


MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke   
Executive Director

DATE: October 4, 1999

SUBJECT: Groundfish Specifications for 2000

ESTIMATED TIME  
3 HOURS

**ACTION REQUIRED**

- (a) Review revised specification process.
- (b) Approve preliminary and interim BSAI and GOA groundfish specifications.

**BACKGROUND**

Revised specification process

In June 1998, the Council approved Amendments 48/48 to streamline the specification process to allow the previous year's final specifications to remain in effect until superseded by subsequent final specifications. NMFS notified the Council in July 1999 that the Council's preferred action will not be forwarded to the Secretary for approval based on legal and technical difficulties (Item D-2(a)). NMFS and Council staff have agreed to table further development of streamlining while NMFS and the Council produce the revised SEIS, Steller sea lion management measures, AFA amendments, and other analyses.

Beginning in 1998, the Council streamlined its own Groundfish Plan Team process for approving preliminary and interim specifications. As no new ABC recommendations are made at the September Plan Team meetings, the Teams have recommended rolling over all 1999 final specifications as preliminary specifications for 2000. These preliminary specifications will be used as the basis for interim specifications to start the commercial groundfish fisheries on January 1. In November, the Plan Teams will be making OFL and ABC recommendations based on new stock assessments for all groundfish species. The Council will adopt final recommendations for the 2000 fishing year at its December meeting, based on the November 1999 SAFE report.

NMFS staff have prepared a draft environmental assessment (EA) for the Council to review in its deliberations of preliminary specifications. It contains: 1) the Preliminary 2000 Bering Sea Aleutian Islands (BSAI) Stock Assessment and Fishery Evaluation (SAFE) report; the Preliminary 2000 Gulf of Alaska SAFE report; the Preliminary 2000 Economic SAFE report; and the Preliminary 2000 Ecosystem Chapter. The combined document was mailed to you on September 29.

BSAI and GOA groundfish specifications

The preliminary SAFE reports, BSAI and GOA groundfish ABCs and TACs, bycatch apportionments, and halibut discard mortality rates need to be approved and made available for public review and comment.

Tables 1 and 2 from the EA are attached to this memo and list the 1999 final specifications that the Council is considering for approval as preliminary specifications for 2000.

The final 1999 Prohibited Species Caps (PSC) limits for the BSAI are listed in Tables 3 and 4. The final 1999 PSC limits for GOA halibut are listed below. The 1999 halibut discard mortality rates are listed in Tables 5 and 6. These are all recommended to be rolled over as part of the preliminary specifications. Joint and Gulf of Alaska Plan Team minutes are attached as Items D-2(b)(1) and (2).

		<b>GOA</b>	
<b>Trawl gear</b>		<b>Hook and Line</b>	
1st quarter	600 mt (30%)	1st trimester	250 mt (86%)
2nd quarter	400 mt (20%)	2nd trimester	15 mt ( 5%)
3rd quarter	600 mt (30%)	3rd trimester	25 mt ( 9%)
4th quarter	400 mt (20%)	DSR	10 mt
2,000 mt		300 mt	



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

AGENDA D-2(a)

OCTOBER 1999

July 14, 1999

RECEIVED

JUL 19 1999

N.P.F.M.C

Richard B. Lauber, Chairman  
North Pacific Fishery Management Council  
605 West 4<sup>th</sup> Avenue, Suite 306  
Anchorage, Alaska 99501-2252

Dear Rick,

In December 1996, the North Pacific Fishery Management Council (Council) approved development of amendments 48/48 to the groundfish fishery management plans. The intent of these amendments was to streamline the Council's annual groundfish harvest specification process by (1) rolling over final harvest specifications established for one year into the following year to serve as preliminary specifications and eliminate the need to publish interim specifications, and (2) issuing annual specifications through a single Federal Register document which would be published after the December Council meeting.

We have subsequently found some legal and technical difficulties with amendments 48/48 as originally contemplated. These problems stem largely from our need to comply with the National Environmental Policy Act (NEPA), the Administrative Procedure Act (APA), and the Regulatory Flexibility Act (RFA). Compliance with these statutes has become more rigorously scrutinized in recent years since the Council's recommendation to proceed with amendments 48/48. We have developed a Supplemental Environmental Impact Statement, implemented Steller sea lion conservation measures in the pollock and Atka mackerel fisheries, and have been named in a variety of lawsuits. The agency also has been under increasing pressure to produce more rigorous economic impact analyses pursuant to changes in the RFA, which opened these analyses to challenge and judicial review.

These actions have forced us to take a hard look at our management and harvest practices, and to reassert the importance of analyzing the impacts of fishing on the environment and public involvement in the decision process. Hence, we are concerned that the original concept for amendments 48/48, that would allow rolling over harvest specifications from one year to the next, would undermine these objectives and would not sufficiently accommodate legal requirements under NEPA, APA, and the RFA.



To resolve these problems, we recommend a fresh look at the design of amendments 48/48. To this end, we suggest that the Council and its groundfish Plan Teams work with us to evaluate our mutual management objectives and requirements for the annual harvest specification process. The result should be a new design for a comprehensive process that meets the requirements of NEPA, APA, and the RFA, and expedites the current Council procedure.

The first step in this process is development of a document that combines the annual Stock Assessment and Fisheries Evaluation Report (SAFE) with an environmental assessment (EA), regulatory impact review (RIR), and initial regulatory flexibility analysis (IRFA) prepared for the annual harvest specifications. A scoping meeting for the development of this combined document is already scheduled for July 20, 1999, in Seattle. In the past, NMFS staff have prepared the annual EA/RIR/IRFA to accompany the final annual specifications. A combined SAFE/EA/RIR/IRFA should be prepared this year to allow the start of the 2000 groundfish fisheries on January 1. Accordingly, by December 31, 1999, we must file a SAFE/EA/RIR/IRFA for the 2000 specifications that sufficiently assesses the effects of harvesting groundfish in the Bering Sea and Aleutian Islands management area and the Gulf of Alaska. The comprehensive nature of this analysis also will allow tiering of subsequent analyses prepared on separate proposed management measures.

The second step is to discuss and decide on criteria necessary to develop a more efficient process for the establishment of annual harvest specifications to meet current and future management objectives. We hope to initiate this discussion also at the scoping meeting on July 20, 1999. We will be prepared to discuss the need for, and progress toward, the redesign of amendments 48/48 whenever you wish to place this issue on a future Council meeting agenda.

Sincerely,

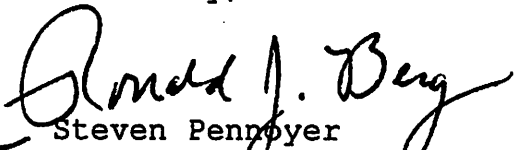
  
Steven Pennoyer  
For Administrator, Alaska Region

Table 5. Summary of halibut discard mortality rates (DMRs) in the Bering Sea/Aleutian Islands (BSAI) groundfish fisheries during 1990-1997 and recommendations for Preseason Assumed DMRs to use in monitoring halibut bycatch mortality in 1999.

