Utilization

- \* IU Option 1 *"No product-form requirements"*
- \* IU Option 2 *"For-human-consumption"*
- \* IU Option 3 *"Maximum allowable meal production"*
- \* IU Monitoring and Enforcement
  - A. Directed Fishing Standards
  - B. Onshore (Inshore) Processing



North  
Pacific  
Longline  
Association



Agenda C-5

April 13, 1996

Mr. Richard B. Lauber, Chairman  
North Pacific Fishery Management Council  
650 West 4th Avenue  
Anchorage, AK 99501

**RE: Improved Retention/Utilization**

Dear Rick:

In the course of addressing implementation and other aspects of IR/IU, the committee identified a number of unresolved complications and "unintended results" arising from different aspects of the proposal. These should be resolved carefully before the Council takes any action on the measure. If ever a proposal cried out for a formal cost/benefit analysis, this may be it. Here are some of the issues:

Product Form, Human Consumption

It may be possible to head-and-gut immature cod and pollock and cod, but then what do you do with them? Our members have no problem with the first part, but don't know if there's any market. Certainly our aim should be not to catch such fish in the first place - they are best left in the ocean to grow, spawn, recruit to the legitimate fishery. Turning them into meal would certainly be wasteful. Whether meal is for human consumption is a question the committee hasn't quite resolved, but that begs the question. We simply ought not to be killing a lot of small fish. In a semantic sense full retention may attempt to redress discard problems, but it doesn't really do anything about the actual catch of unwanted fish.

Enforcement/Observers

It is not clear that enforcement of a full retention measure will be very effective. The Observer Program doesn't seem to think that they can do the job unless there are more observers on the vessels, which would be prohibitively expensive. Enforcement seems very sure that it cannot enforce a "phased-in program" - it is 100% retention, or no enforcement. Enforcement through back-calculation using product recovery rates is problematic. It may be that in realty the best we can achieve is a voluntary program.

### Product Recovery Rates

The committee reviewed product recovery rates for various products. Some had wide ranges. Product recovery rates do vary over the year, and from vessel to vessel. Back-calculating round weights and total catches from product weights could prove to be a real challenge - to understate the point.

### Authority Over Inshore Processors

It seems that under the Magnuson Act the Council and the Secretary have no authority to require IR/IU of shoreside processing facilities. Since a lot of product is processed shoreside, this could be a problem. It is claimed that shoreside processors are "fully utilizing" their fish - though I'm not sure we are completely agreed on what "full utilization" means. It is also claimed that the State wanton waste statute required full utilization, and that further State regulations can be developed to parallel any federal IR/IU regulations. These issues should be clarified thoroughly before the Council takes any action.

### Gulf of Alaska; Small Factory Trawlers

Since the GOA experiences the same bycatch and discard problems as are encountered in the BSAI, it seems logical that whatever is developed for the latter will be applied to the former. There are owners of small factory trawlers who are not sure they can survive under some of the IR/IU proposals being discussed.

### Flatfish Fisheries

Flatfish fishermen claimed that there are not adequate markets to support flatfish IR/IU (nor is it clear that there are adequate markets for small cod and pollock), but that they would like a "phase-in" of the idea. NMFS seems to feel that a "phase-in" is unenforceable.

### Directed Fishing Standards, PSC Limits

References were made to complications arising from directed fishing standards and PSC limits.

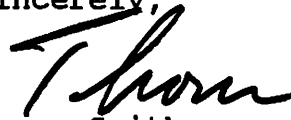
Trawl representatives seem to wish to "fast track" full retention of cod and pollock, in the apparent hope that this will resolve or finesse perceived bycatch and discard problems. It is not clear that this would be the case, if we continue to harvest immature or undesirable fish for which there is little or no market. The real solution is not to kill such fish in the first place.

In addition to evaluating its possible benefits the Council should look very carefully at the complications, unintended results, and potential negative economic impacts of IR/IU. We

are traversing new territory, and a very careful analysis of potential economic impacts should be undertaken before any regulatory action. We should also ask ourselves seriously if we aren't trying to outwit the environmentally-aware public through sleight-of-hand. If that perception gets abroad, we'll be in deep pickled cabbage.

Thank you for your attention.

Sincerely,

A handwritten signature in cursive script that reads "Thorn".

Thorn Smith



Fishermen's  
Finest

# North Pacific Fishing, Inc.

4039 21st Ave. W. #201 ■ Seattle, WA 98199  
TEL: (206) 283-1137 ■ FAX: (206) 281-8681

March 25, 1996

Mr. Joe Kyle, Chairman  
Improved Retention/Full Utilization Committee  
North Pacific Fishery Management Council  
605 West 4th Avenue, Suite 306  
Anchorage, AK 99501-2252

**RE: IR/IU Committee Meeting, March 25-27, 1996  
Comments on Draft Implementation Issues, Attachment #4 to  
NPFMC Memo of February 16, 1996.**

Dear Mr. Kyle:

We would like to present the following comments for the committee's consideration during the second set of meetings on the improved retention and utilization initiative. We understand that the committee's focus at this meeting will be on further refining aspects of full utilization, in particular, the *fish meal* and *for human consumption* issues as well as the utilization of the "last fish" or, the economic viability issue.

## **Ecosystem Considerations**

### **1. Pollution:**

Regarding the meal produced by shoreside plants, the EPA report stated:

**"pollock meal processors lead the industry in terms of pollutant discharges."  
(U.S. EPA, Response to Comments, Seafood Processors in Alaska, NPDES  
General Permit No. AK-G52-0000 (1995), page 7)**

In contrast, regarding at-sea processors, the EPA found that:

**"Discharges of seafood wastes to deeper, unimpounded offshore waters by  
mobile processors do not create the same kinds of problematic waste piles as  
do shore-based facilities."  
(EPA, page 26)**

An increased retention/utilization requirement that allows meal to meet the increased utilization standard creates a pollution concern. Any IR/IU plan should be designed to avoid or minimize rather than increase the impact of processing wastes on the ocean ecosystem.

2. Predator/Prey Balance

The Plan Team has expressed concern over disproportionate harvest rates on various groundfish species and of flatfish and cod predation on crab stocks. *See Preliminary Ecosystem Considerations* 1996, NMFS BSAI/GOA Plan Team, (September 1995), pages 3 - 5. The adverse biological effect of management measures, such as the IR/IU proposal, that may further reduce the flatfish and cod harvests should be carefully considered. Of particular concern is the possible adverse effect on crab stocks.

The IR/IU proposal has been described by some as primarily a political and not a biological problem; it is necessary that the committee consider measures to ensure that the IU/IR program not have adverse biological and ecosystem impacts while addressing a political problem.

**Economic Viability Considerations**

1. Minimum Size Considerations

We recommend the following minimum size requirements (round weight equivalent):

Cod	3.5 lbs
Pollock	3.0 lbs.
Rocksole	1.0 lbs.
Yellowfin sole	0.5 lbs.

Smaller sizes result in the "cod-on-a-stick" product issue that was discussed at the last committee meeting.

