MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence Pautzke
Executive Director

DATE: November 27, 2001

ESTIMATED TIME
10 HOURS
(for all D-1 items)

SUBJECT: Final GOA Groundfish Specifications for 2002

ACTION REQUIRED

(a) Approve 2002 GOA EA and Final Stock Assessment and Fishery Evaluation (SAFE) report.
(b) Approve final GOA groundfish specifications for 2002:
1. Acceptable Biological Catch (ABC), and annual Total Allowable Catch (TAC); and
2. Prohibited Species Catch Limits.
(c) Approve halibut discard mortality rates for the 2002 CDQ groundfish fisheries.

BACKGROUND

(a) GOA SAFE Document

The groundfish Plan Teams met in Seattle November 6-9 to prepare the final SAFE documents provided for this meeting. This SAFE forms the basis for groundfish specifications for the 2002 fishing year. Note that there are three sections to the SAFE report: a stock assessment section, a fishery evaluation section ("economic SAFE"), and an ecosystems considerations section. These three sections, together with the BSAI SAFE, are incorporated into the Environmental Assessment for the 2002 groundfish total allowable catch specifications. The EA, incorporating all these sections, was mailed to you on November 14. The GOA Plan Team and Joint Plan Team minutes are attached as Items D-1(b)(1) and (2).

(b) ABCs, TACs, and Apportionments

At this meeting, the Council will establish final catch specifications for the 2002 fisheries. The SSC and AP recommendations will be provided to the Council during the meeting. Tables 1 and 2 from the SAFE summary chapter report ABCs and biomass levels are attached as Item D-1(b)(3). The sum of the Plan Team's recommended ABCs for 2002 is 394,780 mt. Overall, the status of the stocks is declining. The sum of ABCs declined by 12 percent compared with last year, principally due to a decline in pollock (-45%) and Pacific cod (-15%) stocks. None of the groundfish stocks are overfished or approaching an overfished condition.

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 P. cod TAC from the state parallel fisheries. Preliminary information indicates that neither Chignik nor Cook Inlet achieved its GHL, and therefore would remain at its current allocation. Using the area apportionments of the 2002 P. cod ABC recommended by the Plan Team, the federal TAC for P. cod would be adjusted as listed at right.

Proposed 2002 Gulf Pacific cod ABCs, TACs, and State guideline harvest levels (mt).

Specifications	Western	Central	Eastern	Total
ABC	27,070	25,920	4,610	57,600
BOF GHL	6,770	5,640	1,150	13,560
(%)	25	21.75	25	23.5
TAC	20,300	20,280	3,460	44,040
	Cook Inlet	585	2.25%	
	Kodiak	3,240	12.50%	
	Chignik	1,815	7.00%	
	Central	8,400	21.75%	

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 2001 halibut PSC apportionments were instituted for the Gulf of Alaska groundfish fisheries:

	2001 Trawl			**2001 Hook and Line**	
1st quarter	Jan 20 - Apr 1	550 mt (28%)	1st trimester	Jan 1 - May 17	205 mt (70%)
2nd quarter	Apr 1 - Jul 1	450 mt (22%)	2nd trimester	May 17 - Aug 31	any rollover
3rd quarter	Jul 1 - Oct 1	700 mt (35%)	3rd trimester	Aug 31 - Dec 31	85 mt (30%)
4th quarter	Oct 1 - Dec 31	300 mt (15%)	DSR	Jan 1- Dec 31	10 mt
TOTAL		2,000 mt			300 mt

2001 Trawl fishery categories

Season	**Shallow Water**	**Deep Water**	**Total**
Jan 20- Apr1	450 mt	100 mt	550 mt
Apr 1- Jul 1	150 mt	300 mt	450 mt
Jul 1 - Oct1	100 mt	any rollover	700 mt
Oct 1-Dec 31	no apportionment		300 mt
TOTAL			2,000 mt

(c) Halibut Discard Mortality Rates

Last year, the IPHC staff proposed and the Council adopted a plan to use the 10-year average halibut discard mortality rates (DMR) for a 3-year cycle for all GOA and BSAI non-CDQ groundfish fisheries. Although they do not need to be revised until the 2004 fisheries, the Council has the option to revise DMRs, if necessary. The IPHC staff will continue to review annual halibut bycatch data and recommended no changes for 2002. The 2000 BSAI trawl fishery DMRs exhibited no overall increase or decrease compared to 1999 estimates. In the GOA, results were also mixed, as five trawl fisheries declined and five increased. For longline targets, both the BSAI and GOA cod fishery DMRs remained essentially unchanged from 1999. Pot fishery DMRs exhibited large changes from 1999. The BSAI value is one of the highest recorded, while the GOA value is one of the lowest.

The Council decided to set annual DMRs for the CDQ fisheries. IPHC staff recommends that the 2002 CDQ trawl fisheries use the 2000 CDQ trawl DMRs shown in Item D-1(b)(4). Any new target fisheries that develop in 2002 would use the open access long-term averages.

GOA PLAN TEAM MEETING
November 13-15, 2001
Draft Minutes

The GOA Plan Team convened on November 13, 2001 at approximately 9:45 am. Members in attendance were: Sandra Lowe (chairman), Jane DiCosimo, Jim Ianelli, Jeff Fujioka, Jon Heifetz, Tom Pearson, Tory O'Connell, Gregg Williams, Farron Wallace, and Beth Sinclair. Other NMFS staff, including Phil Rigby, Chris Lunsford, Tamra Faris, the stock assessment authors, and a dozen members of the public also attended.

Pollock The team agrees with the authors' recommendation to reduce the maximum permissible ABC. The $F_{40\%}$ level would be appropriate with perfect information, but there is uncertainty in the GOA summer and winter trawl survey results and the estimate of year class strength. The authors presented a method for creating a constant buffer between F_{ABC} and F_{OFL} as spawning biomass declines to lower levels. The Team requests further analysis of this strategy in a broader context, i.e., when the ABC/OFL definitions are reconsidered. The team agreed with incorporating winter distribution in determining seasonal apportionments.

Pacific cod The team adopted the authors' recommendations for the ABC and area apportionments based on the 2001 trawl survey. The Council may wish to consider a distributional biomass shift since the 1999 survey when it sets the TAC, and use an average biomass distribution from the last 2 or 3 surveys. The team does not have biological concerns relative to Pacific cod regarding the distribution of removals so long as the area TACs remain within the range of the 1999 or 2001 survey results, and do not exceed the combined ABC. The stock is now under Tier 3b management (the stock is at 96% of B40).