Gear and Target	1990	1991	1992	1993	1994	1995	1996	1997	2-Year Mean	Used in 1998	Recommendations for 1999
<i>Trawl</i>											
Atka mackerel	66	77	71	69	73	73	83	85	84	83	85
Bottom pollock	68	74	78	78	80	73	79	72	76	76	76
Pacific cod	68	64	69	67	64	71	70	67	69	71	69
Other Flatfish	80	75	76	69	61	68	67	71	69	68	69
Rockfish	65	67	69	69	75	68	72	71	72	70	72
Flathead sole	-	-	-	-	67	62	66	57	62	64	62
Other species	-	-	-	-	-	-	-	-	-	71	69
Pelagic pollock	85	82	85	85	80	79	83	87	85	81	85
Rock sole	64	79	78	76	76	73	74	77	76	74	76
Sablefish	46	66	-	26	20	-	-	-	23	23	23
Turbot	69	55	-	-	58	75	70	75	73	73	73
Yellowfin sole	83	88	83	80	81	77	76	80	78	77	78
<i>Pot</i>											
Pacific cod	12	4	12	4	10	10	7	4	6	9	4
Other species	-	-	-	-	-	-	-	-	-	9	4
<i>Longline</i>											
Pacific cod	19	23	21	17	15	14	12	11	12	11	11
Rockfish	17	55	-	6	23	-	20	4	12	22	12
Other species	-	-	-	-	-	-	-	-	-	12	11
Sablefish	14	32	14	13	38	-	-	-	-	-	-
Turbot	15	30	11	10	14	9	15	22	19	12	19
IFQ	-	-	-	-	-	14	20	31			

Table 6. Summary of halibut discard mortality rates (DMRs) in the Gulf of Alaska (GOA) groundfish fisheries during 1990-1997 and recommendations for Preseason Assumed DMRs to use in monitoring halibut bycatch mortality in 1999.

Gear and Target	1990	1991	1992	1993	1994	1995	1996	1997	2-Year Mean	Used in 1998	1999 Recommendation
<i>Trawl</i>											
Atka mackerel	67	89	81	67	53	-	60	-	57	57	57
Bottom pollock	51	62	66	57	48	66	79	66	73	73	73
Pacific cod	60	62	66	59	53	64	70	62	66	67	66
Deep wtr flats	61	58	70	59	60	56	71	61	66	64	66
Shallow wtr flats	66	71	69	65	62	70	71	71	71	71	71
Rockfish	65	75	79	75	58	71	65	63	64	68	64
Flathead sole	-	-	-	-	54	64	67	74	71	67	**
Other species	-	-	-	-	-	-	-	-	-	67	66
Pelagic pollock	71	82	72	63	61	51	81	70	76	66	76
Sablefish	70	60	68	59	67	58	80	61	71	67	71
Arrowtooth fldr	-	-	-	-	-	-	66	48	57	66	57
Rex sole	-	-	-	-	56	76	63	47	55	69	55
<i>Pot</i>											
Pacific cod	12	7	16	24	17	21	7	4	6	14	6
Other species	-	-	-	-	-	-	-	-	-	14	6
<i>Longline</i>											
Pacific cod	15	18	13	7	11	13	11	22	16	12	16
Rockfish	6	-	-	7	-	4	13	-	9	9	9
Other species	-	-	-	-	-	-	-	-	-	12	16
Sablefish	17	27	28	30	22	-	-	-	-	-	-
IFQ	-	-	-	-	-	40	16	15	16	-	-

\*\* Recommend 58% for the Catcher vessel fleet, 74% for the Catcher/Processor fleet.

**BSAI and GOA Joint Plan Team Meeting  
Joint Report  
September 21-23, 1999**

**Bering Sea/Aleutian Islands Team**

Loh-lee Low (NMFS-AFSC, Chair)  
Lynn Denlinger (USFWS)  
Brenda Norcross (UAF)  
Mike Sigler (NMFS-ABL)  
Andy Smoker (NMFS-AKRO)  
Grant Thompson (NMFS AFSC)  
Ivan Vining (ADF&G)  
Farron Wallace (WDF)  
Gregg Williams (IPHC)  
Dave Witherell (NPFMC)

**Gulf of Alaska Team**

Sandra Lowe (NMFS-AFSC, Chair)  
Bill Bechtol (ADF&G)  
Tory O'Connell (ADF&G)  
Jane DiCosimo (NPFMC)  
Jeff Fujioka (NMFS-AB)  
Lew Haldorsen (UAF)  
Jon Heifetz (NMFS-AB)  
Jim Ianelli (NMFS-AFSC)  
Lynn Denlinger (USFWS)  
Tom Pearson (NMFS-AKRO)  
Beth Sinclair (MML)  
Farron Wallace (WDF)  
Gregg Williams (IPHC)

**TAC Streamlining & Specification EA/RIR/IRFA & SEIS.** Jane DiCosimo described the status of the TAC streamlining amendments (#48/48). NMFS notified the Council in July 1999 that the Council's preferred action will not be forwarded to the Secretary for approval based on legal and technical difficulties. Streamlining specifications has been tabled while NMFS and the Council address the production of the revised SEIS, Steller sea lion management measures, AFA amendments, and other issues.

Shane Capron described the packaging of the SAFE report with the EA/RIR/IRFA. Tamra Faris discussed the status of the programmatic SEIS and the timeline for public scoping and document preparation. Dave Witherell proposed designing the SEIS in context with the NRC ecosystem panel recommendations. Tamra indicated that such an approach could be incorporated into the NMFS response to the Judge's order on the content of the programmatic SEIS.

**SSC request.** Sandra Lowe presented a draft response to the SSC request to codify the Plan Team process of reducing ABCs below the minimum prescribed in Amendments 44/44 in a consistent and coherent manner. The teams recognized the SSC's interest in setting uniform rules for adjusting ABCs and the Council's interest in setting TACs, however, the teams agreed that insufficient information is currently available to quantify such adjustments. Also, the Council will be considering an additional amendment to the FMPs to modify the definition of overfishing in 2000. Locking the teams, and ultimately the Council, into a set policy at this time would be inappropriate. The teams do not view the maximum permissible ABC as a speed limit, which most people look at as a speed to aim for, rather than a limit. Therefore, going below the limit is not an option on equal footing as going (at least) the speed limit. The teams approved a joint revision by Sandra and Grant Thompson to be forwarded to the SSC (Attachment 1). Table 1 from the attachment demonstrates Plan Team decisions that resulted in more conservative ABC recommendations than would be maximally permissible under the tier system. The teams will also continue to incorporate ecosystem approaches as data and models are presented to them by stock assessment authors.

**New Pacific cod model.** Grant Thompson presented an overview of a proposed model for assessing Pacific cod. Changes from the current Stock Synthesis model include: 1) fewer parameters; 2) incorporation of process error; 3) treatment of uncertainty; 4) calculation of derivatives for the likelihood; 5) use of a single fishery; and 6) use of growth as opposed to length at age. It will be included in the preliminary SAFE reports. Negatives

include being locked into linear dynamics and linear observations and normal process and observation errors. Both models may be run simultaneously for the first year to compare results.

Halibut discard mortality rates. Gregg Williams presented preliminary discard mortality rates (DMRs) for 2000. The teams discussed whether to impose a minimum number of boats or fish sampled upon which to base a proposed DMR (e.g., a DMR for BSAI rockfish in 1998 was estimated at 52% based on observations from one boat). The final DMRs will incorporate those items listed by the authors.

Sablefish. Mike Sigler presented model updates and an analysis of sablefish longline fishery catch rates. Fishery catch rate information for estimating biomass was evaluated in the assessment for the first time. An alternative model without CPUE data will be presented in November. The team discussed applying a short term equilibrium approach to avoid further reductions in sablefish biomass given continued stock declines versus the  $F_{40\%}$  harvest strategy. Adding the earlier year classes estimates to the model revealed that large year classes may be more common than previously thought. Authors will project yields bases on recruitment from the whole time series, 1978+, and 1982+.