We understand that shoreside processors currently pay full price for cod 20"-24" and greater in length (6.0 lbs. - 7.5 lbs.); smaller cod are accepted for meal production at about 1.5 cents per pound. If these figures are accurate, a ban on meal production to meet the IR/IU requirement would adversely affect shoreside operations in a manner similar to the effect on at-sea operators. The effect is a significant incentive, to vessels delivering shoreside, to discard cod that are under 20"-24" in length. This reinforces our conviction, expressed at the last meeting, that 100% coverage, an observer on each vessel, is a necessary component of the IU/IR program.

The committee discussed the view that these economic realities are designed to deter harvest of small fish and therefore that economic considerations are irrelevant. However, minimum size purchase requirements now in effect may tend to encourage unaccounted for at-sea discard by vessels delivering to shore plants. This effect under IU/IR could be more severe, particularly regarding competition between industry sectors, and is an appropriate issue for consideration by the committee and council.

Sincerely,



Rudy A. Petersen

**Bycatch and Waste Reduction Provisions  
in S. 39 as of March 28, 1996**

**Section 2. Findings, Purposes and Policy**

**Purpose:** Add language in #6 to ensure that optimum yield determinations promote [fishery] development in a non-wasteful manner.

**Policy:** Changes policy #3 to assure that the national fishery conservation and management program encourages development of practical measures that [minimize bycatch and] avoid unnecessary waste of fish.

**Section 3. Definitions**

Defines **Bycatch** as fish which are harvested by a fishing vessel, but which are not sold or kept for personal use, including economic and regulatory discards and excluding fish caught and released alive during recreational fishing.

Defines **Economic Discards** as fish which are the target of a fishery, but which are not retained by a fishing vessel because they are of an undesirable size, sex or quality, or for other economic reasons.

Defines **Regulatory Discards** as fish caught in a fishery which fishermen are required by regulation to discard whenever caught, or are required by regulation to retain but not sell.

**Section 202. International Fishery Agreements**

Adds new section (g) **Bycatch Reduction Agreements** that requires the Secretary of State in cooperation with the Secretary of Commerce to seek to secure an international agreement to establish standards and measures for bycatch reduction that are comparable to the standards and measures applicable to U.S. fishermen in such fisheries as appropriate. The agreement must be consistent with policies and purposes of the Magnuson Act and approved by Congress the same way a GIFA is. Secretary of Commerce then needs to report by January 1, 1997 and annually thereafter on progress on this effort.

**Section 205. Import Prohibitions**

Allows Secretary of Treasury to certify countries that have not concluded a Bycatch Reduction Agreement. This could lead to import restrictions.

**Section 301. National Standards**

New **National Standard #9:** Conservation and management measures shall, to the extent practicable, minimize bycatch and the mortality of bycatch which cannot be avoided.

### **Section 303. Fishery Management Plans**

Adds a new required provision #11 for all FMPs: assess the amount and type of bycatch occurring in the fishery, and, to the extent practicable and in the following priority, include conservation and management measures to (A) minimize bycatch, and (B) minimize the mortality of bycatch which cannot be avoided.

Adds a new required provision #12 for all FMPs to assess the amount and type of fish caught during recreational fishing, and to the extent practicable, include conservation and management measures to minimize the mortality of fish caught and released that are the target species of recreational fishing under catch and release programs.

Council has 18 months to comply with new required provisions.

Adds new discretionary provision #10 to allow councils to use measures that provide a harvest preference or other incentive for participants within each gear group to employ fishing practices that result in lower levels of bycatch.

### **Section 313. North Pacific Fisheries Conservation**

(Change heading from Research Plan to Conservation Plan.)

Adds new section (g) **Bycatch Reduction:**

1. North Pacific Council must recommend measures to lower, on an annual basis for not less than four years, the total amount of bycatch that is occurring in its fisheries by statistically significant levels, and shall seek to reduce regulatory discards to the maximum extent practicable while allowing for the prosecution of directed fisheries with designated target species.
2. Council may recommend a system of fees (up to 1% exvessel) to provide incentives to reduce bycatch and bycatch rates and the fees will be deposited in the North Pacific Fishery Observer Fund, and may be made available to offset costs related to reduction of bycatch in the fishery from which fees were collected, and to the State of Alaska to offset costs incurred by the State in the fishery from which such fees were collected, and in which the State is directly involved in management or enforcement.
3. Council may recommend IBQs of regulatory discards that may not be transferred for monetary consideration and are made on an annual basis. Council may impose additional restrictions.

Adds new section (h) **Catch Measurement:**

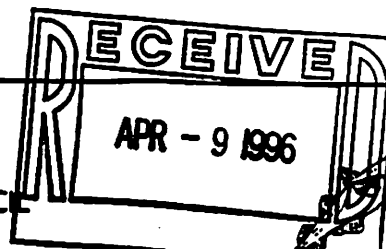
1. By June 1, 1997, Council must recommend measures for total catch measurement that will ensure accurate enumeration, at a minimum, of target species, economic discards, and regulatory discards.
2. To the extent that these measures do not require U.S. fish processors and fish processing vessels to weigh fish, the Council and Secretary shall submit a plan to the the Congress by January 1, 1998 to allow for weighing, including recommendations to assist such processors and processing vessels in acquiring necessary equipment, unless the Council determines that such weighing is not necessary to meet these requirements for total measurement.

**Adds new section (i) Full Retention and Utilization:**

1. By June 1, 1999, the Council must submit to the SOC a report on the advisability of requiring the full retention by fishing vessels and full utilization by fish processors, of economic discards in fisheries under its jurisdiction, to the extent that such economic discards, or the mortality of such economic discards, cannot be avoided.
2. The report shall address the advisability of measures to minimize processing waste, including standards setting minimum percentages which must be processed for human consumption. For these purposes, "processing wastes" means that portion of any fish which is processed and which could be used for human consumption or other commercial use, but which is not so used.



# Alaska Groundfish Data Bank



TO: RICK LAUBER, CHAIRMAN  
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

RE: INCLUDING GULF IN IMPROVED RETENTION/UTILIZATION PROGRAM

DATE: MARCH 9, 1996

SENT BY FAX: 1 pp

## REQUEST TO INCLUDE THE GULF OF ALASKA IN ANY REGULATIONS MANDATING IMPROVED RETENTION AND IMPROVED UTILIZATION

The members of the Alaska Groundfish Data Bank request that the Gulf of Alaska be part of any North Pacific Fishery Management Council analysis and recommended regulations mandating improved retention and improved utilization.

During discussions at the February and March meetings of the Council's Improved Retention/Improved Utilization Committee (IR/IUC) it became quite clear that any improved retention and improved utilization of fishery resources may reduce the profitability of some operations. Leaving the Gulf a "discard zone", we believe, will result in increased fishing effort in the Gulf of Alaska by vessels disadvantaged by improved retention and improved utilization regulations in the Bering Sea.

We feel that moving forward to improve retention and utilization is an important move in the direction of good stewardship of the resources on which we all depend and is as important for the Gulf of Alaska as it is for the Bering Sea.