Nancy Roberson summarized her thesis of an improved technique for aging of P. cod. Enhanced aging techniques may accelerate movement towards an age structured model for cod.

Atka mackerel The team noted that this species formerly was included in the other species category. There is no indication that information on population abundance, the ability to sustain a fishery, and applicability of tier structure for their management will be forthcoming to set an ABC to allow a target fishery in the near-term. The Team discussed management of Atka mackerel in context with the joint team discussion of management of non-target summary.

DSR The team encourages the development of a management solution to allow implementation of full retention for DSR. The data collected from that proposed program would allow a full accounting of DSR bycatch and eliminate the use of a rate to estimate mortality. There is no linear relationship between amount of halibut caught and amount of DSR bycatch and therefore a rate is not an appropriate approach. reevaluation of an appropriate DSR bycatch level in the halibut fishery, so as to reduce wastage.

The Team briefly discussed habitat issues raised by industry. ADFG is continuing to look at ways to define amounts of rocky habitat upon which to base the biomass estimates in the assessment, including how to standardize incorporation of commercial logbook data. The authors also plan to map three more small areas using multi-beam sonar and revise habitat estimates in next year's assessment.

Thornyheads The Plan Team chose to use results from the model with a fixed estimate of M which they considered to be more appropriate, and did not use the results from the authors' recommended base model which estimated a questionable high value of M. The Team recommended an ABC of 1990 mt from the alternative model. The Team suggested the following for next year: 1) review start date for model and

assumptions (add older data and perform sensitivity analysis, 2) examine radiometric aging rather than surface aging, 3) depth specific catches, 4) reexamine (high) M, and 5) compute gear-based F40% separately.

Slope Rockfish There are no measurable differences among the different models examined in the Pacific ocean perch stock assessment. The author selected the base model over the other proposed models as it gave all likelihood emphasis factors equal weighting as a default. The Team evaluated the base model ABC (13,190 mt), proposed models 2-6 (10,860 - 17,700 mt, rolling over last year's ABC estimate (13,510 mt), and last year's projection for 2002 (14,270 mt). Additional work on refining the POP model is being planned for next year.

Pelagic shelf rockfish The Team encouraged the development of an age-structured model for dusky rockfish for next year. The team noted the authors' recommendation that dark dusky rockfish be managed similar to black and blue rockfish due to their similar life history and state water fishing practices, that is, by the State and be removed from Federal management under a plan amendment.

Eastern GOA Trawl survey coverage The 2001 Gulf of Alaska bottom trawl survey did not sample the Eastern Gulf of Alaska management area (Areas 640 and 650). Each stock assessment estimated biomass from the eastern area based on one of the following approaches; past survey data was used to decide which of the two approaches was most appropriate for a given species:

(1) Assume that year-to-year changes in eastern gulf biomass are related to changes in the central gulf. Multiply the 2001 survey estimate of biomass in the central gulf by the ratio of eastern/central biomass from past data to generate an estimate of 2001 biomass for the eastern region.

(2) Assume that, because of distribution or habitat differences, the species of interest has an eastern region biomass that is independent of trends in the central gulf. In this case the most logical estimator of eastern biomass is some average of eastern region biomass from earlier surveys.

The Team expressed concern regarding the lack of coverage by trawl survey in both the eastern GOA and in all deepwater strata during 2001 and *strongly recommended continued coverage of deeper stations in future surveys.*

OFL In its discussions of the pollock and sablefish assessments, the Team recommended a more rigorous analysis of the current overfishing policy for all target species/categories to avoid overfishing as biomass declines. A draft analysis has been on hold while the author has been tasked with higher priority analyses. In October, the Council announced an independent review of its current F40% policy.

The meeting adjourned on Thursday, November 15. The Team met jointly with the Bering Sea/Aleutian Island Groundfish Plan Team on Friday, November 16.

Joint Groundfish Plan Team meeting
November 14 and 16, 2001

The Joint Meeting of the Bering Sea/Aleutian Islands and Gulf of Alaska Groundfish Plan Teams convened for parts of November 14-16, 2001. Members in attendance were: Loh-lee Low (BSAI chairman) and Sandra Lowe (GOA chairman), Jane DiCosimo, David Witherell, Jeff Fujioka, Jim Ianelli, Kathy Kuletz, Tom Pearson, Beth Sinclair, Andy Smoker, Tory O'Connell, Mike Sigler, Ivan Vining, Farron Wallace, Lowell Fritz, Grant Thompson, and Gregg Williams. Nine members of the public and 7 AFSC and 2 visiting scientists from the Azores also attended.

Sablefish The Teams supported the authors' recommendation of setting ABC (although it was not unanimous) less than the maximum permissible ABC, but did not directly support the authors' approach for setting ABC less the maximum permissible. The Teams examined the two choices: decision analysis (17,300 mt) vs. adjusted F40% (21,300 mt). The authors presented the following rationale in support of decreasing the ABC for 2002: 1) Avoid reducing abundance because spawning biomass is low; 2) 17,300 mt most likely will maintain abundance; 3) 2% ABC increase is consistent with 2% project spawning biomass increase; F for 17,300 mt similar to 5-year average; and 21,300 mt reduces projected spawning biomass below B35% even for optimistic recruitment scenario.

Team members questioned the assumed rule in the decision analysis, as the results of the analysis appears to depend on the number of projection years. This rule coincides with an appropriate F (similar to 5-year average F), but may not be applicable to other stocks. The authors' ABC projection is based on the decision analysis of the truncated times series (pessimistic) so that spawning biomass does not decline from current levels. Even with the extended recruitment time series (more optimistic), projections suggest the stock would increase then drop slightly below B35% (96% of B35% in 2005). This fact somewhat tempers concern of the degree of risk in either harvest level (17,300 mt vs 21,300 mt) since both options will maintain spawning biomass above the 1977 level. The team noted that the "optimistic" recruitment assumption should also be viewed with caution since the high recruitment estimated for 1977-81 may be anomalous. Also, the strong 1977 year occurred with years of low spawning biomasses.

Ecosystem Considerations The Teams commented on a summary of evaluations of physical, habitat, groundfish, forage fish, marine mammals, seabirds, and aggregate indicators provided by Pat Livingston. The summary will be incorporated in the Ecosystem Consideration Chapter that will be incorporated into the EA for 2002 TAC-specifications. The Teams recommended that additional expertise advise the "Evaluations" drawn from the indicators, observations, and interpretations, and applauded Pat's efforts to date. A complete summary will be provided in advance of next year's meeting to inform the Teams in their determinations of ABC recommendations for 2003. The teams did not identify any ecosystems considerations or explicit adjustments to the ABCs; however, the teams have traditionally made conservative ABC recommendations to account for uncertainty in the models and ecosystems considerations. Individual assessments used to provide TAC consideration information before they were moved into the Ecosystem Considerations chapter.