Sharks and skates. Jane DiCosimo presented a brief summary of the shark and skate analysis. No specific federal regulations specific to protect sharks in the North Pacific currently exist. The teams discussed whether current state regulations (both commercial and sport) were adequate to ensure conservation of sharks. Alaskan sharks likely have between-species differences in vulnerability to overfishing. In particular, salmon sharks are vulnerable to targeting because they can aggregate in shallow waters where sport fishing generally occurs. The teams further recommended that a quantitative population analysis is needed to evaluate whether current state regulations are adequate to protect salmon sharks from overfishing. Implementing the same regulations in the EEZ may not be adequate.

In response to the SSC's April 1999 minutes, the teams do not believe that current federal management of other species can be determined to be adequate for individual species. Determination is limited by current survey methodology, catch estimations (lack of observer coverage in the GOA contributes to poor identification at the species level for some species), and possible under-reporting of catch (an undetermined amount used as bait). However, adequate protection may be occurring at the group level. Team members suggested that sharks may need special protection, and that a bycatch only restriction may be appropriate, although there was not a clear consensus on this recommendation. The teams agreed that current catch rates and biomass estimates for skates do not currently warrant a bycatch only fishery. The teams noted that the State of Alaska has recently set a bycatch rate for sharks of 20%, but perhaps could support rates as high as 35% to allow utilization of bycaught harvest amounts.

Public comment suggested that bycatch only status may be appropriate for sharks, but that further restrictions on commercial exploitation of the other species are not warranted. The teams also discussed that skates would likely support commercial fisheries, since marketing of bycaught skates currently occurs and cumulative catch of all other species in the GOA is well under the 5% cap on catch. They also recommended restricting a proposed finning ban to sharks. Al Burch reported that a commercial market for skate wings brings in approximately \$0.35-.40/lb and a relatively high recovery rate from the trawl fleet.

In reviewing the alternatives in the analysis, the Teams recommend that the Federal government not defer management to the state of Alaska for three reasons: 1) Sharks are an important part of the ecosystem in Federal waters, implying that groundfish and sharks in Federal waters should be managed together. For an ecosystem and multispecies management approach, it is more appropriate to maintain shark management in conjunction with other groundfish species management within federal waters of the North Pacific ecosystem. 2) Most shark harvests occur in Federal waters. 3) No specific state management and research program is in place. However, sufficient rationale based on distribution, catch, and research efforts leads the teams to



recommend continued federal management of both species (Alternative 2). The teams further recommend additional efforts to sample other species as current data collection is inadequate. The teams support the ADF&G decision to reinstate salmon shark reporting in the statewide charter logbook in 2000 after being dropped in 1999. The team further supports reporting of all recreational shark catches by species (ADF&G sport logbook). Additional data collection towards collecting information on bycatch mortality in the commercial gillnet and seine salmon fisheries and at-sea discards would address needs to augment total estimates of removals.

Other species. Other species Sarah Gaichas (AFSC) presented the available fishery and survey data for the different GOA "other species" category for GOA team review. The BSAI Team joined the review in the context of the analysis for sharks and skates presented separately. The new assessment was pursued at the request of the SSC to ensure that the conservation goals of the individual species or groups are being met. Catch by species group within the GOA other species category was estimated using the same methods as for the Bering Sea. Namely, the catch was stratified by species target, gear type, season, and area and then the "other species" catch rates were expanded by blend estimates of target species catch. There are a large number of species within some of the groups (e.g., sculpins), but catch estimation at the species level is not possible since fishery catches of skates, sculpins, smelts, squid, and octopus are currently not recorded to species. Biomass estimates by species group from GOA triennial trawl surveys were also reviewed.

Currently, OFLs and ABCs for individual GOA other species are not calculated, instead an empirical ABC and a TAC set equal to 5% of the total GOA groundfish TAC is set for the assemblage. For the BSAI, a separate ABC is calculated for squid and an aggregate ABC is set for the remaining groups. The fisheries have not exceeded the aggregate ABCs in any year. The Team discussed the availability of data for setting OFLs and ABCs both at the assemblage and group levels and the implications for managing direct and bycatch fisheries. They encouraged the development of this assessment as a useful monitoring tool and expressed interest in seeing abundance indices broken down further to individual species where possible.

The authors also presented a paper examining the historical and future probability of overfishing "other species" at the group level rather than estimation of ABCs. This model demonstrates a first-stage method of applying some aspects of the biological attributes to the survey biomass estimates. The application of this model for projections revealed that, based on approximate values for natural mortality rates (and corresponding OFL levels), the chance that any of the sub-categories (treated as yet another, less heterogeneous group) being over exploited is small.

The authors suggested that the limited data makes ABC estimation for sharks, smelts, octopus and squid inappropriate at this time. Because of better biomass data from the trawl survey for skates, the GOA team recommended that the authors calculate an ABC for skates using both tier 5 ( $F = .75M$ ) and 6 (average catch for 1988-95) for review in November 1999. The teams were concerned with presenting any information on octopus as a group since the survey and, to a lesser extent, catch levels, are extremely poorly understood. The authors agreed that this is a potential problem and cautioned on any over-interpretation of the results as presented. Cephalopods are a major component of Steller sea lion and fur seal diets and available information on fisheries interactions, prey size, and predator/prey interactions will be incorporated in 2000.

The teams recommended analyzing available data for grenadiers in the GOA for the November meeting since they have the potential to easily develop into a directed fishery. The Teams will determine whether they should be included in the GOA and possibly BSAI FMPs. Grenadier harvests are estimated to be larger than the entire GOA "other species" category.

In response to the SSC regarding whether there is adequate protection for individual species within the other species category, the teams concluded that there is insufficient information to make this determination, but note

that the potential for inadequate protection exists. For example, it is possible for a directed fishery to develop for a single species within that group and hence may be harvested disproportionately. The GOA Team commented that without the ability to estimate an appropriate ABC, a directed fishery should not occur.

Groundfish proposals. Attachment 2 and the list below summarizes the teams' recommendations on 1999 groundfish proposals.

- 1 & 2 H+The teams ranked these proposals as having the highest priority. The teams discussed the need to include status determination criteria (for each stock presently in tiers 1-3), MSSTs will be provided by stock assessment authors in November. AFSC has separately proposed a plan amendment to address the long-term need to comply with the National Standard Guidelines.
- 3 H This was ranked as high, recognizing overcapitalized state of the fisheries, NRC support for IFQ fisheries, and crashed crab stocks. This proposal would diminish the need for the remaining proposals.
- 4 H This is not require a plan or regulatory amendment. It may be better submitted to Congress as a FCMA amendment to change data confidentiality statutes or to NMFS and the State of Alaska to develop a data request protocol. The teams supported an industry suggestion to develop a discussion paper describing the legal issues and public interest in describing bycatch.
- 5 M Regulations are currently in place to prevent exceeding PSCs. This has not happened in the trawl fleet in the last number of years. See discussion under #7.
- 6 L A program is currently in place, but this proposal would address individual bycatch limits.
- 7 H The teams supported preparation of a discussion paper for developing a framework for apportioning and reapportioning halibut PSCs through an inseason management approach.
- 8 M This proposal addresses a longstanding problem in the GOA between trawl and fixed gear fisheries and provides greater access for all fishing sectors. It would also address rationalizing the fisheries. This fishery may also see additional effort as a result of the opilio crab quota (related to #11 and 12).
- 9 M The teams supported a registration program, and noted that the Council already recommended a pre-season registration program that has not yet been implemented. This proposal would create two additional TACs to monitor but would provide a benefit to the fleet. Industry noted that: 1) these proposals are placeholders while it attempts to resolve quota overages for GOA rockfish and 2) that LLP will impact participation in 2000 and beyond. The teams recommended a staff review panel be appointed to provide management recommendations for management of GOA rockfish (related to #10).
- 10 M See discussion for #9.
- 11 M A direct solution to the lack of halibut PSC later in the fishing year could be addressed under the specifications by shifting more halibut PSC on October 1, but would need the gear split under #8 (related to #8).
- 12 H This proposal by itself does not reduce the race for fish but should be included for analysis as one tool to reduce overcapitalization (see #3).
- 13 H The teams suport this proposal as an experimental fishing permit proposal. It would increase the tunnel opening from 9 to 24 inches; the 9 inch size was originally chosen to avoid halibut bycatch and allowed a pot exemption for halibut PSCs. Benefits to this change include: 1) allowing participation by pot vessels in the turbot fishery; 2) providing a better estimate of fishing mortality for Greenland turbot due to orca predation; and 3) allowing the TAC to be taken. Negative impacts include: 1) the possibility of increased bycatch of crab and halibut with this gear configuration; and 2) enforcement problems resulting from the difficulty of determining the actual depth the gear is fished.