The current Council motion is for a feasibility analysis for improved retention/improved utilization of pollock, Pacific cod, rock sole and yellowfin sole in the Bering Sea. Comparable species in the Gulf of Alaska are pollock, Pacific cod, shallow flatfish and rex sole.

### 1995 GULF CATCH AND DISCARDS - SELECTED SPECIES - BY MODE

SPECIES	SHRBSD MT CAT	SHRBSD MT DISC	SHRBSD %DISC	AT SEA MT CAT	AT SEA MT DISC	AT SEA %DISC
POLLOCK	70813	6535	9.23	2934	1443	49.18
PAC COD	55200	1508	2.73	13966	1942	13.91
SHW FLT	4940	705	14.27	536	200	37.31
REX SOLE	601	78	12.98	3447	260	7.54

We realize that the Council in January voted down a motion to include the Gulf of Alaska in improved retention/improved utilization and hope that a member on the prevailing side will move to reconsider at the April meeting.

We appreciate the Council's consideration of our request.

Sincerely,

Chris Blackburn, Director  
Alaska Groundfish Data Bank

North Pacific Fishery Management Council  
Improved Retention/Improved Utilization  
Transcription of Council Discussion  
April 20, 1996

[To save time and space the formalities of seeking and receiving formal recognition from the Chair have been omitted]

**Tape 48**

[Chairman Lauber asked Clarence Pautzke, Executive Director, to outline what the Council needed to accomplish on this agenda item at this meeting.]

Pautzke: I would draw your attention to two items in your notebooks. One is C-5(a), which is the listing of the alternatives as the analyst currently has those; and the second thing I would draw your attention to, and I would like Lew Queirolo to come up to the table here, is C-5(b) which is an executive summary that has a punch list of the issues, the implementational issues that we reviewed at the committee level. And this is a distillation of a major report that's in your notebooks and it is an outgrowth of several different implementational analyses that Lew did earlier on. So, you've got it kind of down to the bare bones where we need to have you take a look at the way we are planning to tell the analysts to resolve a particular issue and that's what will come back to you in June and then go out to public review if you just keep in the Bering Sea/Aleutian Islands. Now, I had a question for Chris on whether. . .Chris Blackburn, she's very interested, and so is the AP on having the Gulf wrapped into this. This is such a big change in the way we do fisheries in the North Pacific that I think there's going to be a lot of issues that are going to need to be resolved, a lot of approaches and things that we need to look at, and I think the best way to get our arms around that is to have a major public review of this over the summer. That's why my suggestion is that right now you focus on the Bering Sea and Aleutian Islands and that we send a document out for public review over the summer and then in September when you're struggling with this you can make your final decisions perhaps on the Bering Sea/Aleutian Islands and with your intent to implement it in 1998. We could then go forward with the study of the Gulf and those two things could all come together for January of 1998. So that's the way I perceive things happening here unless you direct us otherwise. We'd like to go down through this punch list that's in C-5(b) and also at the end. Then we will have told the analyst what he should come back with in June and if you want him to change directions on some of these alternatives, then this is the time we need to know this.

Lauber: . . .when you say punch list, C-5(b), ah . . . it starts out "bleeding or dumping, retention options, monitoring and enforcement," and so forth. Would that then relate back to C-5(a) which is our retention option 1, so forth? How are we going to work this?

Pautzke: I think you ought to have them side by side. Some of them will refer right back to the major alternatives. For instance, if you start with bleeding or dumping of codends, that was an implementational issue that was raised. The suggestion from the committee is that as far as analytical purposes we are suggesting that hook shaking and outright dumping of codends would be prohibited, period, fini. Unless you have a problem with that, that's the way the analyst would treat it in the document.

Lauber: O.K., can't we go through this rather rapidly, at least some of them and do that? Is that the. . .so, we'll follow that policy taking the C-5(a) and then using C-5(b) where it matches. And then there may be some other things I think that Lew mentioned that he may need clarification on. But, doing that, let's see what. . .is there any discussion on the bleeding or dumping, do you wish to give any other direction other than what's contained in the committee recommendation? O.K., I don't have any idea that. . .if you want to come back to any of these and so

forth, I'm not trying to rush anybody, but I am trying to move this along in some way so if something jogs your memory and you want to come back to an issue, certainly we'll do that.

Dave Benton: So, procedurally then, as we go through this list of issues if we have comments or alterations of the committee's findings and we should identify those, and if we don't do that then we have agreed with the findings of the committee? Or do you want a clear expression of that at this time?

Lauber: Well, I think I'm going to ask that question. On this issue that's exactly what I've done, is basically the Council's ideas correspond to those of the committee and that would be then the direction that the analyst would use.

Benton: Because I'd be willing to make a motion on this first item on the list if that's your preference.

Lauber: Well I was just going to do that one by acclamation. I didn't see any disagreement with it, so I don't think I need a motion, it's unanimous. We may on some of these others, though.

Pautzke: To clarify, I guess my feeling on it is that we're giving direction to the analyst, kind of intent, right now that he's going to view what's he's doing in terms that there would be a prohibition but that you have not really made a final decision on that until you get to the final decision in September. At that point you may hear some feedback from industry that says under these circumstances and this and so on, and so on, we need to be able to do it, and you may want to make that decision. But right now, this is kind of directional to the analyst, is the way I . . .

Steve Pennoyer: So the direction we're taking is that we are saying that is the option and the analysis will decide us later on whether we adopt it or not, whether it's enforcement, or what other aspects there are likely to be, that's what we're asking people to look at, but we're not making decisions here.

?: Correct.

Pennoyer: Thank you.

Lauber: O.K., we'll move on. The next one is retention options, target species vs species based target retention options. . .

Benton: . . . A question for staff. It's my understanding that given your work and the work of the committee, that retention option 2 seems to be the option that holds the most promise for the Council if I recall our discussion yesterday. And, I guess my question is that if we were to eliminate at this juncture retention option 1 and its suboptions, how would that affect the analytical process. Would that make your job simpler or more complicated?

Lew Queirolo: Much of the drafting on option 1a and b has already been completed so it's retention would not overly complicate the analysis. Its retention, however, would make the document substantially more complicated and substantial. We're talking 50 pages of text and analysis for those two suboptions.

Benton: So if we were to omit retention option 1, that would simplify the document and aid in the analysis if that was the case, correct? [affirmative response]

Pautzke: And it would really help. . . I mean, the committee went round and around and around on this, and it would really help focus the industry and public comment on something that's probably doable.

Benton: . . . I would make a motion at this point. I would move that we eliminate retention option 1 from the analysis and that the analysis would focus on retention option 2.

Linda Behnken: Second.

Lauber: It's been moved and seconded. Is there any further discussion on this? O.K., is there any objection to the motion?

Bob Mace: . . . I have no objection but I'm wondering if it might be more efficient to go ahead and verbalize what we want to do and ask whether there are any objections, rather than go through formal motions, to speed the process. I'm not sure we need this.

Benton: I can speak to my motion. . . Mr. Mace's comments are germane, but in this particular instance, and I think it's probably more so here than in others, we have a specific option that was adopted by the Council. My motion would be in keeping with the recommendations of the AP and I think we need to formally adopt this in order to remove the option from the analysis, otherwise it's fixed in place.