Species Defined in the FMPs David Witherell distributed a memo to the plan teams regarding species categories of the FMPs. The memo discussed the need for plan amendments to the BSAI and GOA FMPs to revise the species categories and to list the species contained in each category. The memo also addressed the problem that some species of fish in the target category are clearly not targets of any fishery, and some species of fish currently considered targets may occur only rarely in Alaska waters, or have been mis-identified. The optimum yield concept would be applied to the target species and non-target species categories. These categories for the BSAI FMP are described as follows:

1. Prohibited Species would include salmon, steelhead, king crab, *Chionoecetes* crab, Pacific halibut, and Pacific herring.

2. Target species would include pollock, Pacific cod, yellowfin sole, Greenland turbot, arrowtooth flounder,

rock sole, flathead sole, (***Alaska plaice?***), sablefish, Pacific ocean perch, northern rockfish, rougheye rockfish, shortraker rockfish, and Atka mackerel. A specific TAC is established annually for each target species or stock.

3. Non-target species would include the following species groups: "other flatfish","other rockfish", sculpins, sharks, and skates, and ***grenadiers***. Other flatfish include ..(list of species).... Other rockfish include..(list of species; including ***sharpchin rockfish***).. TACs are established for each species group, but no directed fishing would be allowed.

4. Forage fish species would include ***squid, octopus,*** and fish from the families Osmeridae (eulachon, capelin and other smelts), Myctophidae (lanternfishes), Bathylagidae (deep-sea smelts), Ammodytidae (Pacific sand lance), Trichodontidae (Pacific sandfish), Pholidae (gunnels), Stichaeidae (pricklebacks, warbonnets, eelblennys, cockscombs and shannys), Gonostomatidae (bristlemouths, lightfishes, and anglemouths), and the Order Euphausiacea (krill). The forage fish species category is established to allow for the management of these species in a manner that prevents the development of a commercial directed fishery for forage fish.

5. Nonspecified groundfish species would include eelpouts (family Zoarcidae), poachers (family Agonidae), alligatorfish, snailfish, lumpfishes, lumpsuckers (family Cyclopteridae), ronquils, searchers (family Bathymasteridae), lancetfish (family Alepisanydae), rattails (family Macrounidae), prowfish, hagfish, and lampreys. Monitoring of the catch of non-specified species would occur through the groundfish observer program.

6. HAPC species -- would include mussels, kelp, corals, sponges, and all other invertebrates. The catch of these species must be returned to sea, as soon as practicable, with a minimum of injury except when their retention is authorized by other applicable law.

Dave further noted that the non-target species category should include only those species that are distributed in the management area, and not simply strays outside of the species range. For the non-target category, an explicit list of all species belonging to each species group should be developed to avoid any confusion and eliminate those species that do not occur in the management area. Rebecca Reuter suggested one way to eliminate those species that rarely occur off Alaska: include only those species that occur in over 1% of the observed fishery hauls that find any of the subject species group or those species that have had at least one observation during a research survey within the last 10 years. She filtered out species in the BSAI other rockfish complex using this methodology. The Team recommended that plan amendments be developed to address these concerns.

Jane DiCosimo reported that the "other species" analysis which has been recommended to be tabled by the SSC could be incorporated into these broader FMP amendments. Further, these issues also complement separate FMP amendments to revise the TAC-setting process.

The meeting adjourned on Friday afternoon.

Table 1. Gulf of Alaska groundfish 2001 and 2002 ABCs, 2001 TACs, and 2001 catches reported through November 15, 2001. MSY is unknown for all species.

SPECIES		ABC (mt) 2002	OFL 2002	ABC (mt) 2001	OFL 2001	TAC 2001	CATCH 2001
Pollock	W (61)	17,730		35,240		31,724	30,423
	C (62)	23,045		14,260		12,841	1,733
	C (63)	9,850		26,650		23,996	17,014
	Shelikof			20,680		18,619	18,895
	WYAK	1,165	75,480	2,520	117,750	2,235	2,351
	EYAK/SEO	6,460	8,610	6,460	8,610	6,460	0
	TOTAL	58,250	84,090	105,810	126,360	95,875	70,416
Pacific Cod	W	27,070		24,400		18,300	13,767
	C	25,920		38,650		30,250	27,186
	E	4,610		4,750		3,560	132
	TOTAL	57,600	77,100	67,800	91,200	52,110	41,085
Deep water flatfish[1]	W	180		280		280	18
	C	2,220		2,710		2,710	668
	WYAK	1,330		1,240		1,240	116
	EYAK/SEO	1,150		1,070		1,070	3
	TOTAL	4,880	6,430	5,300	6,980	5,300	805
Rex sole	W	1,280		1,230		1,230	434
	C	5,540		5,660		5,660	2,505
	WYAK	1,600		1,540		1,540	0
	EYAK/SEO	1,050		1,010		1,010	0
	TOTAL	9,470	12,320	9,440	12,300	9,440	2,939
Shallow water flatfish[2]	W	23,550		19,510		4,500	207
	C	23,080		16,400		12,950	5,966
	WYAK	1,180		790		790	0
	EYAK/SEO	1,740		1,160		1,160	0
	TOTAL	49,550	61,810	37,860	45,330	19,400	6,173
Flathead sole	W	9,000		8,490		2,000	599
	C	11,410		15,720		5,000	1,311
	WYAK	1,590		1,440		1,440	0
	EYAK/SEO	690		620		620	0
	TOTAL	22,690	29,530	26,270	34,210	9,060	1,910
Arrowtooth flounder	W	16,960		16,480		8,000	6,147
	C	106,580		99,590		25,000	13,369
	WYAK	17,150		24,220		2,500	193
	EYAK/SEO	5,570		7,860		2,500	200
	TOTAL	146,260	171,060	148,150	173,550	38,000	19,909
Sablefish	W	2,240		2,010		2,010	1,591
	C	5,430		5,410		5,410	5,506
	WYAK	1,940		2,060		2,060	1,730
	SEO	3,210		3,360		3,360	3,220
	TOTAL	12,820	19,350	12,840	15,720	12,840	12,047
Other Slope rockfish	W	90		20		20	25
	C	550		740		740	332
	WYAK	260		250		150	81
	EYAK/SEO	4,140		3,890		100	132
	TOTAL	5,040	6,610	4,900	6,390	1,010	570