- 14 M This proposal was resubmitted late from 1998 when it was ranked low. The proposed BSAI cod split may mitigate the need for this action, but inseason frameworking of season start dates would enhance efficiency.

Ecosystem Considerations. Pat Livingston presented a brief summary of the Ecosystem 2000 chapter. A revised chapter will be provided in November. Dave Witherell presented a summary of the HAPC analysis.

Public attendance. Chris Blackburn, Shane Capron, Blaine Hodges, Tamra Faris, Dave Fraser, Joe Childers, Steve Ganey, Al Burch, John Henderschedt, Erica Acuna, Paul MacGregor, Ed Richardson, Mike Szymanski, Josh Sladek-Nowlis, Kris Balliet, Donna Parker, Anne Hollowed, Ken Stump, Franz Mueter, Pat Livingston, Paul Spencer, Brent Paine, Kristen Stahl-Johnson, Glenn Merrill, Paul Clarke.

### ABC Considerations

The following item is contained under the heading "General considerations" in item D-3 (Groundfish SAFEs) of the SSC's December, 1998 minutes:

"The passage of Amendment 44 has codified a harvest policy approach for setting upper limits to ABCs and overfishing levels (OFLs). The maximum permissible ABC and OFL is determined based on the level of available information (tier) with the option of the Plan Teams and the SSC to recommend a lower level based on additional considerations such as the trend in recruitment, level of the population, uncertainty in the stock assessment, and ecosystem considerations. The Plan Teams have proposed ABCs lower than the maximum allowed for GOA Pacific cod; roughey, northern, other slope, pelagic, and demersal shelf rockfishes, and Atka mackerel; and for BSAI walleye pollock, Pacific cod, Greenland turbot, Atka mackerel, and Other Species. There are compelling and well stated reasons for these recommendations, and the SSC has concurred in nearly all (GOA Pacific cod and BSAI other species being the two exceptions). However, the SSC is concerned that deviating from the Amendment 44 tiers may create a perception of arbitrariness. The process of setting maximum ABCs is intended to have several conservative elements incorporated into it, and it is desirable to have an easily understood set of rules (ideally quantitative and consistent) to explain the need for additional conservatism. We recognize that this may not be possible given the uncertainty inherent in stock assessments and ecological relationships. Nevertheless, the SSC is interested in working with the Plan Teams toward this goal. As an initial step, the SSC suggests that the Plan Teams include a summary table listing the appropriate tier for each species, the corresponding maximum fishing mortality rate and ABC, and the recommended fishing mortality rate and ABC when reduced for added conservation concerns. Table 3 of the GOA SAFE summary and Tables 4 and 6 of the BSAI SAFE summary already provide some of this requested information and could serve as templates. The SSC also urges the Teams to evaluate their ABC/OFL policy statement and determine whether it can be suitably modified or refined to codify reductions to maximum ABC based on considerations related to recruitment levels, environmental relationships, and/or ecosystem considerations."

As noted in the above excerpt, the current FMP language explicitly allows for ABC to be set below the maximum permissible level. As the above minute also notes, the Plan Teams have consistently sought to provide a clear and compelling rationale whenever a recommended ABC was below the maximum permissible level. These rationales have often included consideration of the uncertainties that surround estimates of biomass and the biological reference points used to define the maximum permissible ABC. While the Plan Teams acknowledge that the process of determining the maximum permissible ABC has some conservation steps built into it, Tiers 2-6 do not explicitly account for differential levels of estimation uncertainty that might be associated with various stocks managed under the same tier.

The Plan Teams welcome the SSC's interest in working with us to fine-tune the ABC recommendation process. However, as it appears likely that the ABC/OFL definitions will be revised during the coming year, the Plan Teams do not feel that a complete codification of the current ABC recommendation process is desirable at the present time. Instead, the Plan Teams hope to contribute to the continuing development of the process by providing the following herein: 1) a list of general approaches that have sometimes been used in past Plan Team recommendations, 2) a list of the specific rationales used by the Plan Teams last year in recommending ABCs below the maximum permissible level, and 3) an example table of the type suggested in the above minute, based on last year's SAFE reports.

## General Approaches

The approaches listed here do not represent formal Plan Team policies, but have been applied at various times in the past.

1) To minimize the impact of inter-assessment fluctuations that stem from changes in data and methodology but that do not necessarily reflect changes in abundance, the Plan Teams have sometimes recommended an ABC that would keep the relative catch trend roughly equal to the relative biomass trend as estimated in the current assessment. Such reductions have been applied to Greenland turbot, sablefish, Pacific cod, and Atka mackerel in the past.

2) For GOA rockfish managed under Tier 4, an  $F=M$  strategy has been shown to give ABCs lower than the maximum permissible level. In these cases, the GOA Plan Team has typically opted for the  $F=M$  strategy, believing that this additional conservatism is warranted due to 1) the unaccounted-for uncertainty in data such as survey biomass estimates, 2) the limited data available to calculate biological parameters and biological reference points, and 3) the life history characteristics of these species which make them particularly sensitive to overfishing (e.g. longevity, slow-growing, sporadic and typically low levels of recruitment).

## Specific Rationales Used by the Plan Teams Last Year

### *Gulf of Alaska*

Pacific cod: Pacific cod fall under Tier 3a of the ABC definitions. The 1999 Pacific cod assessment used a Bayesian meta-analysis to address uncertainty surrounding the true values of the parameters  $M$  (natural mortality) and  $Q$  (survey catchability). Given the posterior distribution for  $M$  and  $Q$  derived in the meta-analysis, the 1999 ABC obtained under an  $F_{40\%}$  harvest strategy was profiled as a function of  $M$  and  $Q$ . The log-ABC profile was smoothed and fit to a bivariate quadratic function. This function was multiplied by the posterior distribution resulting in a weighted log-ABC profile. The geometric mean of the weighted log-ABC profile provided the stock assessment's 1999 ABC recommendation (90,900 t) which the Plan Team rejected. The Team was concerned that the 1995 year class had only been observed by the 1996 trawl survey and the subsequent 1997 fisheries, and the above-average estimate for this year class had a high degree of associated uncertainty in the assessment. Given concerns of increasing the ABC amid projections of spawning stock declines, the Team recommended that the 1999 ABC remain fixed at the 1998 ABC of 77,900 t. The Plan Team's 1999 ABC recommendation for Pacific cod was approximately 17% below the maximum permissible allowed under Amendment 44 with an  $F_{40\%}$  harvest strategy (93,900 t).

Rougheye, Northern, Sharpchin (Other Slope Category), Pelagic Shelf, and Demersal Shelf Rockfish: These rockfish species fall under Tier 4, and are not assessed with formal age-structured analyses. The data to estimate abundance levels are highly variable and uncertain. The data to estimate biological parameters and reference points are also limited and in some cases associated with a high level of uncertainty. These species are slow-growing, long-lived, with uncertain recruitment. Given the data limitations and the life history characteristics of these rockfish, the Plan Teams have decided that further conservatism is warranted and applied an  $F = M$  policy rather than the maximum allowable  $F_{40\%}$  policy as defined in Amendment 44. In the case of Other slope rockfish, only sharpchin rockfish fall under Tier 4, the other components fall under Tier 5.