Pautzke: This one you need a formal motion on.

Lauber: O.K. I had said on some of these others I think we can just . . . speed through them, but on some of them we may need a motion on.

Mace: All right. I understand.

Lauber: O.K., there's been no objection - that was not an objection to the motion, so the motion passes, and we go with option 2.

Pautzke: The next issue is monitoring and enforcement. We discussed this at length in the committee and essentially we have looked at several different ways of using PRRs and on-the-grounds enforcement and so on and this is one that I think the analyst . . . that there's no major decision right now that the analyst has to have. He will be discussing and working with enforcement types to fully flesh this issue out for you so you'll have it when it comes back in June. I don't think there's a major decision at this juncture.

Benton: Well, it's a question for staff. Would the analysis look at, besides PRRs and observer coverage, would the analysis look at such measures as weighing or volumetric measurements in some fisheries as possible tools that could aid in the monitoring program.

Queirolo: . . . No, that isn't presently a component of this element. The specifics of this element deal with the degree to which onboard observers and enforcement personnel would be employed in assuring compliance with retention, and it speaks more to the level of resources that are being applied, and we have a range bounded by what the committee referred to as only a base level of enforcement to a more intensive level of enforcement, including doubling of current observer coverage. But that's the focus of this element rather than looking at issues of weight or volumetric.

Pautzke: I would only add that while this amendment is not a vehicle for establishing total weight measurement, I think that probably some of the history of what we've done with total weight measurement in the pollock fisheries and where we are with the advanced notice of proposed rulemaking and also where the Magnuson Act is on this, since there is specific language in the amendments that would require total enumeration or whatever, at least we ought to have that as part of the discussion document. And then the other thing that I'm not sure is really clear in this monitoring and enforcement part is that the committee, I think, has recommended, what they

call "the Cadillac version" of observer coverage which would be, say, doubling. . . it's not a recommendation, but it's just that it has to be discussed in there--doubling the observer coverage on these vessels to get at this problem of monitoring and enforcement. And again, it's not . . . it's something that will be discussed in there and you'll have it before you when you look at this in June.

Pennoyer: I think this is a philosophical discussion at the present time and I think the degree of Cadillacs versus Fords versus something else and whether you need them or not are going to vary by the item we adopt and I'm not willing at this time to say that the Secretary for one would be willing to sign off on any particular amount of enforcement for any particular measure. So as each one of these is brought up, that should be discussed. At the same time, I'm certainly not willing to say that there's any showstopper here that I've seen so far overall to our ability to do it. But that discussion is something we should have and I don't feel we're ready to sign off on any particular piece here unless there's an element that's missing in terms of that discussion right now.

Clem Tillion: Before we start, and we'll be doing this in June, talking about adding more observers we had better take the fact that if you had the IRS require an audit of each and every taxpayer it would probably bring in a little bit more money for the United States government but not a heck of a lot more and I think we're mandating far too much and we better start thinking about the fact that we're going to have to have something that we can do within our 2%, so let's start. . . yes, I want all of your data there in June, but while we're talking philosophically I think we're observing places we don't need to observe right now.

Wally Pereyra: Following along Mr. Pennoyer's remarks, it seems to me we don't want to overburden this document formally, or this thrust formally, with things that might actually hang it up in terms of getting final approval and so I think it's fair and appropriate to discuss things like weighing, full weighing and so forth, the observer coverage, in the document. Those specific issues I think should be separate initiatives so that the main thrust of what we're trying to accomplish here isn't lost and we don't wind up at the year 2000 still discarding, who knows--we'd have to ask Larry, how many hundreds of millions of pounds of pollock and cod. So, that would be my wish.

Benton: It was not my intention to add options that be part of the rulemaking in the end for weighing at sea or something like that, because we do have other initiatives to cover those. However, in this particular instance, my question regarding weighing and volumetrics, we have an analysis that's already been prepared, as Dr. Pautzke has pointed out, and quite a bit of information, and I think some of that information could be and should be incorporated into the analysis if it possibly could to help understand monitoring options and varying problems and solutions that may come about because of this and I don't think that requires much additional work. I think it's mainly a matter of just incorporating those items into the analysis.

Lauber: I don't understand--I'm now looking at the committee's report and it says "enforcement and monitoring would consist of back-calculating PRRs and their secondary data for estimating catch and discards." What's the basis. . . how would PRRs tell you. . . if you know how much somebody produced, how does that tell you that they have fully utilized the resource that they've caught and they haven't thrown anything overboard?

Queirolo: We worked through a couple numerical examples and essentially the approach that is reflected in that option speaks to a situation where a vessel is boarded, the boarding officer goes to the bridge and looks at the catch log and records the quantity of catch reported there while other agents aboard evaluate the content of the hold in terms of product forms. Those products are then used in conjunction with the standard product recovery rate and back cast to an equivalent round weight and that back-casted round weight is compared to the catch logs and if they agree within an acceptable range compliance of retention is assumed. The method has been applied differentially to confirm compliance with the utilization and I can go through that if you'd like as well, but at least on the retention side, it's the catch log against the back cast, using product recovery rates on all the primary product on board.

Lauber: I understand that, but my question is, how does that tell you that he hasn't thrown any fish overboard? It doesn't, does it. It just tells you that there is a relationship between the estimate of what was in the codend and the product recovery rate, but what happened between if you. . .the estimate is different or wrong or he lies, or whatever, that doesn't tell you how much fish you started out with. We're right back where we are now, which is a problem that we have.

Queirolo: The advice from enforcement and from observers is that this is largely an honor system, or voluntary program. It's often been characterized as equivalent to a speed limit on a highway. You are going to have people speed, but the risk of being detected is there and the occasional state patrol on the side with his lights flashing may induce behavior that's consistent with that speed limit.

Lauber: I understand that, and I believe that there's going to be substantial compliance with this no matter what we do, I understand that. But, in taking drives through National parks where there's a rule publicly posted that says there's no shooting in this National park, there's strong evidence that there's a few people that don't do that 'cause they have to change those damn signs all the time because there's a bunch of bullet holes in them. But, let's face it; I understand that it may be only one out of ten thousand people; most of us drive through that park and put our gun away and don't shoot, but somebody sure as hell is. And, by the way, they do that without an observer; I don't know that I'd want to be the guy standing beside that sign making sure they don't shoot. . .

Pennoyer: . . . I guess I'm a little confused about where we're going with this. I think Mr. Benton raised the question of whether one option was looked at in terms of enforcement relative to these various things and I think that's a good question, if there's something we can see that's been left out. All of these rules are going to come to us, I presume, with a section saying how enforceable this is and how we might do it. Now, if we've left some consideration out like scales that needs to be looked at in certain situations, then we ought to make sure the analysts include it. But right now a philosophical discussion might bear quite differently from one rule to another. One might be, quote, difficult, but it'll work somehow; another might be totally impractical. So, my assumption is the analyst will look at each of these, you're coming back and going to tell us, with advice from enforcement, that we can then judge how enforceable a particular rule is and is there something else we have to do here with that? To specifically say, yes, you should look at it, that's a monitoring program, or you ought to have a transmitter on board, or some of these other suggestions, or are you going to be basically looking at most of these options in terms of enforceability?