(Table 1 continued)

SPECIES		ABC (mt) 2002	OFL 2002	ABC (mt) 2001		ABC (mt) 2001	CATCH 2001
Northern rockfish	W	810		600		600	539
	C	4,170		4,280		4,280	2,587
	E	0	[3]				
	TOTAL	4,980	5,910	4,880	5,780	4,880	3,126
Pacific ocean perch	W	2,610	3,110	1,280	1,520	1,280	947
	C	8,220	9,760	9,610	11,350	9,610	9,457
	WYAK	780		870		870	623
	SEO	1,580	2,800	1750	3,090	1750	1
	TOTAL	13,190	15,670	13,510	15,960	13,510	11,028
Shortraker/rougheye	W	220		210		210	124
	C	840		930		930	963
	E	560		590		590	838
	TOTAL	1,620	2,340	1,730	2,510	1,730	1,925
Pelagic shelf rockfish	W	510		550		550	121
	C	3,480		4,080		4,080	2,436
	WYAK	640		580		580	439
	EYAK/SEO	860		770		770	12
	TOTAL	5,490	8,220	5,980	9,040	5,980	3,008
Demersal Shelf Rockfish		350	480	330	410	330	279
Atka Mackerel	GW	600	6,200	600	6,200	600	77
Thornyhead rockfish		360		420		420	274
		840		970		970	513
		790		920		920	536
	TOTAL	1,990	2,330	2,310	2,770	2,310	1,323
Other Species	GW	NA		NA	NA	13,619	4,780
TOTAL		394,780	509,450	447,710	554,710	285,994	181,400

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.
NOTE:
ABCs and TACs are rounded to nearest 10 mt.
GW means Gulfwide.
Catch data source: NMFS Blend Reports.

Table 2. Gulf of Alaska 2002 ABCs, biomass, overfishing levels, and estimated trends (mt) for Western, Central, Eastern, Gulfwide, West Yakutat, and Southeast Outside regulatory areas.

		2002			
SPECIES		ABC	Biomass	Overfishing Level	Abundance,[2] Trend
Pollock	W (61)	17,730			Below, Declining
	C (62)	23,045			
	C (63)	9,850			
	WYAK	1,165	726,600	75,480	
	EYAK/SEO	6,460	28,710	8,610	
	TOTAL	58,250	755,310	84,090	
Pacific Cod	W	27,070			Above, Declining
	C	25,920			
	E	4,610			
	TOTAL	57,600	428,000	77,100	
Deep water flatfish	W	180			Unknown, Unknown
	C	2,220			
	WYAK	1,330			
	EYAK/SEO	1,150			
	TOTAL	4,880	68,263 [4]	6,430	
Rex sole	W	1,280			Unknown,[3] Stable
	C	5,540			
	WYAK	1,600			
	EYAK/SEO	1,050			
	TOTAL	9,470	71,326	12,320	
Shallow water flatfish	W	23,550			Unknown,[3] Stable
	C	23,080			
	WYAK	1,180			
	EYAK/SEO	1,740			
	TOTAL	49,550	349,992	61,810	
Flathead sole	W	9,000			Unknown,[3] Stable
	C	11,410			
	WYAK	1,590			
	EYAK/SEO	690			
	TOTAL	22,690	170,915	29,530	
Arrowtooth flounder	W	16,960			Above, Declining
	C	106,580			
	WYAK	17,150			
	EYAK/SEO	5,570			
	TOTAL	146,260	1,760,000	171,060	
Sablefish	W	2,240			Low, Stable
	C	5,430			
	WYAK	1,940			
	EY/SEO	3,210			
	TOTAL	12,820	188,000	19,350	
Other Slope rockfish	W	90			Unknown, Unknown
	C	550			
	WYAK	260 [1]			
	EYAK/SEO	4,140			
	TOTAL	5,040	107,960	6,610	

(Table 2 continued)

SPECIES		2002 ABC	Biomass	Overfishing Level	Abundance,[2] Trend
Northern rockfish	W	810			Above,
	C	4,170			Declining
	E	0 [1]			
	TOTAL	4,980	94,350	5,910	
Pacific ocean perch	W	2,610		3,110	Below,
	C	8,220		9,760	Increasing
	WYAK	780			
	EY/SEO	1,580		2,800	
	TOTAL	13,190	293,240	15,670	
Shortraker/ rougheye	W	220			Unknown,
	C	840			Unknown
	E	560			
	TOTAL	1,620	70,890	2,340	
Pelagic shelf rockfish	W	510			Unknown,
	C	3,480			Unknown
	WYAK	640			
	EY/SEO	860			
	TOTAL	5,490	62,489	8,220	
Demersal shelf rockfish	SEO	350	15,615	480	Unknown, Unknown
Atka mackerel	GW	600	Unknown	6,200	Unkown, Unknown
Thornyhead rockfish	Western	360			Above,
	Central	840			Stable
	Eastern	790			
	Total	1,990	77,840	2,330	
Other species					TAC = 5% of the sum of TACs.
TOTAL		394,780	4,220,950	509,450	

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

2/ Abundance relative to target stock size as specified in SAFE documents.

3/ Historically lightly exploited therefore expected to be above the specified reference point.

4/ Biomass of Dover sole; biomass of Greenland turbot and deep-sea sole is unknown.

NOTE:

ABCs are rounded to nearest 10.

Overfishing is defined Gulf-wide, except for pollock and POP.

Table 7. Summary of halibut discard mortality rates (DMRs) in the Bering Sea/Aleutian Islands (BSAI) groundfish fisheries during 1990-2000. DMRs used in 2001 are to be used in 2002.