Atka Mackerel: Atka mackerel fall under Tier 6 of the ABC/OFL definitions. The data to estimate abundance is extremely limited and unreliable; there is no reliable estimate of current biomass. Recruitment is highly uncertain and may rely on recruits from the larger population in their center of abundance in the Aleutian

Islands. Leslie estimates of local population sizes suggest that the abundance has declined significantly in localized areas from 1992-94, and the species has exhibited vulnerability to the high levels of foreign fishing in the past. Because of the severe limitations and uncertainty of the data, and that historical catch levels may not be sustainable, the Plan Team felt that a reduction in ABC below the maximum permissible (0.75 x average catch from 1978-95) was warranted. The 1999 ABC of 600 t represented the amount of Atka mackerel needed to satisfy bycatch needs in other fisheries, and preclude a directed fishery in the GOA.

#### *Gulf of Alaska/Bering Sea/Aleutian Islands*

**Sablefish:** The exploitation strategy recommended in the 1997-99 sablefish assessments and embraced by the Plan Team for 1997 and 1998 are detailed here. The 1999 ABC recommendation was not an issue as the maximum permissible value under Amendment 44 coincided with the harvest recommendation. Sablefish fall under Tier 3b of the ABC definitions. The approach used to recommend the 1997 and 1998 acceptable biological catches (ABC) was a linear reduction one third of the way from the current ABC to the respective short-term equilibrium yield. The rationale for this approach to ABC recommendation is as follows. The yield from an adjusted  $F_{40\%}$  strategy in the 1997 and 1998 assessments represented an increase over recent ABCs. Increasing ABC was inconsistent with declining stock trend and a spawning biomass that was projected to fall near the observed low within a few years. Rather than increasing ABC then reducing thereafter toward the predicted short-term equilibrium yield, in the 1997 and 1998 assessments the Plan Team recommended an incremental adjustment of ABC toward the short-term equilibrium yield. Further, biomass estimates have changed between assessments and may not result in a rational series of ABCs when an  $F_{40\%}$  strategy as defined in Amendment 44 is applied.

#### *Bering Sea/Aleutian Islands*

**Pollock:** The Plan Team suggested that EBS pollock qualify for management under Tier 1b of Amendment 44. Under Model 2 (used by the Plan Team for 1999 recommendations), the maximum permissible fishing mortality rate is 0.58, associated with a catch of 1,370,000 t. The Plan Team decided this value was too high and instead recommended an ABC of 992,000 t, which would be the maximum permissible value if the stock were managed under Tier 3b (i.e., it corresponds to an adjusted  $F_{40\%}$  harvest strategy). A harvest of 992,000 t is associated with a fishing mortality rate of 0.29. The Plan Team noted that setting the 1999 ABC in this manner would be approximately consistent with the method used to set the 1998 ABC. The Plan Team recognized that its 1999 ABC recommendation constituted a reduction of nearly 27% from the maximum permissible value under Amendment 44, but believed that such a reduction was warranted for the following reasons: 1) the 1998 trawl survey biomass estimate is the lowest since 1980 and the second lowest in the entire time series; 2) future catches and biomass levels will be heavily dependent on the strengths of the 1996 and 1997 year classes, the estimates of which are currently accompanied by high levels of uncertainty; 3) the projected 1999 spawning biomass is only 31% of the estimated pristine level (if no stock relationship is assumed); 4) pollock has been the most common item in the diet of Steller sea lions, which are listed as an endangered species; 5) the impacts of Russian harvest of pollock in the western Bering Sea on future recruitment to the eastern Bering Sea stock are currently unknown but potentially significant; 6) the age distribution of the stock is narrower than was the case during the late 1980s and early 1990s, raising possible concern about the short-term spawning capacity of the stock; and 7) the harmonic mean of the pdf for  $F_{MSY}$  is much higher than expected, raising possible concern about its use as a target harvest rate.

**Pacific Cod:** Pacific cod fall under Tier 3b of the ABC definitions. The 1999 Pacific cod assessment used a Bayesian meta-analysis to address uncertainty surrounding the true values of the parameters  $M$  (natural mortality) and  $Q$  (survey catchability). Given the posterior distribution for  $M$  and  $Q$  derived in the meta-analysis, the 1999 ABC obtained under an  $F_{40\%}$  harvest strategy was profiled as a function of  $M$  and  $Q$ . The log-ABC profile was smoothed and fit to a bivariate quadratic function. This function was multiplied by the

posterior distribution resulting in a weighted log-ABC profile. The geometric mean of the weighted log-ABC profile provided the stock assessment's 1999 ABC recommendation (177,000 t) which the Plan Team accepted. The geometric mean was considered a risk-averse optimum. The Plan Team's 1999 ABC recommendation for Pacific cod was approximately 9% below the maximum permissible allowed under Amendment 44 with an  $F_{40\%}$  harvest strategy (196,000 t).

Greenland Turbot: Greenland turbot fall under Tier 3b of Amendment 44. The maximum permissible value of the 1999  $F_{ABC}$  is 0.21 associated with a catch of 20,000 t. Instead, the Plan Team recommended setting the 1999 ABC by multiplying the age 1+ biomass projected for 1999 by the ratio of 1998 ABC to the current estimate of 1998 age 1+ biomass, giving a value 14,200 t. This recommendation is 29% below the maximum permissible, a reduction the Plan Team believed was warranted based on the facts that the estimated age 1+ biomass has trended downward continually since 1972 and that the three most recent recruitment estimates constitute the three lowest values in the time series. The fishing mortality rate corresponding to the ABC recommendation is approximated at 0.15.

Atka Mackerel: Atka mackerel fall under Tier 3a of the ABC definitions. The assessment provided the following rationale, with which the Plan Team concurred, to support a 1999 ABC of 73,300 t, 32% below the maximum permissible level: 1) stock size as estimated by the age-structured model has declined by approximately 50% since 1991; 2) the 1997 Aleutian trawl survey biomass estimate was about 50% lower than the 1991 and 1994 survey estimates; 3) under an  $F_{40\%}$  harvest strategy, female spawning biomass is projected to decline 20% below  $B_{40\%}$  within 5 years; 4) the effects of a number of local depletions are uncertain; 5) the effects of increasing the percentage of TAC removed from areas outside of sea lion critical habitat, as currently proposed, are not known; and 6) the movement of the fishery to areas outside of critical habitat, as currently proposed, will not be complete for four more years.

Table 1. Maximum permissible fishing mortality rates and ABCs as defined in Amendment 44 to the GOA and BSAI Groundfish FMPs, and the 1999 Plan Team recommended fishing mortality rates and ABCs, for those species whose recommendations were below the maximum.