Queirolo: . . . We're obviously not going to be comprehensive, but we hadn't thought about the transmitter issue, and hadn't spoken directly to the weight. The committee identified two potential monitoring and enforcement programs that bounded the range of approaches that they felt were viable within the context of the fisheries as they're currently prosecuted and we were intending to examine each of those programs as to the limits in that bound.

Pennoyer: Then I presume we'll have NMFS and Coast Guard enforcement report on each one of those and presumptively at this stage if there's an option here that we can identify that just period won't work, that's what we should be saying right now won't work; but other than that, you're going to bring back this analysis?

Queirolo: That's the plan.

Lisa Lindeman: I'd just like to say that from General Counsel's standpoint, we do have at this point concern from an enforcement standpoint with using PRRs for enforcement. When they were published they were published as estimates, recognizing that they can vary with fish size, seasons, processing methods and so to use them as a definite standard to enforce against somebody, we've got concerns and we'll obviously be working with Coast Guard, NMFS enforcement, the analysts, when they're working on this analysis, but I think I should say now that that is an issue. And, another point is, with respect to utilization, this issue whether or not the Magnuson Act

gives the authority to regulate utilization and product forms for onshore processors. At this time it doesn't, so unless the Magnuson Act were amended to provide that authority to the Secretary, it would be up to the State of Alaska to implement regulations. But that's not to say that the Council couldn't include the regulation of onshore processors and product forms in the analysis because in the event the Magnuson Act were amended to provide that, then you'd have the analysis there.

Benton: Mr. Pennoyer keeps referring to a philosophical discussion and I'm just trying to get at what elements might be included in the analysis and I think my comment previously is particular germane given what NOAA General Counsel's just told us, and that is to incorporate into the analysis to the extent that's necessary the previous work that's already been done with regard to weighing and volumetrics because then we can look at that information and as we go through the development of this program and identify any problems that we may have in order to address the concerns NOAA General Counsel just called our attention to. So, in that regard I guess it's my . . . and I don't know if I need to make a motion about this, but my request that the analysis incorporate that previous work and I don't think it'll require a lot of new work but I do believe we need a section in there that discusses the various methods that we can monitor compliance so we can make a rational judgement about it.

Lauber: I think Clarence has indicated that they would include what work we have done. Is that adequate?

Benton: That's sufficient, thank you.

Capt. Anderson: I just don't want to get too hung up at this time on the details, the numbers, looking at logs, and back calculating. Another topic that was discussed with enforcement in the committee is having a program that's framed that allows reporting of what people see. If you have an observer he might not be tied to this program but since he's aboard this boat he's walking around. If he sees a larger amount of pollock and P. cod continuously going over the side, when those fisheries are in open status, you don't need to have a specific number tied to a specific standard to say that boat's in violation because he can't be discarding pollock and P. cod; it's 100% retention. You have observers, you have all the crew members, you have other boats in the area, a lot of opportunities to have enough of a framework there that brings that 750 million pound figure down, so I don't want to get too hung up on how well can we back calculate and get into . . . on the numbers, because there are other methods out there that are going to be used to help frame this program.

Lauber: I understand, 100%, and if they throw one fish over it's a violation.

Anderson: And, we won't be writing a ticket for just one fish, we're really after the big . . .

#### Tape 49

Tillion: I didn't get my idea across very well the last time. For God's sake, let's keep it simple. What we're trying to do is decide how fast the speed limit should be on the highway, not how we enforce it, though we have to keep that in our mind because we're going to have to do some enforcing. But, really, let's keep this thing simple so that we can get something through at a reasonable time that says you keep all your pollock and cod, you might want to ease off a little bit on your sole 'cause they're a surplus, but however you decide it, that's your decision. Let's get . . . what Capt. Anderson said is very good. They'll figure out how to enforce it; we might have to make some changes then. Whether you might want to put radar on and have the . . . in Anchorage is another decision.

Lauber: I don't know about one pollock, but I do remember a Coast Guard boarding, I don't know, it must have been a Polish vessel or something, on the East Coast. The inspection passed fine, they didn't find any problems, but the cook, in trying to be a nice guy, came out and wrapped up a little package and he had a couple of lobsters in it and he gave it to the boarding crew and they didn't take too kindly to that, seized the vessel, and so forth. So, big numbers don't always count.

Anderson: Well, I know I personally in 1975 boarded a foreign vessel off Southeast Alaska and found creatures of the Continental Shelf in the vessel's galley and brought that out in a gunny sack and spread it out on the deck so it looked like a lot in the picture that we took, enough to get a vessel seizure, so, yes even in my own background I have done such things.

Lauber: O.K., can we move on then. You've got your direction on that?

Pautzke: The next issue is interaction with regulatory discards. As was indicated earlier, National Marine Fisheries Service has indicated that directed fishing standards will be enforced, and the way I look at this, is that I think the analysts ought to discuss when some of these, should discuss when we're going to have problems with regulatory discards in the document. Even if we do not come to closure on the issue at our September meeting when you take final action, you still have time during 1997 to grapple with this problem if you can't quite get past it in September, because these things won't come into play until 1998.

Pennoyer: Clarence, we talked a lot about that and I think as we go into this program we are going to fine-tune a lot of things. We're going to find that fisheries targets are going to shift and so the directed fishing standards are going to look a little different. A lot of things are going to happen. Right off the bat, if there's any way to pull out any general estimate of the amount of discard that occurs because of the directed fishing standards or PSC, it would be nice to know that. If we can solve 90% of the problem and put the other part of this. . . except for obvious things that we need to do on the back burner, it'd be nice to know that. So if the analysts in any way. . . even. . . I've been told overall we can't do that, but even if there are example fisheries, like we know what the cod fishery closes in a certain year and all the discards prior to that closure and all the discards after that closure, I mean there've got to be ways that we can get at some idea of the magnitude for at least example fisheries in example years, and I think that would be very helpful for us to have in the report.

Benton: I appreciate the comments of Mr. Pennoyer and I think he's right. I would ask the analysts how hard it would be to also look at, when they're looking at this thing in a qualitative discussion, I think is what Mr. Pennoyer is mostly talking about, although I think it would not be that difficult to provide us with some quantitative data to show when and at what level regulatory discards occur. I think if I understood Mr. Pennoyer correctly, he's asking that those numbers be provided to us. But it would be interesting to have the analysts also identify for us measures or ways that the accounting procedures and the allocation procedures when we set TACs could be modified so we could avoid these situations if possible. I think if we get a good sense of the magnitude of the problem we'll then be able to see whether or not it is a problem and needs to be addressed and that's the first step. But as I go through it I think that the managers should look at this with an eye towards how can we change the management system to make this program a success, and I would ask that be done as much as possible.