Gear/Target	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	Used in 2001[1]
BSAI Trawl												
Atka mackerel	66	77	71	69	73	73	83	85	77	81	77	75
Bottom pollock	68	74	78	78	80	73	79	72	80	74	67	76
Pacific cod	68	64	69	67	64	71	70	67	66	69	69	67
Other Flatfish	80	75	76	69	61	68	67	71	78	63	76	71
Rockfish	65	67	69	69	75	68	72	71	56	81	89	69
Flathead sole	-	-	-	-	67	62	66	57	70	79	74	67
Pelagic pollock	85	82	85	85	80	79	83	87	86	87	88	84
Rock sole	64	79	78	76	76	73	74	77	79	81	75	76
Sablefish	46	66	-	26	20	-	-	-	-	90	60	50
Turbot	69	55	-	-	58	75	70	75	86	70	74	70
Yellowfin sole	83	88	83	80	81	77	76	80	82	78	77	81
BSAI Pot												
Pacific cod	12	4	12	4	10	10	7	4	13	9	13	8
BSAI Longline												
Pacific cod	19	23	21	17	15	14	12	11	11	12	12	12
Rockfish	17	55	-	6	23	-	20	4	52	-	12	25
Sablefish	14	32	14	13	38	-	-	-	-	-	-	22
Turbot	15	30	11	10	14	9	15	22	18	17	14	18
CDQ Trawl												
Atka mackerel	-	-	-	-	-	-	-	-	-	82	89	82
Bottom pollock	-	-	-	-	-	-	-	-	90	88	90	88
Flathead sole	-	-	-	-	-	-	-	-	-	-	83	79
Pelagic pollock	-	-	-	-	-	-	-	-	90	90	88	90
Rockfish	-	-	-	-	-	-	-	-	-	88	-	88
Yellowfin sole	-	-	-	-	-	-	-	-	-	83	-	83
CDQ Longline												
Pacific cod	-	-	-	-	-	-	-	-	10	10	13	10
Turbot	-	-	-	-	-	-	-	-	-	-	4	17
CDQ Pot												
Pacific cod	-	-	-	-	-	-	-	-	-	-	7	9
Sablefish	-	-	-	-	-	-	-	-	-	-	38	12

[1]Values represent 1990-1999 long term mean.

Table 8. Summary of halibut discard mortality rates (DMRs) in the Gulf of Alaska (GOA) groundfish fisheries during 1990-2000. DMRs used in 2001 are to be used in 2002.

Gear/Target	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	Used in 2001[1]
Trawl												
Atka mackerel	67	89	81	67	53	-	60	-	-	-	-	70
Bottom pollock	51	62	66	57	48	66	79	66	55	55	52	61
Pacific cod	60	62	66	59	53	64	70	62	64	54	57	61
Deep wtr flats	61	58	70	59	60	56	71	61	51	51	62	60
Shallow wtr flats	66	71	69	65	62	70	71	71	67	81	67	69
Rockfish	65	75	79	75	58	71	65	63	68	74	71	69
Flathead sole	-	-	-	-	54	64	67	74	39	51	69	58
Pelagic pollock	71	82	72	63	61	51	81	70	80	86	80	72
Sablefish	70	60	68	59	67	58	80	61	-	68	38	66
Arrowtooth fldr	-	-	-	-	-	-	66	48	62	73	75	62
Rex sole	-	-	-	-	56	76	63	47	58	70	71	61
Pot												
Pacific cod	12	7	16	24	17	21	7	11	16	13	8	14
Longline												
Pacific cod	15	18	13	7	11	13	11	22	11	17	16	14
Rockfish	6	-	-	7	-	4	13	-	9	-	9	8
Sablefish	17	27	28	30	22	-	-	-	-	-	-	24

[1]Values represent 1990-1999 long term mean.

AGENDA D-1(
DECEMBER 20(
Supplemental

Stosh Anderson

North Pacific Fisheries Management Council

"Dirty fishing" by fewer than six catcher-processors in the Gulf of Alaska has resulted in the premature closing of the cod season and prohibiting more than 50 vessels of coastal community longline fleets from participating in this years entire cod season.

The allocation of bycatch to different user groups has always been a political hot potato but with the closure of cod fishing to the coastal community longline fleets (because of halibut bycatch) with 40% of the Gulf Alaska's total allowable catch remaining the situation has become untenable.

While large catcher processor vessels target on volume, often times disregarding halibut bycatch, local small vessels from coastal communities avoid depths and areas where there are high numbers of halibut. The majority of the coastal community fleet has an investment in the future of halibut. We therefore avoid damage to any halibut caught by releasing the fish at the roller by spinning it off the hook. The vessels that use snap on gear must remove and release halibut before they can go on to the next hook. Both methods result in almost no injury to the halibut.

Catcher processor vessels simply run the halibut through a crucifier and discard the fish when time or personnel warrant it. When the bycatch for an area is caught they simply move on.

The problem arises when observers report these bycatch numbers to NMFS and these same numbers are applied to the number of hooks pulled by the local fleets. Fisheries managers are receiving false data and the local communities are being penalized.

Because long line fleets support local tax structures for schools, roads and harbors communities such as Seward, Homer, Kodiak, Chignik, Sandpoint and King Cove suffer from premature closures.

With the present bycatch tally management system the coastal community longline fleet is being eliminated from participating in at least 40% of the quota by the unethical practices of a very small number of catcher-processor longliners.

Thank you

Charles L. Thompson

Dark Star Fisheries

Community Based Fisherman
From Kachemak Selo, Vosnesenka,
Radolna and Nikolaevsk
P.O. Box 2956
Homer AK 99603
(907) 235-4274

November 28, 2001

Chairman Dave Benton,
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, AK 99501-2252

Dear: Chairman Benton and the
North Pacific fishery Management Council,

We represent approximately 100 community based fishing vessels owned and operated by fishing families from Kachemak Silo, Vonsnesenka, Radolna and Nikolaevsk.

During the 2001 Pacific cod season we were negatively impacted by vessels greater than 50 feet using fishing practices and techniques that accelerate the race for fish and result in a higher halibut mortality. These vessels do not represent the halibut mortality resulting from our community fleet and our fishing practices and techniques

We are requesting that the North Pacific Fishery Management Council recognize the difference in halibut mortality between the small community based longline fleet using hand baiting techniques, snap on gear, that fish short sets with limited soak duration who's fishing practices and techniques result in the lowest halibut mortality possible as compared to longline vessels greater than 50 feet using fishing practices and techniques that accelerate the race for fish and result in a higher halibut mortality.

We believe that our fishing practices and techniques result in the highest survival rate of Halibut because of our,

- Small vessel size, most boats between 38 feet to 42 feet and all under 50 feet
- Small number of crew, two to three-man crew including skipper
- Hand bait, Snap-On gear.
- Small amount of hooks, 6000 to 8000 hooks per day.
- Short set lengths, two to three mile long sets.
- Short soak time, two to three hour soak per set

- The most efficient process and techniques used for retrieving Snap-On longline gear result in the proper handling, de-hooking and releasing of all by-catch including halibut. Our deck configuration makes it extremely difficult and impractical to physically use a roller brush or crucifier while retrieving Snap-On longline gear.
- Hand Icing of product

We are pursuing a direct allocation of the Prohibited Species Cap for halibut to our fleet. We are also pursuing an Exemptive Fishing Permit with the goal of determining the exact mortality rate of halibut using the slower paced fishing practices such as ours. In the interim we are working with NMFS to establish a volunteer observer program, too at least start collecting the needed data to determine the mortality rate of halibut within our fleet.