Gulf of Alaska

Species	Tier	1999	1999	1999	1999
		Max. Permissible $F_{ABC}$	Max. Permissible ABC	$F_{ABC}$	ABC
Pacific cod	3a	0.350	93,900	0.210	77,900
Rougeye rockfish	4	0.032	1,560	0.025	1,220
Shortraker rockfish	5	0.023	370	0.023	370
<b>Total Shortraker/Rougeye</b>	<b>4,5</b>		<b>1,930</b>		<b>1,590</b>
Northern rockfish	4	0.075	6,250	0.060	5,000
Other slope rockfish (sharpchin)	4	0.054	2,234	0.050	2,069
Other slope rockfish (redstripe)	5	0.075	1,646	0.075	1,646
Other slope rockfish (harlequin)	5	0.045	666	0.045	666
Other slope rockfish (silvergry)	5	0.030	547	0.030	547
Other slope rockfish (redbanded)	5	0.045	169	0.045	169
Other slope rockfish (minor species)	5	0.060	162	0.060	162
<b>Total other slope rockfish</b>	<b>4,5</b>		<b>5,424</b>		<b>5,270</b>
Pelagic shelf rockfish	4	0.101	5,480	0.090	4,880
Demersal shelf rockfish	4	0.025	688	0.020	560
Atka mackerel	6	NA	4,700	NA	600

Bering Sea/Aleutian Islands

Species	Tier	1999	1999	1999	1999
		Max. Permissible $F_{ABC}$	Max. Permissible ABC	$F_{ABC}$	ABC
Pollock	1b	0.58	1,370,000	0.29	992,000
Pacific Cod	3b	0.28	196,000	0.25	177,000
Greenland Turbot	3b	0.21	20,000	0.15	14,200
Atka Mackerel	3a	0.35	107,000	0.23	73,300



Groundfish Plan Team review of 1999 amendment proposals received through September 27, 1999						
No.	Proposal	Proposer	Area	Amendment	Effect*	Rank
<b>Overfishing</b>						
1	est. MSSTs, inc. target stock size, adopt conservative harvest control rules	CMC	both	plan	C	H+
2	analyze MSSTs to overfishing definitions	AMCC	both	plan	C	H+
<b>Bycatch</b>						
3	groundfish & crab IFQ program	fraser	both	plan	E	H
4	public disclosure of new catch and bycatch data	AMCC	both	neither	B	H
5	establish true PSC limits for BS pollock fishery	AMCC	BSAI	regulatory	B	M
6	rescind chum salmon savings area trawl closure & manage cap under coop	UCB	BSAI	plan	B	L
7	reapportion PSC amounts between fisheries in same gear group	G. Forum	both	regulatory	B	H
<b>GOA management</b>						
8	split P. cod by gear type "mobile/fixed" based on 1995-97 average	ADA	GOA	plan	A	M
9	rockfish preseason reg.; CG season apportion; allocate at-sea/catcher vessels	AGDB	GOA	plan	A	M
10	rockfish preseason registration & other measures to restrict preemption	G. Forum	GOA	plan	A	M
11	longline only on October 1 in CG	Filiatraut	GOA	plan	A	M
12	buyback program for GOA trawlers	ADA	GOA	plan	E	H
<b>Other</b>						
13	allow 24" tunnel opening in fish pots in >200 fm, west of 172 W, May - Aug	Jacobsen	BSAI	regulatory	E	H
14	framework BSAI longline cod season in 1st & 3rd trimesters	NPLA	BSAI	plan	E	M

**GOA Plan Team Meeting Minutes  
September 22-23, 1999**

*Sandra Lowe (NMFS-AFSC, Chair)*  
*Bill Bechtol (ADF&G)*  
*Jane DiCosimo (NPFMC)*  
*Jeff Fujioka (NMFS-ABL)*  
*Lew Haldorsen (UAF)*  
*Jon Heifetz (NMFS-ABL)*  
*Dave Jackson (ADF&G)*

*Jim Ianelli (NMFS-AFSC)*  
*Tory O'Connell (ADF&G)*  
*Tom Pearson (NMFS-AKRO)*  
*Beth Sinclair for (NMML)*  
*Farron Wallace (WDF)*  
*Gregg Williams (IPHC)*

EGOA split Addressing the first point in the December 1998 SSC minutes, Michael Martin reported on changes to the GOA trawl survey design. The survey was extended to 1000 m; it had previously sampled depths at or below 500 m and effort was distributed across all depth ranges. Fifty tows were added between 500-1000 m (at a cost of tows from <500 m depths). Sampling effort was distributed uniformly across depths strata in the GOA. For November, Michael will provide biomass based on two methods: 1) as done last year, in each strata and allocate according to the area on either side of 140° W and 2) for east and west of 140° W based on survey sampling. His recommendation was to use last year's method.

A work group of Plan Team and AFSC scientists will examine the results of the two methods. They will provide recommendations on the approved methodology to the assessment authors in early October, along with the release of the 1999 GOA trawl survey results.

Addressing the second SSC point for a stronger rationale for splitting individual species, the team continued to support its rationale as stated in its November 1998 minutes, "The Team recommended splitting the EGOA for species that would be disproportionately harvested from the West Yakutat area by trawl gear. The Team did not split EGOA ABCs for species that were prosecuted by multi-gear fisheries, harvested as bycatch, and where harvests occurred in both subareas." Further, the team noted that no management problems were encountered in 1999 as a result of splitting ABCs and TACs for individual species.

Addressing the third SSC point for consistency in splitting rockfish, the team repeated its preference to examine each species or complex based on its specific parameters. The small ABC for northern rockfish in the EGOA was incorporated into the other slope rockfish category and no management problems resulted. The team maintains that it is not appropriate to split the shortraker/rougeye rockfish and thornyheads since they are multigear fisheries.

Addressing the fourth SSC point to reexamine the use of the upper 95% confidence level (c.l.) with the SSC's recommendation that the point estimate should be considered the default for setting ABC, the team will continue to present both the point estimate and the 95% confidence level in the assessments. The team will recommend an ABC based on the 95% c.l. for those species that match its rationale stated in last year's SAFE and November 1998 minutes. No management problems resulted in applying the 95% c.l.

Chris Blackburn commented that pollock in West Yakutat are spawning and fished in the first quarter only and are not represented in the GOA trawl survey. The Team noted that this is an inherent problem with the summer survey for all stocks.

Arrowtooth flounder Jack Turnock presented an update of the ATF assessment. He reported on differential mortality for males and females and the trade-off between mortality and selectivity. A differential sex ratio is found in both the fishery and survey. Given the pervasiveness of the survey, it is not likely missing males, thus it may not be an availability (selectivity) issue. The team recommended two model runs for November: one with differential mortality and the second with differential selectivities, as was done last year.

Pollock Martin Dorn presented a new assessment model for pollock. Previous assessments used Stock Synthesis to model GOA pollock. The new assessment is an age-structured model using ADModel Builder software with automatic differentiation. Model runs made with both Stock Synthesis and ADModel Builder using the same data yielded very similar results. The team accepted the new model with no recommended changes for November.

EGOA pollock Martin Dorn described the history of setting subarea pollock ABCs. The W/C estimate has been based on west of 144° W (Cape St. Elias). This year the assessment was extended to 140° W. Separate ABCs can be obtained for Areas 610-640 based on the distribution of 1999 survey biomass. The team concurred with the author's proposal to calculate the ABC for Area 650 based on the appropriate OFL tier.

While the Team acknowledges that current data do not indicate that Prince William Sound (PWS) pollock are a discrete and isolated stock, an ADF&G summer survey conducted in 1999 at the same the NMFS survey was being conducted in waters adjacent to PWS confirmed the presence of pollock in PWS that were not assessed by the NMFS bottom trawl survey. The PWS biomass estimate is conservative because the ADF&G survey gear is less effective at catching pollock than NMFS survey gear based on limited trawl comparison studies. Thus, the Plan Team *continues* to recommend that the PWS harvest *not* be taken off any Federal TAC. However, in an effort to address SSC concerns, the Plan Team has asked the pollock assessment author to work with ADF&G staff to explore mechanisms to incorporate ADF&G survey data for PWS into the gulfwide assessment. The PWS ABC could then be deducted from the Gulf ABC.