Pennoyer: In response to that, I think that. . . we. . . sit down and describe it, but I think it requires more than that, so as we get this. . . and if it comes out to 1% let's forget it, but I don't think it'll come out that low, so as it comes out, certainly a presentation by staff in terms of how it's done now and where the problems occur in concert with this, whether it's in the document or whether in fact we just bring that presentation in June, or whenever we get to this, I think we ought to do that. That's clearly step two of looking at this if step one shows that there's a problem, which I assume there's going to be enough to talk about.

Benton: As part of that I think it would be important to identify for us in the discussion, sort of the procedure that's used now to determine when it goes on bycatch status, when it goes on PSC status, and also when and at what stage other fisheries are shut down because of bycatch of one of these species that we're talking about. One thing I'm particularly interested in is knowing how and when, for example P. cod in the yellowfin sole fishery or some other fishery would result in a closure of that other target fishery and whether or not that's a problem and whether there's any mechanism currently to do that.



Pennoyer: Obviously in any year there are hundreds of these examples because we do it practically daily and at least weekly, they're putting something on bycatch status at the start of the year, during the year, sometime during the year and then switching to PSCs--there are a lot of these actions, but it seems to me it would be good to highlight a particularly visible one. Let's say it's cod, let's say it's cod in the directed pollock and flatfish fisheries and see if we can follow how that occurs in a couple of example years and see what did happen and see what the numbers are during those periods of time. And maybe if the analysts could bring us that type of example to look at, because I don't know any way to go back and take them all. We're going to have to look at some examples, I think, and I think we could do that.

Benton: I'd agree with that.

Pereyra: I think we have to keep in focus what we're really trying to accomplish here. We are making, in my mind at any rate, a quantum change in the way the fisheries are going to be prosecuted out there and this is going to have all sorts of downstream impacts that I don't think that we can determine what they're going to be at this juncture. I think what we have here is no different than what we had with the halibut/sablefish ITQ program. We have an iterative process that we're involved with and we're going to be making changes as we go along. It isn't like tweaking a percent or two here or there or adding a day or starting a week earlier or a week later, sort of thing. This is a major change and certainly there are some things that we want to kind of look at and get a feel for, but to try to somehow fine-tune this down to the last fish that might go over and not go over, I just think that it's going to have us miss what our objective is here. Now, if our objective is different than that, O.K., I can see where there might be some other things people might want to do, but I'm assuming that what we want to do is we want to make a dramatic change in the discards and a dramatic increase in utilization of groundfish which is harvested in the North Pacific.

Pennoyer: I think I started out with my remarks saying just that, that we didn't want to lose focus, that we wanted to look at whether this was a problem that needed solving ahead of time or something we work at down the line, so we're going to first look at some examples of magnitude, give us our first look at whether this is significant in terms of timing right now; second, we're going to look at a couple of examples so that people better understand. And I think that this Council should understand anyhow how these actions that you pass and TACs and bycatch allowances and so forth occur. There's obviously some interested in finding out a little detail, particularly relative to probably cod in the flatfish fishery is the example I hear the most. So, my proposal was to bring you . . . have the analysts look at the overall question, qualitatively at least, and as quantitatively as possible, of what regulatory discards are, both directed fishing standards and PSC if possible, and second, some examples of the system so we can see why things occur and decide if it's something we want to deal with or not. I suspect initially we're probably right where you said, but this is just to bring information before the Council in June.

Benton: The only thing I'd point out is that the State had a series of reports put together over the last several years that do go through all the fisheries and we'd be happy to make those available to you, in terms of the regulatory discards.

Pennoyer: I think you did them using our data so my presumption is we can still provide it.

Behnken: A quick comment. I think Wally's point is well taken about looking at the magnitude of various discards, because if we take Gulf cod as an example and start talking about managing to reduce waste, we're going to run into some pretty serious allocation issues and I suppose that's probably true with other fisheries. I don't know how much of that we want to get wrapped up into this package.

Tillion: In answer to that, waste is not acceptable. The fact that it might result in some allocation changes is just one of the facts you're going to have to face. Again, I think that we should confine ourselves to whether we want to reduce the waste or not reduce the waste. We'll face the allocation problems that they lead to at a later date.

It's just unacceptable to throw this much edible fish over. We're going to catch hell, we're catching it in the press, we're catching it from the Congress, let's address that problem.

Lauber: O.K., let's move on . . . this Council, after 122 meetings, is confronted with a situation that we're not quite used to working with. And that is, here we've had all these significant units of the fishery come in here and tell us that they think we should do this and do it damn fast and we just can't handle it. We're so used to fighting about these things that we don't quite frankly give a damn about what you people out there care, we're going to continue fighting because like it! We'll find something wrong with this thing before it's done.

Pautzke: The next issue is . . .

Lauber: Contaminated and damaged fish?

Pautzke: Yes, we talked about this and we worried about the little fish that got caught in the machinery or had oil spilled on it for some reason and so on and so forth, and the committee in their first line there tells you that they believe there should be an outright prohibition on discards, whether damaged or contaminated, is the only way to proceed. And then they recognize that if you do have some problems and they're absolutely mandated that you have a discard, for instance you get . . . what was it, hydraulic fluid was the example brought it by someone, then we say log it in the book and tell us what's going on and so on, but we say there ought to be a prohibition, so no one uses it and lets fish rot on the deck.

Lauber: Those basically, they could have almost been covered in the section above. They're kind of regulatory discards, there's nothing you can do about them, and they can handle that. . . that's the type of thing, I don't know, we adopt this as a policy, let it be handled by regulation at a later time. O.K., defining utilization.

Pautzke: That's a broad issue of how to do this utilization thing and whether you can use, for instance, a list of . . . first of all there's the meal problem on whether you should allow unlimited amounts of meal, and if you don't, how much of that meal is designated for human consumption and so on and so forth, and whether it can be run through a chicken or another fish and you still have a human consumable product. We have come up with different ways of looking at utilization. One way would be to take your primary product list that you already have available and if they meet the PRRs on that and they have a selection of primary products that they're using that everybody knows is being used for human consumption and they meet a certain standard there, that we will have taken care of that problem. I'm not sure, Lew, that they have to make any decisions at this point; this will be fully teased out and discussed in the document that comes back to you and then you will have some very heavy decisions to be made on this whole full utilization part of it and how to track it and where does our tracking leave off and how much can we enforce it.

Lauber: So we can just leave this in, you have enough direction from the committee, don't need any more from us on that?

Queirolo: Yes, Mr. Chairman.

Lauber: O.K., let's move on then. Potential phase-in on flatfish.

Pautzke: This is a big item. We right now are looking at just the Bering Sea and Aleutian Islands. We were looking at, under retention option 2, it would be 100% retention of all subject species, and those being pollock, rock sole, Pacific cod, and yellowfin sole. And that's what the analysts will come back with right now, unless you decide that there needs to be some kind of a soft landing for certain sectors of the fleet, for instance concerning flatfish, or something. And if you want him to come back with a graduated schedule for some of these and talk about them in the document and leave that available for your decision, you need to put it in now.

Lauber: If we wanted the full list immediately and so forth, and we wanted the phase-in of a couple of the species in a two-year and a five-year category, now is the time to tell you that?