Included with this letter is a pitition signed by eighty individuals supporting the request to recognize the difference of our fishing practices and techniques used in our fleet.

Thank you,

Yakov Reutov, representing
community based fisherman
from Kachemak Selo, Vosnesenka,
Radolna and Nikolaevsk

NOTE: A third page of signatures did not come through on the Fax; we contacted Mr. Ruetov to re-send, but it was never received.

We the undersigned would like the North Pacific Fisheries Management Council to recognize the difference in halibut mortality between the small community based longline fleet using handbaiting techniques, snap on gear, that fish short sets with limited soak duration who's fishing practices and techniques result in the lowest halibut mortality possible as compared to longline vessels greater than 50 feet using fishing practices and techniques that accelerate the race for fish and result in a higher halibut mortality.

This petition will be sent to the North Pacific Fishery Management Council, Honorable Alaska Governor Tony Knowls, Honorable Alaska U.S Senator Ted Stevens, Honorable Alaska U.S. Senator Frank Morkowski, and Honorable Alaska U.S. Congressmen Don Young

	NAME printed	NAME signature	ADDRESS	VESSEL NAME, or check if our family relies on commercial fishing
1.	Ivan I. Usoltseff		P.O Box 862 Anchor Point AK 99556	F/V Preliv
2.	Alexander L. Ivanov		P.O Box 2028 Homer, Ak 99603	F/V Nenevia
3.	Mihei P Reutov		7521 Grey Wolf circle Anchorage AK 99507	F/V Program
4.	Foma V Reutov		P.O. Box 3058 Homer AK 99603	F/V Molnia
5.	Ivan A. Konev		P.O. Box 508 Homer Ak 99603	F/V Sea Hunter
6.	Feodor Fefelov		P.O. Box 613, Homer, AK. 99603	F/V SEVER
7.	Zahary Martuzhev		P.O. Box 1765 Homer Ak. 99603	F/V AQUARIUM
8.	FEOKTISTA KUZMIN		P.O. BOX 1599 DELTA JCT. AK 99737	F/V ARIZONA
9.	Vera T Basargin		P.O. Box 1494 Homer AK 99603	X
10.	LAVRO IVANOV		P.O. BOX 2078 HOMER AK 99603	F/V NENEVIA
11.	ANNA EFIMOV		P.O. BOX 565 ANCHOR PT AK. 99556	
12.	David Reutov		PO Box 1399 Kodiak AK 99615	ANtartic
13.	Foma EFimov		P.O. Box 565 ANCHOR PT AK. 99556	F/V ART
14.	Ivan Martushev		PO BOX 1939 Homer AK 99603	OTB/T
15.	Alex MarTushoff		P.O. Box 1353 Homer AK 99603	Exciter
16.	Pelagea Kvasova		PO Box 2342 Homer AK 99603	
17.	Lisa MarTushoff		P.O. Box 1353 Homer AK 99603	
18.	Vladimir Polushkin		P.O. Box 3697 Homer, Ak 99603	F/V Fighter
19.	Evtropii Matveev		P.O. Box 208 Homer AK 99603	RUSH ON
20.	David Reutov		P.O. Box 2847 Homer Ak 99603	Bounty

We the undersigned would like the North Pacific Fisheries Management Council to recognize the difference in halibut mortality between the small community based longline fleet using handbaiting techniques, snap on gear, that fish short sets with limited soak duration who's fishing practices and techniques result in the lowest halibut mortality possible as compared to longline vessels greater than 50 feet using fishing practices and techniques that accelerate the race for fish and result in a higher halibut mortality.

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	NAME printed	NAME signature	ADDRESS	VESSEL NAME, or check if our family relies on commercial fishing
1.	Michael G. Brooks	Michael G Brooks	39225 Greer Road Homer Alaska 99603	Family Relies on Fishing
2.	George I Reutov	George Reutov	P.O. Box 2552 Kodiak, Ak. 99615	Velocity
3.	Eros F. Kuzmin	Eros F. Kuzmin	P.O. Box 1737 Homer AK. 99603	Combine
4.	Steve Kalugin	Steve Kalugin	P.O. Box 4302 Homer Ak. 99603	F/V Dunai
5.	Iosif Martishev	Iosif Martishev	P.O. Box 1660 Homer, AK 99603	F/V AURORA
6.	Arteman Basargin	Arteman Basargin	P.O. Box 1494 Homer, Ak 99603	F/V CRYSTAL
7.	Nikit Reutov	Nikit Reutov	P.O Box 1807 Homer " "	F/V Reliance
8.	Simion BASARGIN	Simion Basargin	PO Box 3047 Homer AK 99603	F/V KASATKA
9.	Nikita Kuzmin	Nikita Kuzmin	P.O. Box 2272 Homer AK 99603	F/V Highliner
10.	Yakov Reutov	Yakov Reutov	P.O. Box 2956 Homer AK 99603	F/V OKEAN
11.	Anton Sanarov	Anton Sanarov	P.O. Box 2175 Homer AK 99603	F/V CASCADE
12.	Fadey Kuzmin	Fadey Kuzmin	P.O. Box 3009 Homer AK 99603	F/V Volga
13.	Nikita Basargin	Nikita Basargin	P.O. Box 1788 Homer, AK 99603	F/V SeaRacer
14.	Kirill Z. Basargin	Kirill Z. Basargin	P.O. Box 991 Homer, AK 99603	V
15.	Roma Efimov	Roma Efimov	P.O. Box 565 Anchor Pt AK. 99556	F/V ART
16.	Ilia Kuzmin	Ilia Kuzmin	P.O. Box 3453 Homer, AK 99603	F/V CURRENCY
17.	Arman Kalugin	Arman Kalugin	P.O Box 3046 Homer	TYMAN
18.	Konstantin Basargin	Konstantin Basargin	P.O Box 1760 Homer, AK 99603	F/V ButterFly
19.	Alan Parker	Alan Parker	P.O. Box 3339 Homer, Ak 99603	F/V Kelsey
20.	Nikolai Kuzmin	Nikolai Kuzmin	P.O. Box 1184 Homer, Ak 99603	F/V RUSAK

