


MEMORANDUM

TO: Council, SSC and AP Members
FROM: Chris Oliver 
Executive Director
DATE: September 29, 2004
SUBJECT: Groundfish Management

ESTIMATED TIME
10 HOURS
all D-3 items

ACTION REQUIRED

- (d) Final action to adopt interim 2005 groundfish specifications for BSAI and GOA

BACKGROUND

Preliminary 2005 groundfish specifications

The Bering Sea/Aleutian Islands (BSAI) and Gulf of Alaska (GOA) Groundfish Plan Teams streamlined their preliminary (September) and final (November) meeting schedules in 1998. The September Groundfish Plan Team meeting now provides an opportunity for teams to review any preliminary assessments, new modeling methodologies, discuss general issues of interest for both teams, and to provide preliminary ABCs and OFLs for use by the Council in setting interim specifications at the October Council meeting.

The Plan Teams recommended projected groundfish specifications for 2005 and 2006 during their September 15-17, 2004 meetings (Item D-3(d)(1)). This year represents the first time that specifications are being recommended for a period of up to two years, pending Secretarial approval of Amendments 48/48. Unless otherwise noted in the plan team reports, the ABCs and OFLs are projected values using updated catch information. Further information on the methodology for projecting these specifications may be found in the TAC-Setting EA. Reports from the Joint, GOA and BSAI plan team meetings are provided under Item D-3(d)(2).

TAC Considerations for State Pacific Cod Fishery

Since 1997, the Council has reduced the GOA Pacific cod TAC to account for removals of not more than 25% of the Federal Pacific cod TAC from the state parallel fisheries. Preliminary information indicates that neither Chignik nor Cook Inlet achieved its GHIL, and therefore would remain at its current allocation. Using the area apportionments of the 2005 Pacific cod proposed ABC recommended by the Plan Team, the federal TAC for Pacific cod would be adjusted as listed at right.

Proposed 2005 Gulf Pacific cod ABCs, TACs, and State guideline harvest levels (mt).				
Specifications	Western	Central	Eastern	Total
ABC	21,204	33,573	4,123	58,900
BOF GHIL	5,301	7,722	412	13,435
(%)	25	24.25	10	23
TAC	15,903	25,851	3,711	45,465

Prohibited Species Catch Limits

Since 1995, total halibut Prohibited Species Catch (PSC) limits for all fisheries and gear types have totaled 2,300 mt. This cap was reduced from 2,750 mt after the sablefish IFQ fishery was exempted from the halibut PSC requirements in 1995. The following 2004 halibut PSC apportionments were instituted for the Gulf of Alaska groundfish fisheries:

2004 Trawl		2004 Hook and Line		
Jan 20 - Apr 1	550 mt	1st trimester	Jan 1 - Jun 10	250 mt
Apr 1 - Jul 4	400 mt	2nd trimester	Jun 10 - Sep 1	5 mt
Jul 4 - Sep 1	600 mt	3rd trimester	Sept 1 - Dec 31	35 mt
Sept 1 - Oct 1	150 mt			
Oct 1 - Dec 31	300 mt	DSR	Jan 1 - Dec 31	10 mt
TOTAL				300 mt
	2,000 mt			

Season	Trawl fishery categories		
	Shallow Water	Deep Water	Total
Jan 1 - Apr 1	450 mt	100 mt	550 mt
Apr 1 - Jul 4	100 mt	300 mt	400 mt
Jul 4 - Sep 1	200 mt	400 mt	600 mt
Sept 1 - Oct 1	150 mt	any rollover	150 mt
Oct 1 - Dec 31	no apportionment		300 mt
TOTAL	900 mt	800 mt	2,000 mt

In 2004, the trawl bycatch of halibut during the D season caused the fishery to reach its annual limit of 2,000 mt on September 10, 2004, thus resulting in a closure of the GOA trawl fishery for the remainder of the year. NMFS in-season management has indicated that the Council may wish to consider adjusting the seasonal amounts of halibut PSC to different target fisheries. NMFS in-season management indicated that some adjustment of the opening dates for the trawl fishery may occur for 2005.

In the BSAI, PSC catch limits are established for halibut, red king crab, Tanner crab, opilio crab, and herring. These PSC limits are further allocated among gear types and apportioned by target fisheries. The 2004 bycatch limits and apportionments are attached as Item D-3(d)(3).

Management Strategy Evaluation

While the evaluation of fishery management strategies has been an ongoing research activity of the AFSC for many years, a working group (WG) has recently been established and tasked with continuing and expanding the AFSC's research in the area of management strategy evaluation (MSE). This WG convened its first meeting on August 17, 2004. A report by the working group meeting is attached as Item D-3(d)(4). Dr. Grant Thompson will be available at the SSC to discuss this report.

BSAI Plan Team OFL and ABC recommendations (metric tons) based on projected catches (see TAC-setting EA for details).

Species	Area	2004			2005		2006	
		OFL	ABC	TAC	OFL	ABC	OFL	ABC
Pollock	EBS	2,740,000	2,560,000	1,492,000	2,909,800	2,363,000	2,542,900	2,087,800
	Aleutian Islands	52,600	39,400	1,000	52,600	39,400	52,600	39,400
	Bogoslof District	39,600	2,570	50	39,600	2,570	39,600	2,570
Pacific cod	BSAI	350,000	223,000	215,500	352,500	225,500	344,700	220,500
Sablefish	BS	4,020	3,000	2,900	3,432	2,418	3,184	2,244
	AI	4,620	3,450	3,100	3,960	2,790	3,674	2,589
Atka mackerel	Total	78,500	66,700	63,000	57,730	49,470	51,830	44,180
	WAI	—	24,360	20,660	—	18,057	—	16,126
	EA/BS	—	11,240	11,240	—	8,360	—	7,466
	CAI	—	31,100	31,100	—	23,053	—	20,588
Yellowfin sole	BSAI	135,000	114,000	86,075	129,710	109,300	124,900	105,250
Rock sole	BSAI	166,000	139,000	41,000	153,290	128,370	136,240	114,060
Greenland turbot	Total	19,300	4,740	3,500	17,740	11,230	16,490	10,430
	BS	—	3,162	2,700	—	7,524	—	6,988
	AI	—	1,578	800	—	3,706	—	3,442
Arrowtooth flounder	BSAI	142,000	115,000	12,000	144,990	96,140	145,180	96,300
Flathead sole	BSAI	75,200	61,900	19,000	69,100	56,860	64,870	53,380
Alaska plaice	BSAI	258,000	203,000	10,000	254,970	159,040	255,220	159,230
Other flatfish	BSAI	18,100	13,500	3,000	18,100	13,500	18,100	13,500
Pacific ocean perch	BSAI	15,800	13,300	12,580	15,790	12,020	15,990	12,170
	BS	—	2,128	1,408	—	1,923	—	1,947
	AI total	—	11,172	11,172	—	10,097	—	10,223
	WAI	—	5,187	5,187	—	4,655	—	4,713
	CAI	—	2,926	2,926	—	2,655	—	2,689
	EAI	—	3,059	3,059	—	2,787	—	2,821
Northern rockfish	BSAI	8,140	6,880	5,000	7,900	6,030	7,670	5,850
Shorthead	BSAI	701	526	526	701	526	701	526
Rougheye	BSAI	259	195	195	259	195	259	195
Other rockfish	BS	1,280	960	460	1,280	960	1,280	960
	AI	846	634	634	846	634	846	634
Squid	BSAI	2,620	1,970	1,275	2,620	1,970	2,620	1,970
Other species	BSAI	81,150	46,810	27,205	81,150	46,810	81,150	46,810
Total		4,193,736	3,620,535	2,000,000	4,318,068	3,282,843	3,910,004	2,977,468

GOA Plan Team OFL and ABC Recommendations (Part 1 of 2) based on projected catches (see TAC-setting EA for details).

Species	Area	2004			2005		2006	
		OFL	ABC	TAC	OFL	ABC	OFL	ABC
Pollock	610	—	22,930	22,930	—	22,930	—	22,930
	620	—	26,490	26,490	—	26,490	—	26,490
	630	—	14,040	14,040	—	14,040	—	14,040
	640	—	1,280	1,280	—	1,280	—	1,280
	subtotal	91,060	64,740	64,740	91,060	64,740	91,060	64,740
	650	8,690	6,520	6,520	8,690	6,520	8,690	6,520
	Total	99,750	71,260	71,260	99,750	71,260	99,750	71,260
Pacific cod	W	—	22,610	16,957	—	21,204	—	17,406
	C	—	35,800	27,116	—	33,573	—	27,560
	E	—	4,400	3,960	—	4,123	—	3,385
	Total	102,000	62,810	48,033	78,400	58,900	63,950	48,350
Flatfish (deep water)	W	—	310	310	—	310	—	310
	C	—	2,970	2,970	—	2,970	—	2,970
	WYK	—	1,880	1,880	—	1,880	—	1,880
	SEO	—	910	910	—	910	—	910
	Total	8,010	6,070	6,070	8,010	6,070	8,010	6,070
Rex sole	W	—	1,680	1,680	—	1,680	—	1,680
	C	—	7,340	7,340	—	7,340	—	7,340
	WYK	—	1,340	1,340	—	1,340	—	1,340
	SEO	—	2,290	2,290	—	2,290	—	2,290
	Total	16,480	12,650	12,650	16,480	12,650	16,480	12,650
Flathead sole	W	—	13,410	2,000	—	11,694	—	11,111
	C	—	34,430	5,000	—	30,025	—	28,527
	WYK	—	3,430	3,430	—	2,992	—	3,843
	SEO	—	450	450	—	390	—	370
	Total	64,750	51,270	10,880	56,500	45,100	53,800	42,850
Flatfish (shallow water)	W	—	21,580	4,500	—	21,580	—	21,580
	C	—	27,250	13,000	—	27,250	—	27,250
	WYK	—	2,030	2,030	—	2,030	—	2,030
	SEO	—	1,210	1,210	—	1,210	—	1,210
	Total	63,840	52,070	20,740	63,840	52,070	63,840	52,070
Arrowtooth flounder	W	—	23,590	8,000	—	26,249	—	27,924
	C	—	151,840	25,000	—	168,953	—	179,734
	WYK	—	10,590	2,500	—	11,787	—	12,539
	SEO	—	8,910	2,500	—	9,911	—	10,543
	Total	228,130	194,930	38,000	253,900	216,900	270,050	230,740
Sablefish	W	—	2,930	2,930	3,421	2,411	3,174	2,237
	C	—	7,300	7,300	8,364	5,892	7,758	5,468
	WYK	—	2,550	2,550	2,661	1,875	2,469	1,740
	SEO	—	3,770	3,770	4,562	3,214	4,232	2,983
	E subtotal	—	6,320	6,320	7,223	5,089	6,701	4,723
	Total	22,160	16,550	16,550	19,008	13,392	17,633	12,428

GOA Plan Team OFL and ABC Recommendations (Part 2 of 2) based on projected catches (see TAC-setting EA for details).