Pautzke: Now's the time to tell us.

Lauber: Right now what you're working on is a no phase in -- it would take effect, 100% retention of all species in what, 1998? [Queirolo: Yes, sir.] So, we will have to tell you if we want to add to that? You will provide us that, anyway.

Benton: I'm prepared to make a motion in this regard, O.K.? I would move that we add as an option for analysis a phase-in for flatfish species, specifically rock sole and yellowfin sole, and that the options include: (1) no phase-in; and (2) a two-year and five-year phase-in period beginning with suboptions under each of those, beginning with 60% and graduating to 100% within the period of the phase-in.

Pautzke: For clarification, the issue that Mr. Cotter raised. Are you talking about 1998 as the start, or . . .

Benton: For the phase-in?

Pautzke: Yes, you start with 60%, for instance, in January for 1998 and have the analyst graduate it up . . .

Lauber: Phase-in from the implementation date?

Benton: Correct, that would be the way that I would look at it.

Lauber: O.K., so the effect would be the year 2000 and the year 2003. . .

[Behnken seconded the motion]

Lauber: It's been moved and seconded. Go ahead, speak to your motion.

Benton: The reason I chose two and five is because I think that brackets a reasonable period of time for such phase-in to occur if we were to adopt it. And it also addresses the concerns that we've heard in public testimony that a five-year phase in from 1998 is a very long period of time and industry is already on notice that they have to begin, or should begin, looking at the fisheries and looking at alternative markets or alternative ways to operate and obviously this allows the Council to choose that five-year period if we wish, two years would shorten that time frame considerably and I think takes care of some of the concerns that were raised in public testimony that that period not be extended to such a long period of time beyond the present time.

Mace: The AP has suggested rex sole, for example, in the Gulf of Alaska and other shallow flats. Now, do you anticipate this would come along later?

Benton: My motion applies only to the Bering Sea/Aleutian Islands analysis at this time but it would be my understanding that, as Dr. Pautzke laid out our time line for dealing with the Gulf, that certainly we would look at it in the same context.

Pautzke: I was thinking, Mr. Mace, that we would take that up as an issue when we got done with some of these other ones.

Lauber: O.K., is there any further discussion on this. . .

Pennoyer: Just, as I stated before, the enforcement and monitoring discussion, the philosophical discussion; my presumption. . . we've heard there are difficulties that may be . . . in our ability or desire to do this and I think that those will come out in the discussion in the analysis. I don't think they're worth belaboring at this point, so we'll just do it then.

Queirolo: I'd like to clarify. In the two-year phase, the intent is that it would be 60% in 1998, 80% in 1999, and 100% at the beginning of the third year?

Benton: That's correct.

Pereyra: There was a five year also? [affirmative response]

Lauber: Is there any objection to the motion? Hearing none, it passes.

Pautzke: The next item is the limited processing allowance for catcher vessels. Now, if you turn over your list of alternatives, and this is kind of a non-sequitur here because it's a different issue, but if you turn over that page you'll see on the back side that you've added limited processing for catcher vessels and you have several options there. Right now the staff is not analyzing that issue in context of this amendment for the Bering Sea and Aleutian Islands. It's an issue that we feel that has to be implemented for 1998, if the license limitation system goes through, and that we would take that on a separate track; it'll be a separate amendment package that we promise we'll get back to you so you'll have it implemented in 1998 if you want to go ahead with it, rather than having it within this document, because what we've been told by the analyst, he just cannot do all that in the time frame you've asked him to.

Benton: A question for Clarence. Would it be your suggestion that we would table this item and put it on a separate track, is that what you're saying, and then we'd take it up separately.

Pautzke: Yes, we're tracking it with the staff; it's not going to get lost, it's just that as soon as we have an opening for analysts to work on it we'll work on it as a separate item and bring it back to you -- it may be January of 1997, but you'll have it in time for your decision process to allow it to be implemented with the license system if you want to go ahead with it; it's not lost.

Behnken: I'll make that motion, and following the advice of the committee I would move that the analysis be on a separate track and be of only Option 3, but that we ensure that it is available for implementation concurrent with this [emphasis added] program if we so choose. [Pereyra seconded]

Lauber: Any objection to that motion? Hearing none, it passes.

Pautzke: Then, if you turn to page 4, "additional issues that are identified;" most of these, I think, are direction to the analyst that we want to have these items reviewed and analyzed in the document that comes back before you. When you get down to number 6, though, which is "potential impacts to the Gulf fisheries by making fishing in the Bering Sea . . .," you also have heard testimony that they would like the Gulf included and you have an AP recommendation to that effect. And what I have suggested is that because I've heard from the analyst that he's already going to coming right up to the wire to provide this document for us in June, and I believe that we probably do want to have this available for review over the summer so we can get lots of good feedback from industry, that what I have suggested is that we put the Gulf of Alaska on a separate track that would start this fall and that the intent would be to implement them all together when we first bring the Bering Sea provisions into play.

Lauber: If that's our intention let's put something on the record so that we can notice the public that we are going to do it and do it that way.

Benton: I'm going to make a motion, but I'm going to speak to it just a little bit before I make the motion so everybody understands. I'm intending to move that we delete item 6 from the Bering Sea/Aleutian Islands analysis and then it would be my intention through a separate motion to address the Gulf issues in their entirety, and that would be along the lines of what Clarence is talking about. So, I would move that we delete item 6 from the Bering Sea/Aleutian Islands analysis.

?: Second.

Lauber: Any objections? Go ahead, it passes.

Benton: Clarence, is the time you want a motion on the Gulf, or do you want that after we're done with this check-off list for the Bering Sea?

Lauber: Oh, this is fine, . . .

Benton: I would move that we initiate an analysis of the options for the Gulf Alaska that were identified by the AP for improved retention and improved utilization and that this analysis commence immediately following the conclusion of the analysis and process to adopt measures for the Bering Sea/Aleutian Islands, with the intention that we would implement both suites of measures concurrently when we're done.

Pautzke: And, it would be my intention to request the analyst, though, to thoroughly discuss the impacts, which he has to really under the Magnuson Act, or the . . ., to discuss how what we're doing in the Bering Sea is going to impact the Gulf. I think that should be part of his analysis that he brings back in June, though that will not be the vehicle for taking action on the Gulf.

Pereyra: I certainly embrace the intent of Mr. Benton's motion. The only concern I would have is that if we got down the road away and we found that there were some complications in the Gulf that might delay Bering Sea, I think the magnitude of the issue in the Bering Sea is so large that we should reserve the right at that point down the road to revisit this and put them on a separate track if we felt . . .

Lauber: They are on a separate track and I understand your concern, I guess, but the Council can always change its mind, but I think this is noticing people we intend it take it up; our intention is that they would eventually meet up and be able to be implement on January 1, 1998, that's our current intention.

Benton: The first thing that I'd note is that if I had a second I'd speak to my motion. [seconded by Pereyra]. Now, with regard to Dr. Pereyra's statement, your encapsulation of the intent of my motion is correct and with regard to Dr. Pereyra' concern, I chose the words "with the intent" to implement them concurrently, very specifically because I don't think if there are unanticipated issues that come up with regard to the Gulf that we want them to get in the way of implementing a full program. But to the maximum extent that we can, I think we want to get this stuff in operation concurrently. That was the intent of my motion.