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1.	Alexander Basargin		P.O. Box 1240, Homer AK 99603	F/V Mercury
2.	Sergey Serebrakoff		P.O. Box 4052, Homer AK 99603	F/V Kilter
3.	Alexey Basargin		P.O. Box 1709 Homer AK 99605	F/V Butterfly
4.	Ksenia Basargin		PO. Box 760 Homer AK 99603	F/V Butterfly
5.	Lazar I. Reutov		P.O. Box 1930 Kodiak AK. 99615	F/V KAPITAN
6.	Ivan K. Reutov		P.O Box 2366 Homer AK 99603	F/V BLUEBERRY
7.	Sergei Reutov		PO Box 759 Homer AK 99603	F/V Nordic Traveler
8.	Ivan V. Reutov		P.O. Box 4092 Homer AK 99603	F/V PALOMNIK
9.	Severean Reutov		P.O Box 1879 Kodiak AK 99615	F/V SINAI
10.	Joseph Reutov		P.O. Box 1039 Kodiak AK. 99615	F/V Transit
11.	Vasily Reutov		PO Box 2531 Homer AK 99603	F/V Last One
12.	Peter Kojin		PO Box 5046 Anchor Pt AK 99556	F/V Starfall
13.	Edesy Fefelov		PO. Box 613 Homer AK 99603	F/V Sever
14.	FRANK A MARTIN, JR		PO Box 1765 Homer 99603	F/V AQUARIUM
15.	Nikolai Reutov		P.O. Box 2342 Homer 99603	F/V Project
16.	Feodor F Mortashev		P.O. Box 2148 Homer AK 99603	F/V United
17.	Nikolai I Basargin		PO Box 1145 Homer, AK 99603	F/V Star Trek
18.	Kondra V Kuzmin		P.O. Box 1565 Delta Jct. 99737	F/V KAZBEK
19.	[illegible]	Tatjana T. Konev	P.O. Box 508 Homer Ak. 99603	F/V Sea Hunter
20.	PETER A KONEV		P.O. Box 2443 Homer AK 99603	F/V NATURE

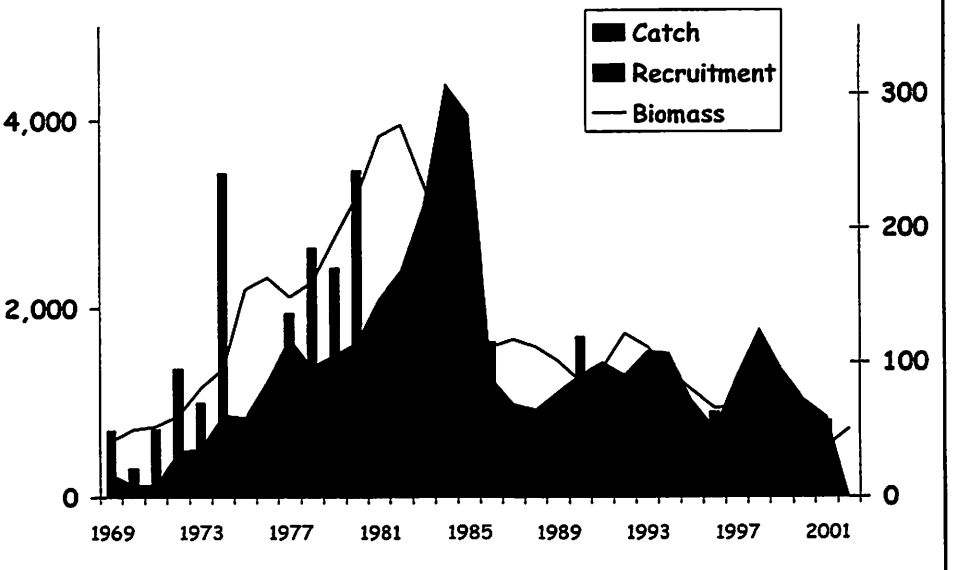
Gulf of Alaska Groundfish Plan Team

Update on groundfish stock trends for the Gulf of Alaska

Sandra Lowe
and
James N. Ianelli
Gulf of Alaska Groundfish
Plan Team

Gulf of Alaska Groundfish Plan Team

Pollock



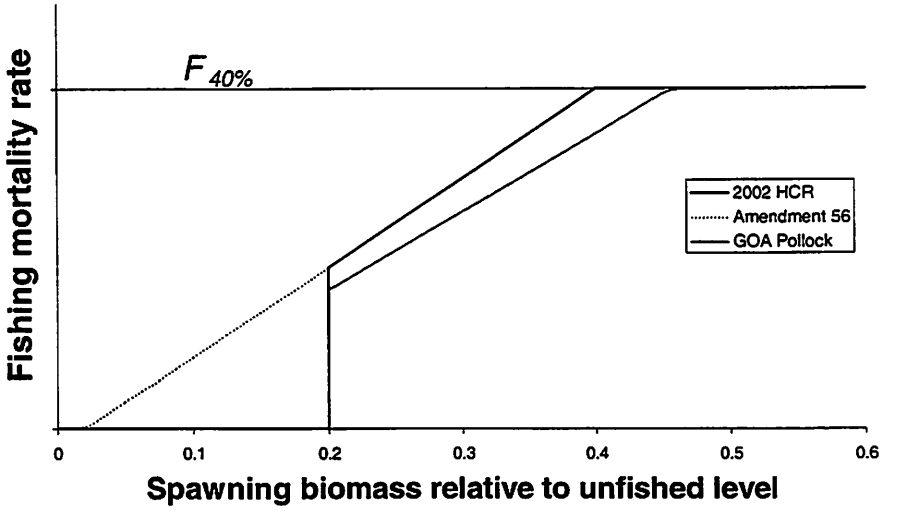
Gulf of Alaska Groundfish Plan Team

ABC Summary

Species	2002 ABC	Change	
Pollock	**58,250**	**Down 47,560**	**(45%)**
Pacific Cod	57,600	Down 10,200	(15%)
Flatfish	86,590	Up 7,720	(10%)
Arrowtooth flounder	146,260	Down 1,890	(1%)
Sablefish	12,820	Down 20	(0.2%)
POP	13,190	Down 320	(2%)
Northern rockfish	4,980	Down 100	(2%)
Shortraker/Rougheye	1,620	Down 110	(6%)
Other slope rockfish	5,040	Down 140	(3%)
Pelagic shelf rockfish	5,490	Down 490	(8%)
Demersal shelf rockfish	350	Up 20	(6%)
Thornyheads	1,990	Down 320	(14%)
Atka Mackerel	600	Same	(0%)
Total	394,780	Down 52,930	(12%)