Species	Area	2004			2005		2006	
		OFL	ABC	TAC	OFL	ABC	OFL	ABC
Pacific ocean perch	W	2,990	2,520	2,520	2,964	2,489	2,873	2,419
	C	9,960	8,390	8,390	9,828	8,253	9,526	8,020
	WYK	—	830	830	—	802	—	779
	SEO	—	1,600	1,600	—	1,556	—	1,512
	E subtotal	2,890			2,808	2,358	2,722	2,291
Total	15,840	13,340	13,340	15,600	13,100	15,120	12,730	
Shortraker/rougheye	W	—	254	254	—	254	—	254
	C	—	656	656	—	656	—	656
	E	—	408	408	—	408	—	408
	Total	2,510	1,318	1,318	2,510	1,318	2,510	1,318
Other rockfish	W	—	40	40	—	40	—	40
	C	—	300	300	—	300	—	300
	WYK	—	130	130	—	130	—	130
	SEO	—	3,430	200	—	3,430	—	3,430
	Total	5,150	3,900	670	5,150	3,900	5,150	3,900
Northern rockfish	W	—	770	770	—	730	—	678
	C	—	4,100	4,100	—	3,869	—	3,591
	E	—	NA	NA	—	NA	—	NA
	Total	5,790	4,870	4,870	5,400	4,600	5,070	4,270
Pelagic shelf rockfish	W	—	370	370	—	370	—	370
	C	—	3,010	3,010	—	3,010	—	3,010
	WYK	—	210	210	—	210	—	210
	SEO	—	880	880	—	880	—	880
	Total	5,570	4,470	4,470	5,570	4,470	5,570	4,470
Thornyhead rockfish	W	—	410	410	—	410	—	410
	C	—	1,010	1,010	—	1,010	—	1,010
	E	—	520	520	—	520	—	520
	Total	2,590	1,940	1,940	2,590	1,940	2,590	1,940
Demersal shelf rockfish	SEO	690	450	450	690	450	690	450
Atka mackerel	GW	6,200	600	600	6,200	600	6,200	600
Skates	C Big+longnose				—	4,435	—	4,435
	W/C/E Other	NA	NA	NA	—	3,709	—	3,709
	Total				10,859	8,144	10,859	8,144
Other species	Gulf wide			12,592	NA	NA	NA	NA
Total		649,460	498,498	251,841	650,457	514,864	647,272	514,240

Plan Team Report

September 15 - 17, 2004

Alaska Fisheries Science Center, Seattle

Joint Team minutes

The Joint Plan Teams convened on September 15-17th, 2004 at the AFSC, Seattle. There were approximately 30 members of the public and agency staff present. The agenda (attached) was agreed upon for the meeting.

Team members present:

Loh-Lee Low	AFSC REFM(BSAI chair)	Jim Ianelli	AFSC REFM (GOA co-chair)
Mike Sigler	AFSC ABL (BSAI vice chair)	Diana Stram	NPFMC (GOA co-chair)
Kerim Aydin	AFSC REFM	Sandra Lowe	AFSC REFM
David Carlile	ADF&G	Jeff Fujioka	AFSC ABL
Bill Clark	IPHC	Jon Heifetz	AFSC ABL
Jane DiCosimo	NPFMC	Robert Foy	UAF
Lowell Fritz	AFSC MML	Bill Bechtol	ADF&G
Brenda Norcross	UAF	Tory O'Connell	ADF&G
Andy Smoker	NMFS AKRO	Tom Pearson	NMFS AKRO
Grant Thompson	AFSC REFM	Beth Sinclair	AFSC MML
Ivan Vining	ADF&G	Sarah Gaichas	AFSC REFM
		Bill Clark	IPHC

The Teams noted the attrition of Team membership and requested that the Council consider appointing representatives from the states of Oregon and Washington and an economist to each Team.

The Teams noted that since the record of decision has been filed for the Groundfish PSEIS, the Teams should track whether the Council policy resulting from the PSEIS mirrors current stock assessment guidelines for authors. The Teams also noted that draft changes to the National Standard Guidelines could affect the development of SAFE chapter requirements, and ultimately ABC recommendations.

Council update and activities

The Teams were updated by Council staff on the results of the HAPC proposal review (from March 2004) and the concurrent process changes in conjunction with the EFH EIS analysis. All 4 Council Plan Teams put considerable time and effort in March 2004 into both reviewing HAPC proposals and making suggestions for revising the proposal process in the future. Understanding that the HAPC Process (appendix J of the EFH EIS) is currently undergoing review and revision, the Plan Teams specifically reiterate the comments put forward in the Report by the Joint Teams in March 2004. A section of that document, the "Comments by the Plan Teams on the HAPC Process", is attached to the minutes. The Plan Teams recognize that the HAPC proposal review process is dynamic and that Plan Team participation may be requested again in the future to review such proposals for the Council, thus the Teams request that these comments be incorporated into any revisions made to the HAPC Process in order to improve upon the process in the future.

The Teams reviewed the process for TAC-setting now underway under Amendments 48/48. It is expected that the amendments will be implemented for the 2005 fishing year. Therefore, the

Teams should recommend overfishing levels and allowable biological catches for 2005 and 2006. The Teams recommended that the new procedure for assessment authors for projecting specifications for the subsequent two fishing years should be included in the guidelines for authors. The Teams recommended that a uniform methodology be applied. Since a groundfish trawl survey was not conducted in the Gulf of Alaska in 2005, assessments for some GOA species will not be conducted in 2004 for 2005; instead projected OFLs and ABCs for selected GOA species will be recommended in November 2004. Assessments for all species (based on the 2005 GOA trawl survey) will be prepared in 2005 for the 2006 and 2007 fishing years. The Teams discussed the method for estimating late May through December catches for proposed and interim specifications, but concluded that the current method achieved results within 2 percent of actual catches.

Report on REFM's Fisheries Interaction Team (FIT) studies

The Teams requested to have presentations on recent fishery marine-mammal interaction studies. Four separate presentations were given.

First, Chris Wilson presented the AFSC acoustic study to examine whether the abundance and spatial patterns of walleye pollock are impacted by commercial fishing activities over short spatio-temporal scales in 2001, 2002, and 2004. This study focused on a fish avoidance response, which might be characterized by disruption of the fish distribution patterns over a longer time scale (days) and space scale (area of commercial fishing operations). Results for 2001 did not detect any fish avoidance responses that could be attributed to the commercial fishing activities. Results from 2002 were disappointing because very little fishing occurred in the area during the study. The commercial fishing effort was good during the 2004 survey and analyses of the data are currently underway. Results from 2004 indicated that the 2004 year-class of pollock was relatively strong compared to numbers of young-of-the-year pollock that were detected during the earlier surveys.

The Teams suggested that the Council consider whether to recommend the preparation of a regulatory amendment to extend the closure of Chiniak Bay past 2005 to allow additional research on potential fishery interactions, depending on whether the 2004 results indicated the need for additional research. The Teams were informed that the RV *Miller Freeman* is not available in 2005, and that another research platform (commercial or ADF&G vessels) may be necessary to continue the study.

Liz Conners presented work on Pacific cod distribution within and outside of closed areas near Unimak Pass in the Bering Sea. The study is part of an overall effort to address concerns over localized depletion of Steller sea lion prey as a result of spatially and/or temporally intensive commercial fishing. Results from the pot study did not show a significant difference in the distribution of cod between trawled and untrawled areas in either 2003 or 2004 (the study was repeated in the Winter of 2004). Comments from Plan Team members requested to what extent the study could be repeated in a different area, and questioned to what extent the region chosen for the study as well as the short temporal nature of the study might complicate results. The author noted the difficulty in identifying regions where trawl exclusion zones are located in close proximity to heavily fished areas.

Susanne McDermott presented work on the tagging program for Atka mackerel. This study operated at three different sites in the Aleutian Islands with very successful release and recapture cruises. The study was designed to assess the movement of Atka mackerel between areas that are open and closed to fishing and adjacent to Steller sea lion critical habitat. The experiments also allow estimation of tag shedding rates and tag reporting rates. Models of the tagging data have been successful at estimating movement rates but have been affected by apparent strong-recruitment of small fish within the study area. Future plans are to use the Atka mackerel tagging

data to provide independent estimates of mortality and supplemental information on the spatial distribution for application in the stock assessment model and in setting ABCs.

Bing Shi presented analyses of the pilot tag program for Pacific cod. This study was done on an opportunistic basis with the Pacific cod study near Unimak Pass. The goal is to test the feasibility of such a study and to better understand the movement of cod. Preliminary estimates of short-term and seasonal movement from this tagging study are affected by fishery effort concentrations. Trials to estimate fishing effort by area have been pursued using VMS data. The presentation suggested that recovery rates for Pacific cod tags were quite high (>30% for some release groups). The Teams were concerned that this is higher than expected given current stock status and exploitation rates. Dr. Shi noted that 733 out of the total 1328 fish recaptured were recaptured in the same area and season as released, suggesting that the Pacific cod released with tags (which totaled 3,691 from February 2003) had not mixed with the entire population. The Teams encouraged further analyses of these data. In particular, it was noted that the NMFS bottom trawl survey had failed to recapture any tagged Pacific cod. The recapture rates and spatial coverage appears to hold promise in improving our understanding of the spawning dynamics of Pacific cod.

Joint Stock Assessment Presentation

Tom Wilderbuer and Paul Spencer presented some issues concerning BSAI flatfish assessments, and a comparison of arrowtooth flounder assessments in the BSAI and GOA. Paul presented estimates of stock productivity and F_{MSY} of BSAI flathead sole and Alaska plaice should these species be managed using Am. 56 Tier 1 ABC calculations. Estimates of stock productivity and F_{MSY} are strongly influenced by the temporal trend in decreasing recruitment in recent years, and vary considerably depending upon the choice of spawner-recruit curve and the years included in the analysis. In light of these uncertainties, management advice based upon estimates of F_{MSY} was not recommended. Paul also presented information on spatial locations of flatfish distributions that indicate that several flatfish distributions on the EBS shelf moved southeast in 1999, one of the coldest years in the EBS. Tom presented similarities and differences in assessing arrowtooth flounder in the BSAI and GOA. The Plan Team discussed the differences in populations of arrowtooth between regions, noting that while biomass in the BSAI has peaked and is in a declining trend, it is still increasing in the GOA. It was further noted that female spawning biomass in the GOA is approximately 3-4 times that in the BSAI.

The Teams suggested that authors utilize data from the longline survey and halibut surveys for further indexes of abundance in flatfish.

The Teams suggested future joint assessments and research presentations might include:

- Rockfish assessment comparisons
- Rockfish genetic stock structure research and implications for stock assessments
- Update on on-going habitat research
- Current status of knowledge on cold water corals and links to productivity of ecosystems
- Inclusion of the broader North Pacific trends in species based on the PICES Ecosystem Status and Trends Report into the Ecosystem Considerations Section
- Survey presentations: update on current survey methodology and survey plans for upcoming year

Pacific cod area apportionments

Grant Thompson presented a report on alternative methods for determining Pacific cod biomass distributions for the BS, AI, and GOA. The Teams recommended applying the Kalman filter, at least for the BSAI assessment. Based on survey data through 2003, the Kalman filter would result in only a 1-3% change in the biomass proportions currently used in the BSAI assessment.

The Teams noted that since a spatially explicit model is expected soon and the results of the differently tested approaches are not meaningfully different than the status quo, it may not be necessary to apply a new method now.

Grant Thompson gave a brief overview of a new spatially explicit "ALASKA" model. The acronym is from: **A**ge- **L**ength- and **A**rea-**S**tructured **K**alman **A**ssessment.

Additional research presentations

Franz Mueter gave a presentation to the Teams on his work with evaluating the total annual surplus production and overall exploitation rate of groundfish in the BSAI and GOA. He showed some probability distributions of an aggregate species MSY that could be used for evaluating overall OY rules (such as those used for the BSAI and GOA). For evaluating OY limits, his results suggest that for the BSAI, the current OY cap is on the left side of the aggregated species MSY distribution while for the GOA, the upper limit of the OY range (800 mt) is to the right. This suggests inconsistencies between the use of OY ranges between the regions based on an aggregate groundfish production estimate. However, the GOA catch has never come close to approaching the upper limit of the OY due to in part to the groundfish species mix and bycatch considerations (e.g., for prohibited species). The Plan Teams decided that a reevaluation of the appropriateness of the current OY range in both the BSAI and GOA would be an important topic for Plan Team discussion. This topic was previously discussed in conjunction with work on the PSEIS and currently is part of the priorities for implementing the recommendations of the PSEIS. It is also timely given the on-going National Standard Guidelines revision as well as the Goodman report in 2003. The Teams suggested that OY range considerations be revisited in the future (but specific dates were left unspecified).