Behnken: Just a clarification of the motion. Does your motion include then the analysis that Mr. Pautzke suggested so that we could evaluate the impacts of implementing one without the other?

Lauber: I thought that the analysis was going to at least include the impacts of implementing them in the Bering Sea and what impacts that will have on the Gulf of Alaska.

Queirolo: That would be our expectation although I . . . [missed rest in tape changeover]

## Tape 50

Lauber: . . . [missed first part in tape changeover]. . . that motion? O.K., it passes.

Lindeman: One other issue that was raised early on in the context of the utilization issue -- NOAA General Counsel was asked, if the Council did require full retention of fish, whether or not there was authority to require onshore processors to accept those fish and we looked at that and we don't see how the Secretary would have the authority to require onshore processors to accept the fish and that might have to be another regulation on the part of the State.

Benton: We have run into this situation a number of times and probably the most prominent issue was roe-stripping for pollock, and while anybody that has looked recently at the Department of Fish and Game's budget will understand, I can't control the Legislature, because if I could we'd have more money, but we would. . . the State has every intention of implementing complementary regulations to ensure that the intent of the Council is met with regard to onshore deliveries and onshore processing. Frankly it's my personal opinion, without having benefit of having the Attorney General's office go through our regulations in some detail, that our regulatory and statutory framework already permit us to do this. But I will have them look at that and it will be our intention to develop a complementary program.

Pennoyer: One more issue, have you gotten adequate feedback on the meaning of human consumption or the options under the human consumption section?

Queirolo: We're proceeding in the analysis along the lines identified by the working group and that was to side-step the issue slightly by simply mandating an acceptable list of primary products without speaking to whether they are or are not intended "for human consumption." Meal was not on that list and none of the ancillary products -- heads, bellies, tongues, lips, eyes, etc. -- we would not speak to whether those were or were not for human consumption, but Option 2, which talks about a percentage for human consumption, would be met by a strict compliance with a specific list.

Pennoyer: O.K., that's fine.

Benton: As part of the analysis, it occurs to me that if we're going to be using the primary product list as the basis, it occurs to me that the Council may want to consider developing a framework wherein occasionally that list could be reviewed and changed by a simple regulatory amendment, as opposed to a plan amendment, so could the analysis look at ways that that could be implemented so that we wouldn't wind up in a situation where we had to go through a whole plan amendment just to allow the taking of cod eyes or fish lips for . . . soup?

Pautzke: We'll have that in there as a discussion item.

Queirolo: It's already a component of this assessment.

Lauber: Seems like I should know this, and somewhere I thought it might come out, but why is it that you can't eat fish meal?

Queirolo: A number of human beings around the planet do eat fish meal and indeed some in this room have admitted to doing so. That was part of the quandary that we faced in defining "for human consumption" and whether meal would be included or would not be included. It's sort of which human population do you want to include.

Lauber: Well, it's obviously extremely high protein and if you . . . I don't know, maybe it would be more palatable if you put it with other products, sausage or something like that. It doesn't kill you, does it, if you eat it?

Queirolo: No, sir. In the '70's there was a requirement in some Southeast Asian countries to include a fixed percentage of fish meal in all baked goods to increase the protein in the diet of their population, and we pointed that out. But there was no closure in the group and we have yet to come to closure from any sources as to how to treat meal, so we side-step it.

Lauber: It might be an interesting dilemma we get ourselves into if we say that fish meal doesn't count and then all of a sudden we find out that fish meal cures cancer, and all of a sudden we're putting fish meal in everything and everybody'd go to jail 'cause they couldn't do that.

Pennoyer: My previous question on human utilization; we hadn't eliminated fish meal, there's an option in here that still allows the inclusion of fish meal, right?

?: It is an option.

Pennoyer: So, O.K., so we're covered.

Benton: I need to go back for one more second to the phase-in for flatfish. Under the options that we identified for analysis, it occurs to me that we had a phase in, a stepwise phase-in and no phase-in. One other option that we might want to consider would be just a delay of full implementation on flatfish, because I'm thinking that enforcement may see a 60-80-100% phase-in as being a problem and there may be a compromise there to address to industry's concern and enforcement's concern, just delaying implementation for flatfish for a period of time following implementation for cod and pollock.

Lauber: Your span is the same, two and five. . .

[several people talking all at once]

Lauber: Any objection to including that? Hearing none, we'll include that as an option.

Pereyra: I have a small issue. It's been brought to my attention that certain options for utilization of, say small pollock and cod that might involve, for example the manufacture of a mince product, would take vessels potentially out of the fishing mode and put them into the processing mode, such as a number of the freezer longliners and some small factory trawlers and the expense of that, requiring a load line, could be fairly substantial, so I would like to have the analysis look at that particular issue, too, the load line issue as it relates to upgrading the way in which the fish is handled on board in order to comply with the utilization.

Queirolo: Already in there, sir.

Pereyra: Good, thanks.

Fluharty: I'll raise this question. I talked earlier with staff about it. The whole question of markets and whether they're able to absorb this is really critical to what we're doing here. So far, as I understand it, there is no market analysis to look at demand for the kinds of things that we're potentially producing or whether they can actually be brought on shore. We might require that they be brought on shore and maybe processors may take them, but there's no value in this for anyone. I think we're probably going to be making a serious problem for ourselves and for everyone involved in this, it's a potential double jeopardy for someone who catches something that they can't get rid of and on top of it we fine them for having it. I know that we're trying to create incentives, so somewhere

in this process, I'm not sure where it is, I think we have to address this set of issues because they can be the real killers, and as part of that I think that we ought to be looking at some framework under which we define sort of impossible circumstances that would allow us to actually discard even under these regulations. I mean, I think we need to have a pressure relief valve as a back-up to this whole process, because otherwise we're I think going to be in a potentially tough situation.

Lauber: What are we supposed to do, I mean what do you. . .

Fluharty: I wanted to raise that and have it on the record and initiate this dialogue.

Benton: With regard to one of those issues that Dr. Fluharty brought up, I believe it was discussed in the committee, so I believe that the analysts have at least discussed this with the committee and I'm assuming that. . .and this is the issue of whether or not you have to take the fish if somebody brings it to you.

Queirolo: That's the assumption that we're operating under . . .

Benton: Correct, and I would concur with Dr. Fluharty that as part of that. . .when you get into that discussion, you may want to identify that if they don't do that it could be a problem and it would be a real qualitative paragraph or two, I'd assume.

Pereyra: With regards to this issue involving meal and human consumption and so forth, the State of Alaska has, I think, some creative definitions and way of addressing that and I think it would be helpful if the committee could look at that when they're addressing this particular issue because I think it might get us out of this sort of loop that we're getting into here, so I'd just sort of offer that as a suggestion.

Lauber: O.K., to make it clear. We are done with this issue and Dr. Queirolo can catch his plane . . .

[End of this discussion]