Northern rockfish Jon Heifetz presented a draft age-structured stock assessment model for northern rockfish incorporating ADModel builder in response to suggestions on ways to improve the stock assessment for this species. The team recommended that the authors investigate additional data sources for estimating natural mortality. The team also recommended smoothing the selectivities for the fishery and the survey in the model. A revised model will be provided in November 1999. A preliminary draft model will also be provided for POP.

Public attendance: Chris Blackburn, Joe Childers, Glenn Merrill, Al Burch, Sarah Gaichas, Tamra Faris, Blaine Hollis, Angelique Iankov, Terri Willette.

Table 1. Council recommended total allowable catch specifications for the Bering Sea and Aleutian Islands management area including 1999 ABC, TAC, and actual catch through September 13, 1999; and 2000 ABC amounts as recommended by the BSAI Plan Team (values are in mt).

Species	Area	1999 Specifications			Actual Catch	Proposed 2000 Specifications	
		OFL	ABC	TAC		ABC	TAC
Pollock	Bering Sea (BS)	1,720,000	992,000	992,000	617,507	992,000	
	Aleutian Is. (AI)	31,700	23,800	2,000	918	23,800	
	Bogoslof District	21,000	15,300	1,000	19	15,300	
Pacific cod	BSAI	264,000	177,000	177,000	135,083	177,000	
Sablefish	BS	2,090	1,340	1,340	521	1,340	
	AI	2,890	1,860	1,380	440	1,860	
Atka mackerel	Total	148,000	73,300	66,400	29,314	73,300	
	Western AI	.....	30,700	27,000	5,615	30,700	
	Central AI	.....	25,600	22,400	11,661	25,600	
	Eastern AI/BS	.....	17,000	17,000	12,038	17,000	
Yellowfin sole	BSAI	308,000	212,000	207,980	54,887	212,000	
Rock sole	BSAI	444,000	309,000	120,000	38,743	309,000	
Greenland turbot	Total	29,700	14,200	9,000	3,967	14,200	
	BS	.....	9,515	6,030	3,756	9,515	
	AI	.....	4,685	2,970	211	4,685	
Arrowtooth flounder	BSAI	219,000	140,000	134,354	8,351	140,000	
Flathead sole	BSAI	118,000	77,300	77,300	16,001	77,300	
Other flatfish	BSAI	248,000	154,000	154,000	13,948	154,000	
Pacific ocean perch	BS	3,600	1,900	1,400	363	1,900	
	AI Total	19,100	13,500	13,500	10,877	13,500	
	Western AI	.....	6,220	6,220	5,920	6,220	
	Central AI	.....	3,850	3,850	2,698	3,850	
	Eastern AI	.....	3,430	3,430	2,260	3,430	
Other red rockfish	BS	356	267	267	154	267	
Sharpchin/Nrthn.	AI	5,640	4,230	4,230	2,149	4,230	
Shorttrkr./roughey	AI	1,290	965	965	412	965	
Other rockfish	BS	492	369	369	96	369	
	AI	913	685	685	480	685	
Squid	BSAI	2,620	1,970	1,970	513	1,970	
Other species	BSAI	129,000	32,860	32,860	14,900	32,860	
TOTAL		3,719,391	2,247,846	2,000,000	993,802	2,247,846	

Table 2. Council recommended total allowable catch specifications for the Gulf of Alaska management area. 1999 ABC, TAC specifications, and actual catch through September 13, 1999; and recommended 2000 ABC, OFL, and TAC specifications (values are in mt).

Species	1999 Specifications					2000 Proposed	
	Area	OFL	ABC	TAC	Catch	ABC	TAC
Pollock	W (61)		23,120	23,120	16,736	23,120	
	C (62)	134,100	38,840	38,840	22,005	38,840	
	C (63)		30,520	30,520	18,747	30,520	
	W. Yakutat	12,300	8,440	2,110	1,759	8,440	
	E. Yak./SEO			6,330	3		
	Total	146,400	100,920	100,920	59,250	100,920	
Pacific Cod	W		29,540	23,630	22,907	29,540	
	C		53,170	42,935	37,131	53,170	
	E		1,690	1,270	815	1,690	
	Total	134,000	84,400	67,835	60,853	84,400	
Flatfish, Deep Water	W		240	240	20	240	
	C		2,740	2,740	1,811	2,740	
	W. Yakutat		1,720	1,720	378	1,720	
	E. Yak./SEO		1,350	1,350	6	1,350	
	Total	8,070	6,050	6,050	2,215	6,050	
Rex Sole	W		1,190	1,190	496	1,190	
	C		5,490	5,490	2,241	5,490	
	W. Yakutat		850	850	41	850	
	E. Yak./SEO		1,620	1,620	22	1,620	
	Total	11,920	9,150	9,150	2,800	9,150	
Flatfish, Shallow Water	W		22,570	4,500	245	22,570	
	C		19,260	12,950	1,065	19,260	
	W. Yakutat		250	250	7	250	
	E. Yak./SEO		1,070	1,070	4	1,070	
	Total	59,540	43,150	18,770	1,321	43,150	
Flathead Sole	W		8,440	2,000	145	8,440	
	C		15,630	5,000	564	15,630	
	W. Yakutat		1,270	1,270	14	1,270	
	E. Yak./SEO		770	770	11	770	
	Total	34,010	26,110	9,040	734	26,110	
Arrowtooth	W		34,400	5,000	2,674	34,400	
	C		155,930	25,000	9,515	155,930	
	W. Yakutat		13,260	2,500	363	13,260	
	E. Yak./SEO		13,520	2,500	171	13,520	
	Total	308,880	217,110	35,000	12,723	217,110	
Sablefish <sup>3</sup>	W		1,820	1,820	1,335	1,820	
	C		5,590	5,590	5,087	5,590	
	W. Yakutat		5,290	2,090	1,411	5,290	
	E. Yak./SEO		-	3,200	2,312	-	
	Total	19,720	12,700	12,700	10,145	12,700	
Rockfish, Other Slope	W		20	20	38	20	
	C		650	650	639	650	
	W. Yakutat		470	470	118	470	
	E. Yak./SEO		4,130	4,130	7	4,130	
	Total	7,560	5,270	5,270	802	5,270	

Table 2 - continued. Council recommended total allowable catch specifications for the Gulf of Alaska management area. 1999 ABC, TAC specifications, and actual catch through September 13, 1999; and recommended 2000 ABC, OFL, and TAC specifications (values are in mt).

Species	1999 Specifications					2000 Proposed	
	Area	OFL	ABC	TAC	Catch	ABC	TAC
Rockfish, Northern	W		840	840	556	840	
	C		4,150	4,150	4,762	4,150	
	E		-	-	-	-	
	Total	9,420	4,990	4,990	5,318	4,990	
Pacific Ocean Perch	W	2,610	1,850	1,850	1,917	1,850	
	C	9,520	6,760	6,760	8,002	6,760	
	W. Yakutat	6,360	1,350	820	626	1,350	
	E. Yak./SEO		3,160	3,160	-	3,160	
	Total	18,490	13,120	12,590	10,545	13,120	
Shortraker/Rougheye	W		160	160	169	160	
	C		970	970	569	970	
	E		460	460	430	460	
	Total	2,740	1,590	1,590	1,168	1,590	
Rockfish, Pelagic Shelf	W		530	530	129	530	
	C		3,370	3,370	3,896	3,370	
	W. Yakutat		740	740	647	740	
	E. Yak./SEO		240	240	20	240	
	Total	8,190	4,880	4,880	4,692	4,880	
Rockfish, Demersal Shelf	SEO	950	560	560	243	560	
Atka Mackerel	Gulfwide	6,200	600	600	260	600	
Thornyhead	W		260	260	258	260	
	C		700	700	567	700	
	E		1,030	1,030	262	1,030	
	Total	2,800	1,990	1,990	1,087	1,990	
Other Species	Gulfwide		NA	14,600	3,147	NA	
<b>GULF OF ALASKA</b>	<b>TOTAL</b>	<b>778,890</b>	<b>532,590</b>	<b>306,535</b>	<b>177,303</b>	<b>532,590</b>	