Economic SAFE Report

The Teams received a report by Ron Felthoven and commended staff for improvements in the Economic SAFE Report and recommended adding more descriptive fishery and cost information in the text section. The Teams requested an update on community profiles at the November 2004 joint meeting, and requested AFSC economists to be named to both Plan Teams.

NPCREP

Pat Livingston gave an overview of a new NOAA initiative to incorporate climate research and ecosystem productivity, Northeast Pacific Climate Regime and Ecosystem Productivity (NPCREP). They had just completed a workshop earlier in the week to provide guidance on the scope and direction of work under the initiative. One conclusion from the NPCREP workshop was to have Council interactions as an integrated part of the work. The program is intended to be responsive to the needs and concerns of fisheries managers. They would like to begin a regular dialog with the Plan Teams and the Council to ensure that the goals of the initiative satisfy pertinent management questions from the Council. For example, what are the Council's key ecosystem concerns? What type of ecosystem investigations would be most useful for answering pressing management issues? The Plan Teams reiterated the utility of having climate forecasting variability information available for single-species assessments. Also, the pattern of projected climate change is of general interest to the Council. The Plan Teams recommend that NPCREP explore means to consolidate information on GOA climate and ecosystem indices, similar to the Bering Climate website (www.beringclimate.noaa.gov). While the Teams understand that this particular website was separately funded, it appears to be an excellent model for consolidation of relevant information and the Teams encourage the development of a similar website for the Gulf of Alaska.

Ecosystem Assessment and Ecosystem Considerations

Jennifer Boldt gave an overview of the chapter on Ecosystems Considerations for 2005. She noted that in the future the timing of production of this chapter will be revised such that it will be updated and produced for the spring Council meeting. This will provide better timing for use of the information contained within the chapter for stock assessment scientists in their assessments.

The Plan Teams recognize and appreciate the amount of effort involved in compiling this information and commends the group on their continued effort on this behalf.

Some recommendations by the Team for inclusion in the future:

- Description of effort by gear type
- More information on global warming trends particularly with respect to the arctic, location of sea ice, and how these impacts are manifested
- Hot links to updated information within the ecosystem chapter
- Compile list of questions to be addressed/data needs (i.e., what would be useful information to answer questions) which could help forging linkage to management

The Plan Teams discussed the recommendation that the Council be more involved in posing management-related questions for the ecosystem chapter to address. It was suggested that this could be the focus of summary section to answer questions pertinent to Council requests, and that a review of the ecosystem considerations chapter be presented to the Council in a similar fashion to their review of annual stock assessments.

Suggestions were made to have a PICES presentation to the Joint Teams regarding what regions and associated indicators are being compiled. The Teams struggled with the intent to decrease the volume of the ecosystem considerations chapter while still providing a comprehensive synthesized overview of all information. Suggestions were made to have a larger document as an appendix with a separate summary section which is updated annually and reviewed. The larger document would always be available (e.g., on the web) but only periodically produced and updated.

Ecosystem Assessment

Kerim Aydin presented an overview of the Ecosystem Assessment and on-going ecosystem modeling activities. He showed the Teams a website under development which will allow for the ecosystem assessment modeling outputs to be utilized in a filtered format. The Teams commended the work by the authors but cautioned that some of the results could be very controversial. Thus, while very useful, the website and results should appropriately recognize assumptions to keep from being misinterpreted. The authors reiterated that it is very important for stock assessment authors to understand that these models are only being conceived of as a tool for use as a preliminary investigation of inter-relationships amongst stocks. If stock assessment authors are interested in specific scenarios being run they can request this of the ecosystem assessment authors.

Marine Mammal Update

Lowell Fritz updated the Teams on results of the 2004 aerial SSL survey and the 2004 fur seal survey.

SSL Survey

Lowell noted that results from the 2004 aerial SSL survey found more animals than in previous years given the use of a new methodology. In general this improved format finds an increase of 3-5% more than the old method.

This year's medium format survey showed approximately an 11% increase overall in the western stock, thus given format issues this likely represents an approximate 6% increase. This shows a very similar pattern to results from 2 years ago. The only area showing a decrease was in the Central GOA. Results are still preliminary.

Fur Seals

Results from the July male seal counts showed a decline on St Paul from recent years. 2002 was the lowest on record since 1921. St. George showed similar low count results. While actual estimates are still being finalized, preliminary indications are of a continued decline in pup production.

Wrap-up

The Teams discussed the changes to the catch accounting system. It was noted that the system represents an improvement over the previous system, but that problems with the new system are related to non-managed species. These issues are due to be resolved in the next year but are unlikely to be resolved in time for the current year's assessments. Important issues were raised with respect to what results would be if the new system were applied to old data and would this result in any changes to those data? Would a retrospective analysis of this nature be possible? The Teams expressed an interest in having a presentation on the new catch accounting system for the November meeting by Dave Ackley.

The meeting adjourned at 12:45pm on Friday September 17th.

Gulf of Alaska Plan Team minutes

The meeting of the Gulf of Alaska groundfish Plan Team convened at 2pm on Thursday September 16, 2004.

Team members present were:

Jim Ianelli	AFSC REFM (GOA co-chair)
Diana Stram	NPFMC (GOA co-chair)
Sandra Lowe	AFSC REFM
Bill Clark	IPHC
Jeff Fujioka	AFSC ABL
Jon Heifetz	AFSC ABL
Robert Foy	UAF
Bill Bechtol	ADF&G
Tory O'Connell	ADF&G
Tom Pearson	NMFS AKRO
Beth Sinclair	AFSC MML
Sarah Gaichas	AFSC REFM

Absent: Kathy Kuletz, USF&W

Approximately 10 members of the public and agency staff were also in attendance.

Sharks

Dean Courtney gave an overview of a new proposed chapter for this year's SAFE Report on sharks in the GOA and BSAI. This chapter will provide a compilation of available information and data from multiple sources as well as summarize the available bycatch data and fishery-independent biomass data. The chapter is intended to provide advice regarding the sustainable incidental catch of some shark species.

Catch of shark species will be tabulated for individual fisheries and areas for monitoring potential incidental catch problems. Relative abundance trends for Pacific sleeper sharks will be included in the stock assessment. The report will be a stand-alone chapter similar to the 2003 "skates" section in the GOA SAFE. It may also appear in the BSAI SAFE in conjunction with the other species chapter since it covers sharks Alaska-wide.

The Plan Team members suggested including the IPHC bycatch data to look at distribution of Pacific sleeper sharks as the halibut survey may provide valuable information on sharks. It was noted that the chapter would benefit greatly by including actual numbers of sharks as well as the percentage estimates of bycatch relative to population estimates. Currently the Regional Office is working on species-specific catch estimation methods from the "other species" category. Changes in how the Regional Office estimate catches have hampered progress on non-targets for this year's assessment. Estimates of non-targets are likely to be unavailable for the November Plan Team.

This chapter was recommended to be included as an appendix to the GOA SAFE. This will also serve as a placeholder for future "Other Species" chapters (which may include a regular evaluation of species within this group).

Rex sole

Teresa A'Mar presented a draft stock assessment for rex sole. This is the first year that data on rex sole have been analyzed separately from "other" flatfish. The model, parameters, and results were presented. In keeping with Plan Team convention, new models undergo a year of review prior to being used for ABC specification purposes (pending approval). This analysis will

represent an appendix to the flatfish chapter in November and may then be presented separately in 2005.

The model formulation is based upon the Dover sole model. The Team (and authors) noted a number of problems and issues with the analysis as presented. The overall modeling and data consistency seemed quite good. However, there is a large difference between the age at 50% maturity and the age at 50% selectivity with the former occurring (apparently) at much younger ages than the latter. The effect of this is that harvest levels recommended tend to be very high since many fish have had numerous opportunities to spawn. Under a standard Tier 3 approach to estimating ABC and OFL, the harvest levels end up being very high. Since the authors and Plan Team members were concerned that the actual selectivity might change to younger fish should rex sole become a more focused target fishery, an alternative harvest rate was considered more appropriate. Some alternatives to consider in the future include:

1. Estimating F_{ABC} and F_{OFL} based on the minimum of the average yield minus $\frac{1}{2}$ times the variance of yield or use of another risk-averse loss function
2. Use of Tier 5 calculation since this is likely to be more precautionary in this case
3. Making adjustments to the fishery selectivity curve in order to set it closer to the maturity curve

The Team discussed these difficulties with the assessment and alternatives. While the maturity data is new, its reliability seems sound. A more careful evaluation of selectivity patterns, possibly by depth and area, is required. Adopting a Tier 3 policy for this species in the future should also weigh trade-offs in catch stability and other bycatch concerns. Presumably, these would be accounted for during the TAC specifications.

Questions were posed regarding the discard rates in the fishery and it was noted by a member of the public that rates are low as compared with other flatfish fisheries given that this species has the highest value of the flatfish fisheries. The majority of catch is from the directed fishery. Age data for the fishery was noted to be difficult from the catcher processor sector given that the fish are frozen whole. It was noted that seasonal depth distribution could be contributing to a possible problem with estimating fishery selectivity-at-age. More investigation should be given to potential seasonal effects and what portion of the catch is taken in which seasons. Highest catches were noted to be in April and October and only the July fishery is in conjunction with the survey. The Team suggested further evaluation be given to the differential mortality rates listed for males and females and questioned the ability to further analyze this as it is pertinent to all flatfish assessments.

The degree to which the commercial fleet target larger fish relative to the survey was questioned.

The Team would like to see additional information presented on the difference between fishery selectivity and survey selectivity as well as more details from the referenced study on maturity versus selectivity. The Team commends the work put forth by the assessment authors and decided to revisit the model and results next September prior adopting the model for use in making ABC recommendations.

Dover Sole

No additional information was presented at this time on Dover Sole.

GOA pollock

Martin Dorn and Chris Wilson presented an overview of preliminary results from the Spring 2004 Shelikof survey.

The survey results were similar to the last 3 years with no indication of a strong 2003 year class based on preliminary results. Relatively greater quantities of adult pollock were detected on the west side of Shelikof Strait which is different from the last 3 years' of surveying.

Preliminary results were presented from the summer 2003 survey. This was meant to be a feasibility study thus no Gulfwide estimates were intended. The top 5 species encountered, based on catch weights from the midwater and bottom trawls were: pollock, POP, herring, eulachon, and northern rockfish. These species were also the most common based on numbers caught, except that capelin should be substituted for herring. It is important to note that these catch estimates do not necessarily represent the actual relative abundance of these species because of the manner in which the hauls are conducted. The survey was able to sample in areas 630 and 620 but not into 610. Plans are for a follow up survey in 2005.

Adult pollock were generally found along the shelf break. 4 yr olds were widely distributed throughout the study area and 1 year olds were often located in the bays on the Kenai.

Martin Dorn summarized the current information on the status of GOA pollock. The results from the Shelikof region appear stable but flat. There is no indication of strong recruitment. Results from the east side of Kodiak found young of year pollock but results are very preliminary. The winter survey did not cover as much area as in other years therefore there was no sense of how much spawning is occurring outside of Shelikof.

The Team discussed the preliminary results and status of the population with respect to recommendations for proposed specifications. It was noted that the model projection for the specification assumes an average 99 year class. Given the concerns with the survey results, the size of the 99 year class and the trend in the population, the Team recommended a rollover from the ABC for the proposed specifications (i.e., a rollover of 2004 ABC and OFLs to 2005 and 2006). The projection model indicated an increase and given the preliminary survey indications, this seemed less prudent.

Biennial Assessments for GOA Species

The Team discussed clarifications to the SAFE Report, Plan Team process and expectations of stock assessment authors given the new specifications process and the biennial specifications instituted for most GOA species.

It was determined that for species where biennial assessments are approved, no new assessments will be presented this year given that there will be no additional survey data until 2005. The Team thought it would be important to have an executive summary of all species whether or not a full analysis was completed. A list of some suggested inclusions for summary assessments were:

1. Citation for the assessment from previous year (perhaps with web address)
2. ABC and OFL for 2005-2006 with documentation for those estimates as well as justification for any adjustment to that estimate
3. Catch estimates for 04-05 if possible. Any new developments of concern: update on new available data
4. Response to any SSC comments.

The Team also discussed what criteria would be utilized to justify the need for an assessment in an "off" year regardless of the lack of summer survey data.

Using some sort of "potential threshold ABC change" as a determinant for whether a new assessment would be required was discussed and ultimately rejected. This also included evaluating patterns in any specific new information (e.g., a dramatic perceived change in abundance trend or fishery development). The Team agreed that the decision could be left at the

discretion of the stock assessment author with guidance from the Council. The analysts should be able to evaluate how additional information (age-composition data, new fishery developing, etc.) would affect an assessment. Time at future September meetings should be devoted to help decide if assessments need to be done in an “off” year based on information and/or concerns about particular species or species groups.

GOA assessments that will continue to be produced annually include:

- Pollock
- Pacific cod
- Sablefish

Additional assessments likely to be included this year regardless of the lack of survey data include:

- Preliminary assessment of Rougheye rockfish
- Dusky rockfish assessment (pending new information)
- POP assessment

The Plan Team requested that stock assessment authors attend the November Plan Team meeting and be prepared to answer questions about their species. In particular, the Team seeks an evaluation of the suggested OFL and ABC and numbers from projections.

Light/dark dusky rockfish

Dave Clausen discussed a recent paper by Orr which officially separates light and dark dusky rockfish by species. They are now designated as “dusky rockfish”, (*Sebastes variabilis*: formerly called light dusky rockfish) and “dark rockfish” (*Sebastes ciliatus*: formerly called dark dusky rockfish). Given that dark rockfish share habitat with black rockfish, it seems reasonable at this time to pursue amending the FMP in order to remove dark rockfish to state management, similar to the decision to remove black and blue rockfish back in 1998. It was reiterated that annual stock assessments have encouraged removing dark rockfish to state management as soon as the identification of two species was official. Conversations with state management personnel indicated that that would be possible to fold into on-going state management initiatives

The Plan Team recommends moving dark rockfish to state management in the GOA. The Plan Team also suggests looking into moving dark rockfish in the BSAI as well as black and blue rockfish in BSAI to state management at the same time.

Shortraker/Rougheye

The Team recapped some issues that were raised at the December Council meeting by the SSC regarding comments on the relative proportions of weighted gears by area for ABC apportionment between SR/RE. It was noted that the Team would like more clarification of this at the November meeting and requests a detailed explanation of the rationale for the assumptions and proportion of catch by gear type.

It was reported that Dana Hanselman is working on an age-structured model for estimating ABC for rougheye rockfish. This analysis will be presented in an appendix to the November Plan Team meeting Slope Rockfish SAFE Report.

Proposed Specifications

The Plan Team approved the proposed ABCs and OFLs with the exception of pollock as noted previously. The Plan Team noted that any proposed TAC for skates which come from the proposed specifications in the CGOA should continue to account for the conservation of big and longnose skates in this region. The proposed specifications as presented do not account for this,

but the previous year's stock assessment as well as minutes from the Plan Team and SSC give the justification for establishing a conservative TAC in the CGOA (equal to the OFL for longnose skates) and the Team continues to recommend that the TAC for skates in the CGOA be conservatively set to account for noted conservation concerns.

The meeting adjourned at 5:30pm.

Draft BSAI Plan Team Minutes

The Bering Sea/Aleutian Islands Groundfish Plan Team convened on September 15-17, 2004. Members in attendance were Loh-Lee Low (AFSC, BSAI chair), Mike Sigler (ABL, vice chair), Jane DiCosimo (Council Plan Coordinator), Kerim Aydin (AFSC), Dave Carlile (ADF&G), Brenda Norcross (UAF), Andy Smoker (NMFS Region), Grant Thompson (AFSC), Ivan Vining (ADF&G). Kathy Kuletz (USFWS), Lowell Fritz (AFSC), and Bill Clark (IPHC), (attended GOA Team meeting) were not present.

Pacific cod split

The team reviewed a report by Grant Thompson on appropriate methods for separating BSAI Pacific cod ABC into subarea apportionments. The current method is a fixed split between the Bering Sea and Aleutian Islands. The team selected the Kalman filter over the current method because the filter adjusts the split for abundance changes in the two areas and considers the amounts of error in the abundance estimates. The team noted that if the AI population were to be set at tier 5, then there would not be an issue of "splitting" the BSAI specifications.

AI pollock

Steve Barbeaux presented a new model for assessing AI pollock. It was presented in November 2004, but was not applied because it was out of cycle for accepting new models. The team recommended that the authors continue their efforts at developing an age-structured model for AI pollock. Assessment of AI pollock is difficult because trawl survey biomass estimates are similar to maximum fishery catch, yet the large fishery catch did not affect the trawl survey abundance trend. The team recommended Tier 5 because the ABC recommendation likely is conservative, but noted the potential to apply Tier 3 to the stock. Catch could be used as a minimum biomass estimate but the upper bound is not known.

Rockfish

The team discussed whether the initiative in the GOA to consider removing dark rockfish (AKA "dark dusky rockfish") from the GOA FMP should be extended to the BSAI. The teams and author discussed the potential management implications from a developing groundfish fishery out of Adak. The analysis (or a discussion paper) could identify whether a deferral to the State of Alaska is necessary or wanted. The team supported the non-target species initiative and noted the following discussion on whether to split shortspine thornyhead rockfish out of the other rockfish complex could be addressed there. The team thought it was reasonable to continue development of the model for shortspine thornyhead. It recommended the following: (1) relax the assumption that the stock starts at K; (2) drop $M = 0.013$ from consideration; and (3) add a discussion of natural mortality values estimated by Kline and Miller.

TACs

The teams recommended the BSAI OFL and ABC projections for 2005 and 2006 as presented by Jim Ianelli. The teams noted that it has recommended a different method for setting the "other species" ABC and likely will recommend the same methodology in November 2005. It may recommend separating shortspine thornyheads from the other rockfish complex, and may recommend that black and dark dusky rockfish be removed from the BSAI FMP to be consistent with action to remove those species from the GOA FMP under GOA Plan Amendment 46 in 1998.

Draft Agenda
September 2004 Plan Team Meeting
AFSC, Seattle

Wednesday September 15: 1pm-5pm

Joint Plan Teams:

- Update on Council-related items: HAPC Process, EFH EIS, PSEIS timeline and issues pertinent to Plan Teams, GOA Rationalization/Central GOA Rockfish Pilot Rationalization Program, Proposed revisions to National Standard 1 Guidelines, Non-Target Species committee work, possible alternative management strategies for rockfish, IRIU (BSAI amendment 80 update)
- Overview of BSAI and GOA Groundfish FMP revisions: questions, clarification (per SSC on definitions) etc as necessary
- Presentation of on-going research by Fishery Interaction Team

Thursday September 16:

Joint Plan Teams:

9am-12pm

- Proposed specification changes: TAC-Setting Process changes and TAC-Setting EA
- Economic SAFE Report
- Joint Stock Assessment presentation on BSAI and GOA flatfish species
- Rockfish Management
- Pacific cod BS and AI , GOA subarea apportionments

1pm-5pm: Individual Teams:

GOA Plan Team:

- GOA pollock
- Rex Sole
- Dover Sole
- Sharks
- Shortraker/rougheye
- Light/dark dusky rockfish

BSAI Plan Team:

- AI pollock
- BS pollock
- AI survey results
- AI special management area discussion
- BSAI thornyhead

Friday September 17:

Joint Plan Teams:

- Update on 2004 aerial SSL survey
- Ecosystem Considerations Chapter
- Ecosystem Assessment
- Joint Teams wrap up

Plan Team comments and suggestions on the current HAPC process

(from: "Report of the NPFMC Joint Plan Teams' review of proposals for Habitat Areas of Particular Concern (HAPC) March 8-9, 2004")

The Teams generally expressed appreciation to be included in the process of establishing useful HAPC designations. This issue is important and can have far-reaching consequences for developing innovative management strategies. The Council requested comments from the Teams about the effectiveness of this style of review process.

The Teams' felt that more input on writing the "directions for reviewers" and on criteria might have helped alleviate some ambiguity.

The Teams' discussed the pros and cons of establishing a smaller subset of plan team members assigned specifically to a HAPC review workgroup (along with a number of experts). Many plan team members felt that could be more efficient than requesting that all members of all Plan Teams participate in the full review process. Such a workgroup could then report back to the full Plan Team their findings similar to other working groups (e.g., "Other species" working group, Crab overfishing working group). However, other plan team members discussed that the inclusion of all Team members brought together diverse experiences and expertise and provided for a more comprehensive review. This was felt to be constructive initially and served to raise the level of general understanding about habitat issues to those involved in FMP implementations (where these types of concerns have not traditionally played a large role). The Teams' acknowledged that time and opportunity to involve additional expertise from outside of the plan teams would have been beneficial in the process.

An evaluation of the level of data utilized in the proposal as well as the level of scientific uncertainty inherent in that data would be useful in this review.

Citations should be submitted in full for these proposals such that reviewers could pursue these citations if necessary to evaluate their relevance. Grey literature should be accessible and would assist reviewers.

A general habitat inventory should be made available. If this is unavailable, it should be a priority for agency work. This would serve a number of purposes, one of which would be to provide a uniform basis for evaluating HAPC sites.

As noted above under "Plan Team concerns," it was difficult to evaluate proposals in a consistent manner according to established criteria. Also, there was a lack of time available to debate and discuss a number of critical concepts and measures.

The Teams struggled with the notion in many proposals that HAPC sites that lack information should be designated HAPC *first*, and then evaluated for refinements and further research to determine if the designation was appropriate. Since HAPC are discretionary tools for Council use, a HAPC designation should be based on information that is currently available rather than on speculation. That said, perhaps HAPC proposals that fit this description should fall into a separate research priority category. This would provide the Council with a subset of sites that may not fit the HAPC criteria, but may reflect a higher priority research area.

Several sites proposed were areas already closed to trawling, hence the question of how to treat the Council's priority on "stress" was raised. Since Council guidance did not specify the type of fishing activity, the Teams interpreted any fishing activity (e.g., fixed gear such as longline and pots) in considering the degree of stress.

Additional data concerns centered on the determination of extent of relative fishing pressure by proposal area. This was notably difficult for reviewers to assess given only the information provided in the proposal though it was noted that some additional information was provided by staff. While it was noted that confidentiality issues may be problematic, it was suggested that in the future catch data be provided in some aggregated form such as within statistical areas.