**Table 3. 1999 BSAI Trawl Fisheries PSC Apportionments and Seasonal Allowances**

Fishery Group	Halibut Mortality Cap (mt)	Herring (mt)	Red King Crab (animals) Zone1	C. bairdi Zone1	C. bairdi Zone2	C. opilio COBLZ
<b>Yellowfin sole</b>	1,005	254	21,084	274,526	1,198,906	3,248,821
January 20 - March 31	285					
April 1 - May 10	210					
May 11 - July 10	100					
July 11 - Dec 31	410					
<b>Rocksole/other flatfish</b>	795	22	158,133	294,134	399,635	801,080
January 20 - March 29	485					
March 30 - July 10	130					
July 11 - December 31	180					
<b>Turbot/sablefish/ Arrowtooth</b>		10				44,504
<b>Rockfish</b>	75	8			7,836	44,504
July 11 - Dec 31	75					
<b>Pacific cod</b>	1,550	22	15,813	147,263	218,288	133,513
<b>Pollock/mackerel/o.species</b>	250	152	1,970	14,077	20,335	77,578
<b>Pelagic Trawl Pollock</b>		1,217				
<b>TOTAL</b>	<b>3,675</b>	<b>1,685</b>	<b>197,000</b>	<b>730,000</b>	<b>1,845,000</b>	<b>4,350,000</b>

Note: Includes 7.5% CDQ allocation.

Unused PSC allowances may be rolled into the following seasonal apportionment.

30% of the red king crab PSC for the rock sole fishery is apportioned to the 56 - 56o10' RKCSA strip.

Accounts for the reductions in halibut and crab PSCs due to ban on pollock bottom trawling

(halibut: -100 mt; RKC: -3,000; Z1 bairdi: -20,000; Z2 bairdi: -30,000; opilio: -150,000 crab)

Accounts for adjustments due to changes in biomass for herring, red king crab, Z2 bairdi, and opilio.

**Table 4. 1999 BSAI Non-Trawl Fisheries PSC Bycatch Allowances and fixed gear Pacific cod seasonal apportionments**

Fishery Group	Halibut Mortality (mt)	Seasonal Apportion of cod TAC (mt)
<b>Pacific Cod</b>	810	
Jan 1 - April 30	495	60,000 first tr.
May 1 - September 14	0	8,500 second tr.
Sept. 15 - Dec. 31	315	15,000 third tr.
<b>Other Non-Trawl*</b>	90	
May 1 - September 14	45	
Sept. 15 - Dec. 31	45	
<b>Groundfish Pot</b>	Exempt	
<b>TOTAL</b>	<b>900 mt</b>	<b>83,500</b>

Note: unused halibut PSC or P. cod TAC from first trimester will be rolled into the third trimester.

Any halibut PSC removed from the CDQ fisheries will be replaced from PSC apportioned from the third trimester.

\* Includes hook & line fisheries for rockfish and Greenland turbot.

Sablefish hook & line fisheries will be exempted from the halibut mortality cap.

Jig gear will also be exempted from the halibut mortality cap.



FM AK REGION

→→→ NPFMC

UNITED STATES DEPARTMENT OF  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
P.O. Box 21668

AGENDA D-2  
OCTOBER 1999  
Supplemental

Juneau, Alaska 99802-1668

October 6, 1999

Mr. Richard B. Lauber  
Chairman, North Pacific Fishery  
Management Council  
605 W. 4<sup>th</sup> Avenue, Suite 306  
Anchorage, Alaska 99501-2252

Dear Rick,

Bycatch rate standards for trawl fisheries under the Pacific halibut and red king crab vessel incentive program during the first half of 2000 are scheduled to be published in the Federal Register by January 1, 2000. A summary of 1995 - 1999 observer data on fishery bycatch rates is listed in the attached table for review by the Council. The halibut bycatch rates for the first, second and third quarters of 1999 have been updated. In the Bering Sea & Aleutian Islands midwater pollock fishery, the first quarter halibut bycatch rate in the Bering Sea fishery is relatively high, though the rate still is lower than the standard. The higher third quarter rate in the yellowfin sole fishery was driven by particularly high bycatch rates during the month of August.

Unless the Council recommends a change in these standards, we will use for the first half of 2000 the halibut and red king crab bycatch rate standards listed in the attached table for the first and second calendar quarters of the year.

Sincerely,

*Steven Pennoyer*  
For Steven Pennoyer  
Administrator, Alaska Region

Attachment





1995 - 1999 (through March 27, 1999) observed bycatch rates, by quarter, of halibut and red king crab in the fishery categories included in the vessel incentive program. Also listed are the bycatch rate standards established since 1995.

**Halibut Bycatch (Kilograms Halibut/metric ton Allocated Groundfish Catch)**

<u>Fishery and quarter</u>	<u>Bycatch Rate Standards</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>
<b>BSAI Midwater Pollock</b>						
QT 1	1	0.05	0.1	0.1	0.02	0.18
QT 2	1	0.07	0.02	0.4	0.00	-
QT 3	1	0.12	0.09	0.1	0.33	0.08
QT 4	1	0.19	0.21	0.1	0.25	
<b>BSAI Bottom Pollock</b>						
QT 1	7.5	1.93	2.22	1.4	9.09	2.49
QT 2	5	5.5	12.84	0.0	0.01	-
QT 3	5	1.98	0.41	1.4	6.70	-
QT 4	5	0.14	0.64	0.4	1.47	
<b>BSAI Yellowfin sole</b>						
QT 1	5	3.67	2.89	6.5	9.65	5.05
QT 2	5	4.54	4.19	5.1	6.48	7.44
QT 3	5	2.93	6.86	2.6	7.30	18.52
QT 4	5	4.49	12.41	4.1	13.71	
<b>BSAI Other Trawl Fisheries</b>						
QT 1	30	11.27	10.66	8.9	12.05	21.44
QT 2	30	16.93	12.71	10.3	13.98	33.05
QT 3	30	10.33	6.37	21.2	11.60	15.56
QT 4	30	21.23	34.24	3.1	11.54	
<b>GOA Midwater Pollock</b>						
QT 1	1	0.34	0.26	0.0	0.18	0.31
QT 2	1	0.05	0.04	0.1	0.14	0.23
QT 3	1	0.54	0.03	0.1	0.04	0.12
QT 4	1	0.13	0.47		0.03	
<b>GOA Other Trawl Fisheries</b>						
QT 1	40	16.55	14.65	0.18	26.23	32.48
QT 2	40	63.93	49.01	62.4	58.88	58.87
QT 3	40	18.48	24.71	26.0	37.98	18.14
QT 4	40	48.33	46.9	47.9	58.20	
<b>Zone 1 Red King Crab Bycatch Rates</b> (number of crab/mt of allocated groundfish)						
<b>BSAI Yellowfin sole</b>						
QT 1	2.5	0.28	0	0.1	0.01	0.04
QT 2	2.5	0.02	0.01	0.1	0.03	0.03
QT 3	2.5	0	0		0.43	0.63
QT 4	2.5		0		0.15	
<b>BSAI Other Trawl Fisheries</b>						
QT 1	2.5	0.31	0.14	0.1	0.04	0.13
QT 2	2.5	0	0	0.0	0.06	0.05
QT 3	2.5	0	0.08	0.0	0.25	0.00
QT 4	2.5	0	0	0.0	0.02	