The number of proposals and limited time to review them did not leave sufficient time to discuss important concepts like the size of buffers around areas, maintaining habitat types as well as connected groups of habitat types, and the overall management objectives for HAPCs.

The Teams noted that the same sites were identified in a number of proposals, but varying levels of scientific information were utilized for each site. There should be consistent availability of data for proposed sites such that it would then raise the levels of information available for use by all proposers and therefore increase the quality and consistency of all proposals. Mixing of sites within proposals made them difficult to evaluate (i.e. pinnacles and seamounts). Proposers could likely have done a much better job in their respective proposals had they been advised to separate out these conflicting and sometimes confusing mixtures of areas and habitat types.

Finally evaluating individual HAPC sites (regardless of who proposed them) rather than evaluating duplicative sites by individual proposal would have been more beneficial and increased the utility of proposal review. The Plan Teams understand that during this review this was not necessarily feasible under the time constraints and thus the Teams evaluated each proposal individually. However it is the Teams understanding that it is the individual sites and relative merits thereof that will eventually be evaluated in any forthcoming analysis.

TABLE 7.—2004 PROHIBITED SPECIES BYCATCH ALLOWANCES FOR THE BSAI TRAWL AND NON-TRAWL FISHERIES

Prohibited species and zone	Trawl Fisheries					
	Halibut mortality (mt) BSAI	Herring (mt) BSAI	Red King Crab (animals) Zone 1 ¹	<i>C. opilio</i> (animals) COBLZ ²	<i>C. bairdi</i> (animals)	
					Zone 1 ¹	Zone 2 ¹
Yellowfin sole	886	171	33,843	2,776,981	340,844	1,788,459
January 20—April 1	262	.....	.....	.....	.....	.....
April 1—May 21	195	.....	.....	.....	.....	.....
May 21—July 4	49	.....	.....	.....	.....	.....
July 4—December 31	380	.....	.....	.....	.....	.....
Rock sole/other flat/flathead sole ⁴	779	25	121,413	969,130	365,320	596,154
January 20—April 1	448	.....	.....	.....	.....	.....
April 1—July 4	164	.....	.....	.....	.....	.....
July 4—December 31	167	.....	.....	.....	.....	.....
Turbot/arrowtooth/sablefish ⁵ .....	.....	11	.....	40,238	.....	.....
Rockfish .....	.....	.....	.....	.....	.....	.....
July 4—December 31	69	9	.....	40,237	.....	10,988
Pacific cod	1,434	25	26,563	124,736	183,112	324,176
Midwater trawl pollock .....	.....	1,456	.....	.....	.....	.....
Pollock/Atka mackerel/other ⁶	232	179	406	72,428	17,224	27,473
Red King Crab Savings Subarea ³ .....	.....	.....	42,495	.....	.....	.....
(non-pelagic trawl) .....	.....	.....	.....	.....	.....	.....
Total trawl PSC	3,400	1,876	182,225	4,023,750	906,500	2,747,250
Non-trawl Fisheries						
Pacific cod—Total	775	.....	.....	.....	.....	.....
January 1—June 10	320	.....	.....	.....	.....	.....
June 10—August 15	0	.....	.....	.....	.....	.....
August 15—December 31	455	.....	.....	.....	.....	.....
Other non-trawl—Total	58	.....	.....	.....	.....	.....
May 1—December 31	58	.....	.....	.....	.....	.....
Groundfish pot and jig	exempt	.....	.....	.....	.....	.....
Sablefish hook-and-line	exempt	.....	.....	.....	.....	.....
Total non-trawl PSC	833	.....	.....	.....	.....	.....
PSQ reserve ⁷	342	.....	14,775	326,250	73,500	222,750
PSC Grand total	4,575	1,876	197,000	4,350,000	980,000	2,970,000

¹ Refer to § 679.2 for definitions of areas.

² *C. opilio* Bycatch Limitation Zone. Boundaries are defined at 50 CFR part 679, Figure 13.

³ In December 2003, the Council proposed limiting red king crab for trawl fisheries within the Red King Crab Savings Subarea (RKCSS) to 35 percent of the total allocation to the rock sole, flathead sole, and other flatfish fishery category (see § 679.21(e)(3)(ii)(B)).

⁴ "Other flatfish" for PSC monitoring includes all flatfish species, except for halibut (a prohibited species), greenland turbot, rock sole, yellowfin sole and arrowtooth flounder.

⁵ Greenland turbot, arrowtooth flounder, and sablefish fishery category.

⁶ Pollock other than pelagic trawl pollock, Atka mackerel, and "other species" fishery category.

⁷ With the exception of herring, 7.5 percent of each PSC limit is allocated to the CDQ program as PSQ reserve. The PSQ reserve is not allocated by fishery, gear or season.

Report on the First Management Strategy Evaluation Working Group Meeting

Grant Thompson
AFSC

Introduction

Evaluation of fishery management strategies has been an ongoing research activity of the AFSC for many years. Most recently, the Programmatic Supplemental Environmental Impact Statement for the BSAI and GOA Groundfish FMPs (PSEIS) devoted thousands of pages to evaluation of both current and alternative fishery management strategies. Nevertheless, further work remains to be done. A working group (WG) has therefore been established and tasked with continuing and expanding the AFSC's research in the area of management strategy evaluation (MSE). While it is understood that MSE research will never truly be "finished," it is expected that the WG will be able to make significant advancements in this area over the next few years.

The WG met for the first time on August 17, 2004. The meeting was held at the AFSC. Present from the AFSC were Kerim Aydin, Jeff Breiwick, Martin Dorn, Sarah Gaichas, Jim Ianelli, Pat Livingston, Paul Spencer, and Grant Thompson. Present from the University of Washington were Doug Kinzey, Arni Magnuson, and James Murphy. The meeting was chaired by Jim.

Review of Background Materials

1) *Harvest Strategy Review*. In October of 2001, the North Pacific Fishery Management Council commissioned an independent scientific review of the Council's current groundfish harvest strategy. The review panel was chaired by Daniel Goodman and presented its report (the "Goodman report") to the Council in November of 2002. The AFSC presented a written response to the Goodman report in October of 2003. Grant provided an overview of the portions of the AFSC's response pertaining to MSE. Briefly, the AFSC's response noted that many of the MSE-related suggestions made in the Goodman report have already been addressed in the PSEIS or other documents, including use of a wide set of performance measures involving both utilization and conservation objectives, use of a public process to develop alternatives, use of species-specific harvest strategies for certain species, use of group-specific harvest strategies for certain groups of species, use of alternatives to the F40% reference point, use of a utility function approach to choose reference points, and examination of multi-annual catch limits. Furthermore, in some instances the MSE contained in the PSEIS goes beyond the suggestions made in the Goodman report, for example, by using a state-of-the-art technical interactions model that facilitates simulation of the effects of the OY caps in the BSAI and GOA groundfish fisheries.

However, the Goodman report also contained several suggestions pertaining to MSE that have yet to be implemented on a major scale, including use of parallel "operating" and "assessment" models to facilitate simulation of the feedback nature of the management process, use of ecosystem models, use of multi-attribute control rules in the lower tiers, use of constraints on the extent to which TAC can change from year to year, and reexamination of the extent to which the current tier system correlates information quality with management precaution. The Goodman report also suggested that alternative management strategies be tested with respect to the effects of regime shifts, spatial structure, depensation, and interspecific differences in life history and with respect to imprecision in estimates of selectivity and survey catchability. WG members

suggested that the scope of MSE research should not be limited to issues raised in the Goodman report

2) *Marine Stewardship Council*. Martin reported on the progress of the Marine Stewardship Council (MSC) in responding to an industry request for certification of the BSAI and GOA pollock fisheries. It is possible that certification will be granted conditionally, with one of the conditions being completion of a more thorough MSE according to a specified timetable. Some members of the WG expressed their view that the WG's MSE research should not be constrained by the MSC's timetable.

3) *Literature Review*. Jim distributed a list of references pertaining to MSE.

4) *National Standard Guidelines*. Grant reported on a draft proposed rule describing a possible revision of the guidelines for National Standard 1 of the MSFCMA. Some of the new features in the proposed revision focus on the distinction between "core stocks" and "assemblages." For example, an OY control rule would be required for each core stock and for each assemblage or each indicator stock within an assemblage. Targets, such as OY, would have to be achieved on average. The current MSST would be replaced by a "biomass limit" (Blim), which has a default value of 1/2 BMSY. The default Blim would not have to be used for a particular stock if the default does not make sense in light of the stock's natural variability. Also, Blim would not have to be specified if the available data are inadequate to do so or if the stock is managed under a sufficiently conservative OY control rule. The term "overfished" would be replaced by "depleted" throughout the guidelines.

Discussion

The WG spent the majority of the meeting hearing presentations on recent MSE research and discussing possible approaches to future MSE research. Jim gave presentations on recent research pertaining to the performance of the current management strategy in the presence of regime shifts and on use of an operational management procedure in which this year's catch limit is a linear function of last year's catch limit and this year's estimated biomass. Sarah gave a presentation on recent research pertaining to the impact of biological interactions on stocks managed using reference points derived on a single-species basis. Points raised during the discussion included the following:

1) *Use of ecosystem models in defining reference points.*

- A) There is a difference between estimating a true ecosystem MSY and incorporating ecosystem considerations into the estimation of single-species MSYs.
- B) The proceedings volume from NSAW6 included a helpful discussion (p. 55-57) on the meaning of "ecosystem MSY" and possible multispecies management objectives.
- C) It might be easier to use ecosystem models to establish a reasonable buffer between ABC and OFL than to determine a truly optimal harvest strategy.
- D) Perhaps the use of ecosystem models could be confined initially to examination of aggregate OY caps rather than trying to determine how ecosystem considerations ought to influence single-species ABCs.

2) Other uses of ecosystem models in MSE.

- A) At least initially, parallel MSEs could be conducted, one track using ecosystem models but ignoring some of the more complicated single-species considerations and the other track using fairly sophisticated single-species models but ignoring ecosystem considerations.
- B) Perhaps the operating model could include biological interactions but the assessment model would still be based on single species. (This idea seemed to have widespread support.)
- C) Some concern was expressed over the extent to which future MSEs should depart from status quo tools and management (e.g., should we base our planned research on use of highly parameterized ecosystem models before we even know whether they can be developed?).
- D) Ecosystem models might be useful in estimating the natural ranges of fluctuations referenced in the proposed revision of the guidelines for National Standard 1.
- E) Perhaps an ecosystem model could be used as a sort of “sidecar” which, for each year in a simulation, would return an adjustment to each projected single-species ABC.

3) Technical considerations in model development.

- A) If we use an ecosystem model, will the parameters be estimated statistically or by some other method?
- B) Given that it will be impossible to simulate the entire stock assessment process (e.g., the evolution of assessment methodology over time), it may be useful to test how well alternative simplifications of the stock assessment perform (e.g., simply drawing an “estimated” stock size at random from a distribution may prove to be an adequate simulation of the assessment process).

4) Risk analysis.

- A) One method of risk analysis consists of producing tables showing the probabilities associated with the various possible outcomes (e.g., biomasses and catches of target and nontarget stocks). *Pro*: lots of fishery risk analyses are done this way, provides lots of information for decision-makers to study, does not require *a priori* specification of objectives. *Con*: creates information overload, invites decision-makers to “reverse engineer” objectives, unlikely to produce optimal decisions.
- B) Another method of risk analysis measures the costs and benefits of the various possible outcomes, weights them by their respective probabilities, then determines the harvest strategy that maximizes the expected value of an objective function that has been specified in advance. *Pro*: minimizes the amount of information decision-makers need to synthesize, produces optimal decisions given the objective function. *Con*: few fishery risk analyses are done this way, requires advance specification of objective function.
- C) Of course, it is possible to present both methods in the same document.

Next Steps

Major advances in MSE research will take a number of years to complete. Imposing a premature deadline on this effort will not produce significantly more information than is already contained in the PSEIS. The best course of action will probably involve incremental advances, starting from the simplest problems and working toward the most complex. The next WG meeting will be called by Jim following completion of the current stock assessment cycle. In the meantime, individual WG members will volunteer to work on the issues that interest those most.

Ho/Council Motion
10-11-04 1:32p

m/s Benson/Fuglvog

D-3(d) Motions:

GOA groundfish specifications:

Recommend that 2005 and 2006 ABC = TACs for all stocks with the following exceptions:

- The Pacific cod TAC should be reduced according to the table in order to account for the apportionment to the State waters fishery in 2005 and 2006.
- For the following species the 2004 TAC should be rolled over to 2005 and 2006:
 - Shallow water flatfish, and Flathead sole, in the Central and Western GOA
 - Arrowtooth flounder gulfwide,
 - Other slope rockfish in EYAK/SEO
 - Big and Longnose skates (CGOA)

GOA groundfish PSC:

The halibut PSC apportionments, annually and seasonally, for 2004 as listed in the Action Memo should be rolled over for 2005 and 2006.

BSAI Specifications:

Recommend that the OFL and ABC for Atka Mackerel be rolled over from the 2004 OFL and ABC rather than the projected numbers put forward initially by the Plan Teams and SSC given the scientific report provided to the Council by the stock assessment authors at the AFSC to this effect.

Recommend that the 2005 and 2006 TACs be set by rolling over the 2004 TACs, ^{with} ~~except~~ for the following exceptions:

- 1- EBS Pollock: Set TAC = 1,474,000 (2004 TAC minus an additional 18,000 for AI pollock)
- 2- AI Pollock: Set TAC = 19,000
- 3- Sablefish and Pacific Ocean Perch set TAC = ABC for 2005 and 2006

For atka mackerel,

Recommend that jig gear allocation for EAI and BS subarea is equal 1% of that allocation.

BSAI PSC:

The annual BSAI Prohibited species bycatch allowances for the BSAI trawl and non-trawl fisheries as attached to the action memo (Table 7) should be rolled over for 2005 and 2006. This should include a rollover of footnote 3 regarding the red king crab limit within the Red King Crab Savings Area for rock sole, flathead sole, and other flatfish fisheries.

Gulf of Alaska Groundfish Plan Team and SSC OFL/ABC Recommendations for 2005-2006												1 of 2
SPECIES		OFL	ABC	TAC	Catch	OFL	ABC	TAC	OFL	ABC	TAC	
		2004	2004	2004	2004**	2005	2005	2005	2006	2006	2006	
Pollock	W (61)		22,930	22,930	17,531		22,930	22,930		22,930	22,930	
	C (62)		26,490	26,490	21,264		26,490	26,490		26,490	26,490	
	C (63)		14,040	14,040	11,704		14,040	14,040		14,040	14,040	
	WYAK		1,280	1,280	144		1,280	1,280		1,280	1,280	
	SubTotal		91,060	64,740	64,740	50,643	91,060	64,740	64,740	91,060	64,740	64,740
	EYAK/SEO		8,690	6,520	6,520	0	8,690	6,520	6,520	8,690	6,520	6,520
	TOTAL		99,750	71,260	71,260	50,643	99,750	71,260	71,260	99,750	71,260	71,260
Pacific Cod	W		22,610	16,957	14,937		21,204	15,903		17,406	13,054	
	C		35,800	27,116	26,027		33,573	25,432		27,560	20,877	
	E		4,400	3,960	112		4,123	3,711		3,384	3,046	
	TOTAL		102,000	62,810	48,033	41,076	78,400	58,900	45,046	63,950	48,350	38,977
Deep water flatfish ¹	W		310	310	8		310	310		310	310	
	C		2,970	2,970	614		2,970	2,970		2,970	2,970	
	WYAK		1,880	1,880	55		1,880	1,880		1,880	1,880	
	EYAK/SEO		910	910	4		910	910		910	910	
	TOTAL		8,010	6,070	6,070	681	8,010	6,070	6,070	8,010	6,070	6,070
Rex sole	W		1,680	1,680	499		1,680	1,680		1,680	1,680	
	C		7,340	7,340	927		7,340	7,340		7,340	7,340	
	WYAK		1,340	1,340	0		1,340	1,340		1,340	1,340	
	EYAK/SEO		2,290	2,290	0		2,290	2,290		2,290	2,290	
	TOTAL		16,480	12,650	12,650	1,426	16,480	12,650	12,650	16,480	12,650	12,650
Shallow water flatfish ²	W		21,580	4,500	129		21,580	4,500		21,580	4,500	
	C		27,250	13,000	2,808		27,250	13,000		27,250	13,000	
	WYAK		2,030	2,030	1		2,030	2,030		2,030	2,030	
	EYAK/SEO		1,210	1,210	0		1,210	1,210		1,210	1,210	
	TOTAL		63,840	52,070	20,740	2,938	63,840	52,070	20,740	63,840	52,070	20,740
Flathead sole	W		13,410	2,000	806		11,694	2,000		11,111	2,000	
	C		34,430	5,000	1,472		30,024	5,000		28,527	5,000	
	WYAK		3,430	3,430	0		2,992	2,992		2,842	2,842	
	EYAK/SEO		450	450	0		390	390		370	370	
	TOTAL		64,750	51,270	10,880	2,278	56,500	45,100	10,382	53,800	42,850	10,212
Arrowtooth flounder	W		23,590	8,000	2,748		26,249	8,000		27,924	8,000	
	C		151,840	25,000	11,970		168,953	25,000		179,734	25,000	
	WYAK		10,590	2,500	75		11,787	2,500		12,539	2,500	
	EYAK/SEO		8,910	2,500	33		9,911	2,500		10,543	2,500	
	TOTAL		228,130	194,930	38,000	14,826	253,900	216,900	38,000	270,050	230,740	38,000
Sablefish ⁴	W		2,930	2,930	1,914		2,411	2,411		2,237	2,237	
	C		7,300	7,300	6,874		5,892	5,892		5,468	5,468	
	WYAK		2,550	2,550	2,087		2,036	2,036		1,889	1,889	
	SEO		3,770	3,770	3,423		3,053	3,053		2,834	2,834	
	TOTAL		22,160	16,550	16,550	14,298	19,008	13,392	13,392	17,633	12,428	12,428

Gulf of Alaska Groundfish Plan Team and SSC OFL/ABC Recommendations for 2005-2006											2 of 2
SPECIES		OFL	ABC	TAC	Catch	OFL	ABC	TAC	OFL	ABC	TAC
		2004	2004	2004	2004**	2005	2005	2005	2006	2006	2006
Other Slope rockfish ³	W		40	40	240		40	40		40	40
	C		300	300	622		300	300		300	300
	WYAK		130	130	76		130	130		130	130
	EYAK/SEO		3,430	200	26		3,430	200		3,430	200
	TOTAL	5,150	3,900	670	864	5,150	3,900	670	5,150	3,900	670
Northern rockfish ³	W		770	770	1,052		730	730		678	678
	C		4,100	4,100	3,711		3,870	3,870		3,592	3,592
	E		na	na	na		0	0		0	0
	TOTAL	5,790	4,870	4,870	4,763	5,400	4,600	4,600	5,070	4,270	4,270
Pacific ocean perch	W	2,990	2,520	2,520	2,301	2,964	2,489	2,489	2,872	2,419	2,419
	C	9,960	8,390	8,390	8,445	9,828	8,253	8,253	9,526	8,020	8,020
	WYAK		830	830	877		802	802		779	779
	SEO		1,600	1,600	0		1,556	1,556		1,512	1,512
	E(subtotal)	2,890				2,808			2,358	2,722	
	TOTAL	15,840	13,340	13,340	11,623	15,600	13,100	13,100	15,120	12,730	12,730
Shortraker/rougeye	W		254	254	262		254	254		254	254
	C		656	656	325		656	656		656	656
	E		408	408	362		408	408		408	408
	TOTAL	2,510	1,318	1,318	949	2,510	1,318	1,318	2,510	1,318	1,318
Pelagic shelf rockfish	W		370	370	284		370	370		370	370
	C		3,010	3,010	2,157		3,010	3,010		3,010	3,010
	WYAK		210	210	199		210	210		210	210
	EYAK/SEO		880	880	11		880	880		880	880
	TOTAL	5,570	4,470	4,470	2,651	5,570	4,470	4,470	5,570	4,470	4,470
Thornyhead rockfish	W		410	410	274		410	410		410	410
	C		1,010	1,010	399		1,010	1,010		1,010	1,010
	E		520	520	131		520	520		520	520
	TOTAL	2,590	1,940	1,940	804	2,590	1,940	1,940	2,590	1,940	1,940
Big/Longnose Skates	C		4,435	3,284	1,421		4,435	3,284		4,435	3,284
Other Skates ⁵	GW		3,709	3,709	1,410		3,709	3,709		3,709	3,709
TOTAL	10,859	8,144	6,993	2,831	10,859	8,144	6,993	10,859	8,144	6,993	
Demersal Rockfish	SEO	690	450	450	222	690	450	450	690	450	450
Atka Mackerel	GW	6,200	600	600	798	6,200	600	600	6,200	600	600
Other Species	GW			12,942	1,530	NA	NA	12,584	NA	NA	12,089
TOTAL		660,319	506,642	271,776	155,201	650,457	514,864	264,265	647,272	514,240	253,867
**catch through October 2, 2004 (BOLD = Catch >TAC)											
1/ Deep water flatfish includes dover sole, Greenland turbot and deepsea sole.											
2/ "Shallow water flatfish" includes rock sole, yellowfin sole, butter sole, stary flounder, English sole, Alaska plaice, and sand sole.											
3/ The EGOA ABC of 5 mt for northern rockfish has been included in the WYAK ABC for other slope rockfish.											
* Indicates rollover from previous year (no age-structured projection data available)											
4/ The ABC for sablefish has been reduced by 5% in the SEO and added to the WYK to allow for 5% of the EGOA TAC to be made available for trawl incidental catch											
5/ Other skates means big and longnose skates in the W and E GOA and bathyrja sp. Gulfwide											
NOTE:											
ABCs and TACs are rounded to nearest mt.											
GW means Gulfwide.											
Catch data source: NMFS Blend Reports.											

D-3(a) H/O
 Diana Stram
 10-11-04 11:10 am

BSAI Groundfish Plan Team and SSC OFL/ABC Recommendations for 2005-2006

Species	Area	2004			Catch**	2005			2006		
		OFL	ABC	TAC		OFL	ABC	TAC	OFL	ABC	TAC
Pollock	EBS	2,740,000	2,560,000	1,492,000	1,248,817	2,909,800	2,363,000		2,542,900	2,087,800	
	Aleutian Islands	52,600	39,400	1,000	1,128	52,600	39,400		52,600	39,400	
	Bogoslof District	39,600	2,570	50	0	39,600	2,570		39,600	2,570	
Pacific cod	BSAI	350,000	223,000	215,500	166,776	352,500	225,500		344,700	220,500	
Sablefish	BS	4,020	3,000	2,900	748	3,432	2,418		3,184	2,244	
	AI	4,620	3,450	3,100	912	3,960	2,790		3,674	2,589	
Atka mackerel	Total	78,500	66,700	63,000	54,789	57,730	49,470		51,830	44,180	
	WAI	—	24,360	20,660	17,341	—	18,057		—	16,126	
	EAI/BS	—	11,240	11,240	9,616	—	8,360		—	7,466	
	CAI	—	31,100	31,100	27,832	—	23,053		—	20,588	
Yellowfin sole	BSAI	135,000	114,000	86,075	68,822	129,710	109,300		124,900	105,250	
Rock sole	BSAI	166,000	139,000	41,000	47,875	153,290	128,370		136,240	114,060	
Greenland turbot	Total	19,300	4,740	3,500	2,136	17,740	11,230		16,490	10,430	
	BS	—	3,162	2,700	1,730	—	7,524		—	6,988	
	AI	—	1,578	800	406	—	3,706		—	3,442	
Arrowtooth flounder	BSAI	142,000	115,000	12,000	17,130	144,990	96,140		145,180	96,300	
Flathead sole	BSAI	75,200	61,900	19,000	16,611	69,100	56,860		64,870	53,380	
Alaska plaice	BSAI	258,000	203,000	10,000	7,624	254,970	159,040		255,220	159,230	
Other flatfish	BSAI	18,100	13,500	3,000	4,669	18,100	13,500		18,100	13,500	
Pacific ocean perch	BSAI	15,800	13,300	12,580	11,032	15,790	12,020		15,990	12,170	
	BS	—	2,128	1,408	701	—	1,923		—	1,947	
	AI total	—	11,172	11,172	10,331	—	10,097		—	10,223	
	WAI	—	5,187	5,187	4,998	—	4,655		—	4,713	
	CAI	—	2,926	2,926	2,970	—	2,655		—	2,689	
	EAI	—	3,059	3,059	2,363	—	2,787		—	2,821	
Northern rockfish	BSAI	8,140	6,880	5,000	4,166	7,900	6,030		7,670	5,850	
Shortraker	BSAI	701	526	526	207	701	526		701	526	
Rougheye	BSAI	259	195	195	189	259	195		259	195	
Other rockfish	BS	1,280	960	460	304	1,280	960		1,280	960	
	AI	846	634	634	309	846	634		846	634	
Squid	BSAI	2,620	1,970	1,275	814	2,620	1,970		2,620	1,970	
Other species	BSAI	81,150	46,810	27,205	21,795	81,150	46,810		81,150	46,810	
Total		4,193,736	3,620,535	2,000,000	1,676,853	4,318,068	3,282,843		3,910,004	2,977,468	

Gulf of Alaska Groundfish Plan Team and SSC OFL/ABC Recommendations for 2005-2006

SPECIES		OFL	ABC	TAC	Catch	OFL	ABC	TAC	OFL	ABC	TAC
		2004	2004	2004	2004**	2005	2005	2005	2006	2006	2006
Pollock	W (61)		22,930	22,930	17,531		22,930			22,930	
	C (62)		26,490	26,490	21,264		26,490			26,490	
	C (63)		14,040	14,040	11,704		14,040			14,040	
	WYAK		1,280	1,280	144		1,280			1,280	
	SubTotal		91,060	64,740	64,740	50,643	91,060	64,740		91,060	64,740
	EYAK/SEO		8,690	6,520	6,520	0	8,690	6,520		8,690	6,520
	TOTAL	99,750	71,260	71,260	50,643	99,750	71,260		99,750	71,260	
Pacific Cod	W		22,610	16,957	14,937		21,204			17,406	
	C		35,800	27,116	26,027		33,573			27,560	
	E		4,400	3,960	112		4,123			3,384	
	TOTAL	102,000	62,810	48,033	41,076	78,400	58,900		63,950	48,350	
Deep water flatfish ¹	W		310	310	8		310			310	
	C		2,970	2,970	614		2,970			2,970	
	WYAK		1,880	1,880	55		1,880			1,880	
	EYAK/SEO		910	910	4		910			910	
	TOTAL	8,010	6,070	6,070	681	8,010	6,070		8,010	6,070	
Rex sole	W		1,680	1,680	499		1,680			1,680	
	C		7,340	7,340	927		7,340			7,340	
	WYAK		1,340	1,340	0		1,340			1,340	
	EYAK/SEO		2,290	2,290	0		2,290			2,290	
	TOTAL	16,480	12,650	12,650	1,426	16,480	12,650		16,480	12,650	
Shallow water flatfish ²	W		21,580	4,500	129		21,580			21,580	
	C		27,250	13,000	2,808		27,250			27,250	
	WYAK		2,030	2,030	1		2,030			2,030	
	EYAK/SEO		1,210	1,210	0		1,210			1,210	
	TOTAL	63,840	52,070	20,740	2,938	63,840	52,070		63,840	52,070	
Flathead sole	W		13,410	2,000	806		11,694			11,111	
	C		34,430	5,000	1,472		30,024			28,527	
	WYAK		3,430	3,430	0		2,992			2,842	
	EYAK/SEO		450	450	0		390			370	
	TOTAL	64,750	51,270	10,880	2,278	56,500	45,100		53,800	42,850	
Arrowtooth flounder	W		23,590	8,000	2,748		26,249			27,924	
	C		151,840	25,000	11,970		168,953			179,734	
	WYAK		10,590	2,500	75		11,787			12,539	
	EYAK/SEO		8,910	2,500	33		9,911			10,543	
	TOTAL	228,130	194,930	38,000	14,826	253,900	216,900		270,050	230,740	
Sablefish ⁴	W		2,930	2,930	1,914		2,411			2,237	
	C		7,300	7,300	6,874		5,892			5,468	
	WYAK		2,550	2,550	2,087		2,036			1,889	
	SEO		3,770	3,770	3,423		3,053			2,834	
	TOTAL	22,160	16,550	16,550	14,298	19,008	13,392		17,633	12,428	

Gulf of Alaska Groundfish Plan Team and SSC OFL/ABC Recommendations for 2005-2006 2 of 2

SPECIES		OFL	ABC	TAC	Catch	OFL	ABC	TAC	OFL	ABC	TAC
		2004	2004	2004	2004**	2005	2005	2005	2006	2006	2006
Other Slope rockfish ³	W		40	40	240		40			40	
	C		300	300	522		300			300	
	WYAK		130	130	76		130			130	
	EYAK/SEO		3,430	200	26		3,430			3,430	
	TOTAL		5,150	3,900	670	864	5,150	3,900	5,150	3,900	
Northern rockfish ³	W		770	770	1,052		730			678	
	C		4,100	4,100	3,711		3,870			3,592	
	E		na	na	na		0			0	
	TOTAL		5,790	4,870	4,870	4,763	5,400	4,600	5,070	4,270	
Pacific ocean perch	W	2,990	2,520	2,520	2,301	2,964	2,489		2,872	2,419	
	C	9,960	8,390	8,390	8,445	9,828	8,253		9,526	8,020	
	WYAK		830	830	877		802			779	
	SEO		1,600	1,600	0		1,556			1,512	
	TOTAL	2,890	15,840	13,340	13,340	11,623	2,808	15,600	13,100	2,722	15,120	12,730
Shortraker/rougheye	W		254	254	262		254			254	
	C		656	656	325		656			656	
	E		408	408	362		408			408	
	TOTAL		2,510	1,318	1,318	949	2,510	1,318	2,510	1,318	
Pelagic shelf rockfish	W		370	370	284		370			370	
	C		3,010	3,010	2,157		3,010			3,010	
	WYAK		210	210	199		210			210	
	EYAK/SEO		880	880	11		880			880	
	TOTAL	5,570	4,470	4,470	2,651	5,570	4,470	5,570	4,470		
Thornyhead rockfish	W		410	410	274		410			410	
	C		1,010	1,010	399		1,010			1,010	
	E		520	520	131		520			520	
	TOTAL	2,590	1,940	1,940	804	2,590	1,940	2,590	1,940		
Big/Longnose Skates	C		4,435	3,284	1,421		4,435			4,435	
Other Skates ⁵	GW		3,709	3,709	1,410		3,709			3,709	
TOTAL	10,859	8,144	6,993	2,831	10,859	8,144	10,859	8,144			
Demersal Rockfish	SEO	690	450	450	222	690	450		690	450	
Atka Mackerel	GW	6,200	600	600	798	6,200	600		6,200	600	
Other Species	GW			12,592	1,530	NA	NA		NA	NA	
TOTAL		660,319	506,642	271,426	155,201	650,457	514,864		647,272	514,240	

**catch through October 2, 2004 (BOLD = Catch > TAC)

1/ Deep water flatfish includes dover sole, Greenland turbot and deepsea sole.

2/ "Shallow water flatfish" includes rock sole, yellowfin sole, butter sole, starry flounder, English sole, Alaska plaice, and sand sole.

3/ The EGOA ABC of 5 mt for northern rockfish has been included in the WYAK ABC for other slope rockfish.

* Indicates rollover from previous year (no age-structured projection data available)

4/ The ABC for sablefish has been reduced by 5 % in the SEO and added to the WYK to allow for 5% of the EGOA TAC to be made available for trawl incidental catch

5/ Other skates means big and longnose skates in the W and E GOA and bathyrja sp. Gulfwide

NOTE:
 ABCs and TACs are rounded to nearest mt.
 GW means Gulfwide.
 Catch data source: NMFS Blend Reports.

D-3(d). handout
Diana Stram
10-11-04 11:10a

(GHL)

Proposed 2005 and 2006 GOA Pacific cod ABCs, TACs, and State Guideline Harvest Levels (mt)

Specifications 2005	Western	Central	Eastern	Total
ABC	21,204	33,573	4,123	58,900
BOF OFL ^{GHL}	5,301	8,141	412	13,434
(%)	25	24.25	10	23.5
TAC	15,903	25,432	3,711	45,046
2006				
ABC	17,406	27,560	3,384	48,350
BOF OFL ^{GHL}	4,352	6,683	338	11,373
(%)	25	24.25	10	23.5
TAC	13,054	20,877	3,046	36,977

D-3(d) handout
Diana Stram
10-11-04 11:10a

Additional considerations on the projections used for BSAI Atka mackerel

October 9, 2004

James Ianelli

AFSC/NMFS/NOAA

The preliminary specification for ABC and OFL for 2005 and 2006 based on the 2003 assessment model projection was:

	2004	2005	2006
OFL	78,500	57,730	51,830
ABC	66,700	49,470	44,180
TAC	63,000	-	-

These values were the basis for the preliminary Plan Team ABC and OFL recommendations at their September 2004 meeting. Generally, these ABC's and OFL's based on projections are considered to be more appropriate than simply rolling over the most recent values (i.e., setting 2005 and 2006 ABC's and OFL's equal to the 2004 values). However, in their deliberations in November of 2003, the BSAI groundfish Plan Team selected a model that had a conservative fit to the recent biomass trend and considered only the 2004 ABC and OFL explicitly. The fit from last year's model shows the level of precaution by the fact that the model prediction is lower than the lower 95% confidence bound for the 2002 survey (Figure 1). Also shown on this figure is the 2004 Aleutian Islands region survey estimate. This indicates that the estimate for Atka mackerel is 886,800 mt, up 15% from the 2002 value of 772,800. Furthermore, the EBS portion of the Aleutian Islands bottom trawl survey biomass estimate was very high (267,600 mt). The 1991-2002 average survey biomass estimate for this portion of the EBS was 44,800 tons.

Given these points, and the fact that the practice of recommending ABC's and OFL's for more than the coming year is new for the assessment authors, Plan Teams, and Council, it seems prudent to have some flexibility in TAC specifications during the October Council meeting. In this case, that flexibility would include the ability to recognize the likelihood that the ABCs and OFLs for Atka mackerel will follow the 2003 model projections decline is very low due to the outcomes of the AFSC/NMFS standard Aleutian Islands survey. This may be especially important if it provides misleading patterns in potential TAC allocations within the 2-million mt OY. When issues such as these arise, it may be prudent for the Council to respond by simply rolling over last year's ABC and OFL values and use them for the 2005 and 2006 values. Ideally, the Plan Team would have been able to be aware of the Aleutian Islands summer survey results in September and would have reacted accordingly. Since the data only became on October 8th, 2004 (due to data editing problems) and due to the fact that an allocation issue may arise, the Council may wish to consider providing an alternative recommendation for the initial 2005 ABC and OFL specifications for Atka mackerel in the BSAI.

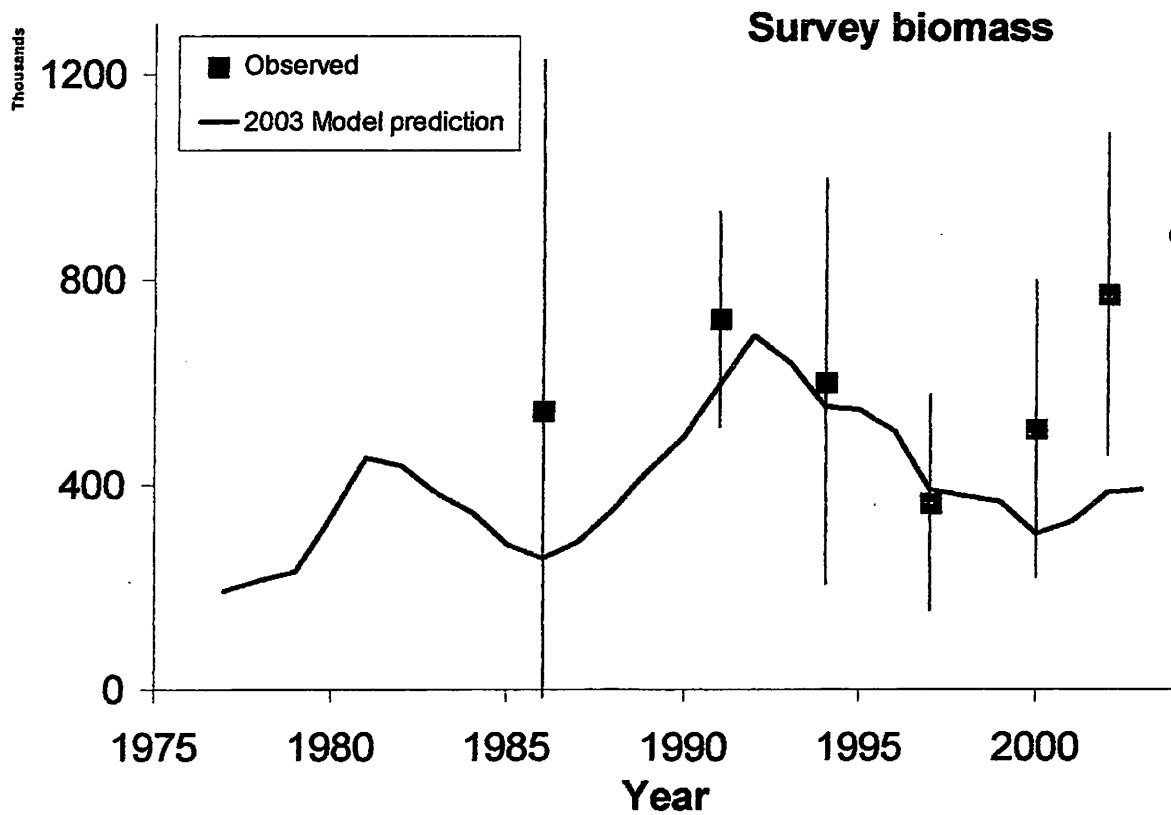


Figure 1. Results from the 2003 Aleutian Islands Atka mackerel biomass trend based on the model (solid line) compared to survey estimates (points). Vertical bars represent ± 2 standard errors. The 2004 survey estimate (provided by NMFS AFSC as of Oct. 8, 2004) is shown as an open circle indicating a continuing increasing trend.

Ben Muse
10-11-04 11:10am
D-3(d)

Agenda item D-3(d): 2005-06 Specifications EA/IRFA

October 2004
NPFMC meeting
Sitka, Alaska

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Other novel features of the specifications EA/IRFA

- Tiering off of the Groundfish PSEIS
 - Affects cumulative effects analysis
- Section reviewing AI pollock TAC to see if this requires any changes to significance determinations for other impacts that are examined. (Section 4.12)

4

Two year specifications

- Amend 48/48
- Status of the amendment
 - Comment periods for NOA and proposed rule are over
 - SOC has 30 days from 9-13 to reach a decision
 - Final rule could be published in November 2004

2

AI pollock

- Analysis did not identify reasons to alter significance ratings for any of the impacts
- Potential issues connected with division of ABC or TAC among AI subareas depending on results of assessment author, plan team and SSC deliberations

5

Two year specifications

- Amendment 48/48
- This year is a transitional year
- TAC Specs projected out for 2005 and 2006
- Interim specs retained for one last year

3

Approach

- Identify environmental components for analysis
- Describe significance criteria and baseline
- Evaluate using the criteria (S-, U, I, S+)
- Five alternatives

6

Alternatives

- Alternatives are alternative sets of species TACs
- The different sets of TACs are meant to provide different sets of fishing mortality rates ("F" rates)

7

Significance determinations for Alternative 2

- Alternative 2 is typically the Council's preferred alternative
- No significant adverse impacts identified
- Action is very similar to that in 2004
- Some impacts classified as unknown

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Alternatives

- 1: TAC to produce $\max F_{ABC}$
- 2: TAC to produce assessment author's recommended F
- 3: TAC to produce $\frac{1}{2} \max F_{ABC}$
- 4: TAC to produce recent five year average F
- 5: TAC to produce $F=0$

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Significance determinations for Alternative 2

- Interim specs have unknown SSL effects on temporal concentration of fishing for pollock, cod, Atka mackerel relative to harvest in the first season
- Could become an issue if final < proposed
- Not likely to be significantly adverse because of potential to mitigate by emergency rulemaking

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Calculation of OFLs, ABCs, and TACs

- Estimated 2004 mortality
- 2005 ABC projections using AFSC age-structured population models or rollover of 2004, depending on stock tier assignment
- A2 2005 TACS projected on basis of Council's decision making patterns in 2004.
- Repeated process for 2006

9

Significance determinations for Alternative 2

- Unknown incidental take effects on seabirds
- Not likely to be significantly adverse
- New seabird avoidance measures may decrease takes
- Additional research may lead to measures reducing take within the time frame of the specifications

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Significance determinations for Alternative 2

- Unknown impact on some piscivorous birds through impact on prey and benthic habitat
- Not likely to be significantly adverse
- no indication that fishing impacts on habitat have caused environmental carrying capacity to change; also action is for a short duration and at a level similar to last years, reducing potential for adverse impact

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Significance determinations for Alternative 2

- Unknown socio-economic impacts with respect to non-use values, reflecting unknown ratings for certain marine mammal, bird, and ecosystem impacts

16

Significance determinations for Alternative 2

- Unknown ecosystem impacts with respect to top predators since population status is unknown
- Not likely to be significantly adverse
- Mitigation measures in place and application of ecosystems policy in Amends 81/74; also action is for a short duration and at a level similar to last years, reducing potential for adverse impact

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Presentation by:

- Ben Muse
- NMFS, Alaska Region
- Ben.muse@noaa.gov
- 907-586-7234

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Significance determinations for Alternative 2

- Unknown ecosystem impacts with respect to HAPC biota due to undefined areas
- Not likely to be significantly adverse
- Currently being defined; Some special habitat areas protected; application of ecosystems policy in Amends 81/74; also action is for a short duration and at a level similar to last years, reducing potential for adverse impact

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**PUBLIC TESTIMONY SIGN-UP SHEET FOR
AGENDA ITEM D-3 (d) (a)**

	NAME (PLEASE PRINT)	AFFILIATION
1	EN LUTTAZZI / OAT SWANSON	GFP
2	Paul MacGyver	of Sea Processors.
3	Julie Binny	AGPB
4	BRANT PAINEZ	UCB
5	Thorn Smith	NPLA
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		12:46
17	STEPHANIE,	
18	I GOT FOOD POISONING	
19	THIS MORNING COULDN'T	
20	GET HERE UNTIL NOW. MAY	
21	I TESTIFY ON TAC-SETTING.	
22	THANKS, THORN	
23		
24		
25		

NOTE to persons providing oral or written testimony to the Council: Section 307(1)(I) of the Magnuson-Stevens Fishery Conservation and Management Act prohibits any person "to knowingly and willfully submit to a Council, the Secretary, or the Governor of a State false information (including, but not limited to, false information regarding the capacity and extent to which a United State fish processor, on an annual basis, will process a portion of the optimum yield of a fishery that will be harvested by fishing vessels of the United States) regarding any matter that the Council, Secretary, or Governor is considering in the course of carrying out this Act.

Bering Sea Flatfish Fisheries 2004

Targets	Directed fishing ends	PSC status
Rock sole	<i>April 1</i>	<i>August 14</i>
Yellowfin sole	<i>June 4</i>	
Flathead sole	<i>July 31</i>	<i>September 4</i>

Secondary

Arrowtooth Flounder	<i>January 1</i>	<i>July 28</i>
Alaska Plaice	<i>April 10</i>	
Other flatfish	<i>June 4</i>	<i>August 14</i>

D-3(A)
Lori Swanson
Ed Luttrell
Public Test Ho
10-11-04 1:10p

D-3(d) Lori Swanson
Ed Luttrell
Pub. Test handout
10-11-04 1:10pm

September 7, 2004

Sue Salveson
National Marine Fisheries Service
Alaska Region
Juneau, Alaska

RE: Yellowfin Sole fishery

Dear Ms. Salveson:

The recent announcement that flathead sole will be placed on prohibited species status prompted us to submit this request regarding the status of fisheries in the Bering Sea. As of September 1, the only fisheries that will be open for the H & G trawl fleet will be pacific cod and atka mackeral. As of the 1st, a distinct group of vessels will prosecute each fishery.

We are concerned that as a result of several flatfish species being designated as bycatch only or PSC, high levels of regulatory discard are required to prosecute the pacific cod fishery at this time of year. Due to changed fishing patterns, we have been left to fish for cod during June and August. During these months, cod is caught with a variety of flatfish species. Due to low TACs for these flatfish species, many have been put on bycatch or PSC status. This has resulted in the discard of a large amount of otherwise marketable fish.

We need your help to provide us with fishing opportunities that do not require these high discard rates. We understand that you may not have the ability to allocate TAC to these flatfish species groups to allow greater retention. If this is the case, we recommend that directed fishing for yellowfin sole be allowed. Almost 5,000 mt of TAC is available, and very little is needed as bycatch in other fisheries. The yellowfin sole fishery can be conducted without high rates of regulatory discard, and would provide the H & G fleet with an alternative fishery to pacific cod. If the yellowfin sole fishery was re-opened, the undersigned would agree to cease fishing for the remainder of 2004 when the yellowfin sole TAC is reached and the fishery closed, and would not resume fishing for pacific cod.

10/10/10

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We are requesting that a more efficient use be made of the groundfish TACs that are available to our fleet. In the future, we hope that management measures can be adopted that allow for the requested action to take place in an expeditious manner. Institution of a cooperative management system would certainly make this type of action easier. But under the current system, your action is required. Thank you for your consideration of this request.

Sincerely,