Gulf of Alaska Groundfish Plan Team

Pollock ABC conservation adjustment



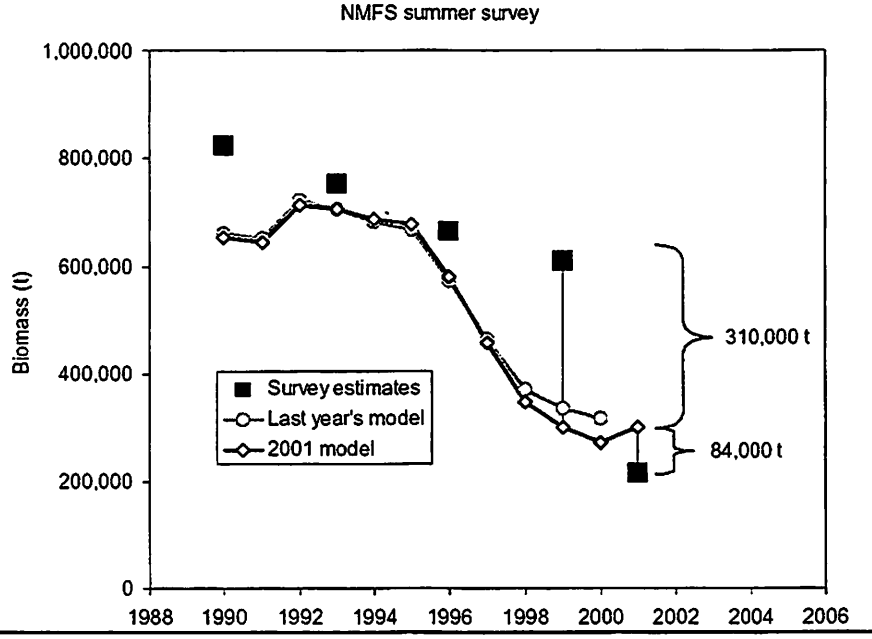
Gulf of Alaska Groundfish Plan Team

Pollock ABC

- **34% Lower than projected in 2000 (for 2002)**
  - *21% due to change in biomass perception
  - *13% due to additional conservation adjustment

Gulf of Alaska Groundfish Plan Team

Pollock



Gulf of Alaska Groundfish Plan Team

Pollock Spawning biomass

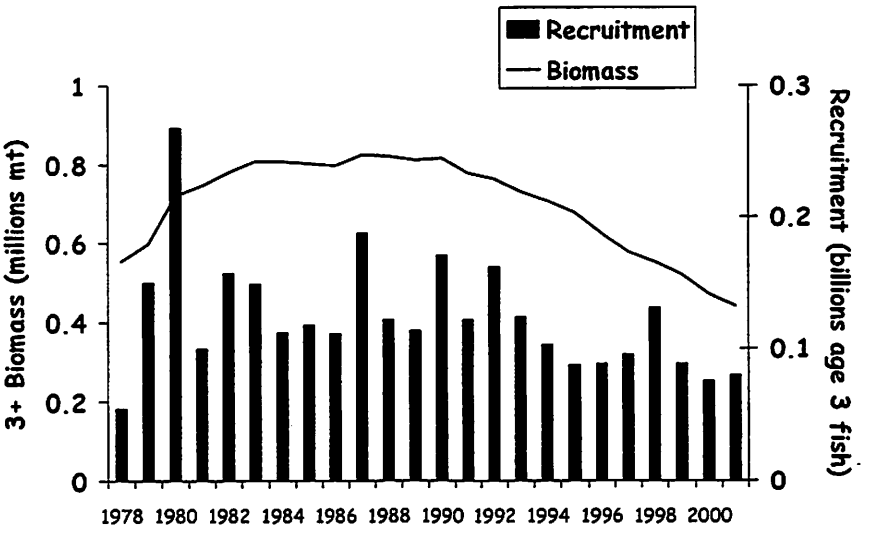
- **Spawning biomass (1,000's tons)**
  - ✶2002 = 158.3
  - ✶$B_{40\%}$ = 245
  - ✶$B_{20\%}$ = 123

Gulf of Alaska Groundfish Plan Team

Pollock optimism?

Gulf of Alaska Groundfish Plan Team

Pacific cod



Gulf of Alaska Groundfish Plan Team

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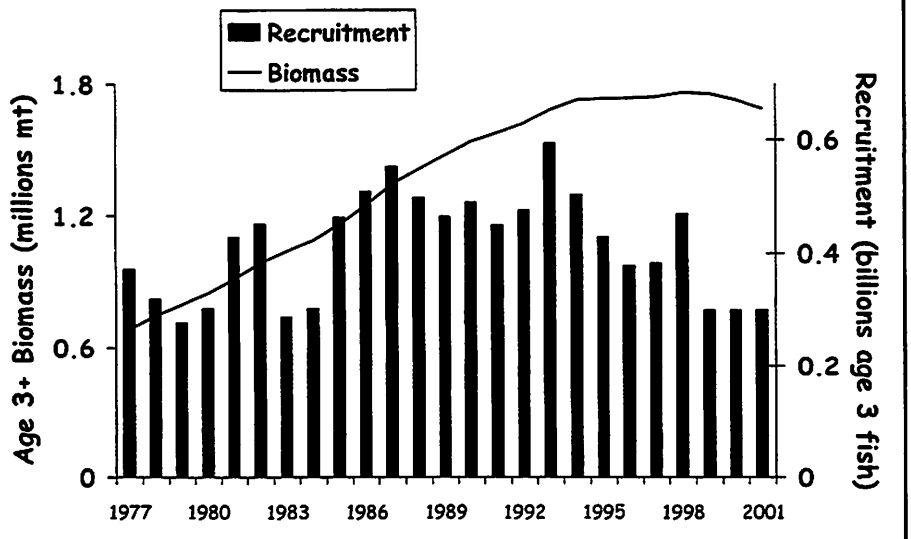
Gulf of Alaska Groundfish Plan Team

P. Cod Spawning biomass

- **Spawning biomass (1,000's tons)**
  - *2002 = 82
  - *$B_{40\%}$ = 85
  - *$B_{20\%}$ = 43

Gulf of Alaska Groundfish Plan Team

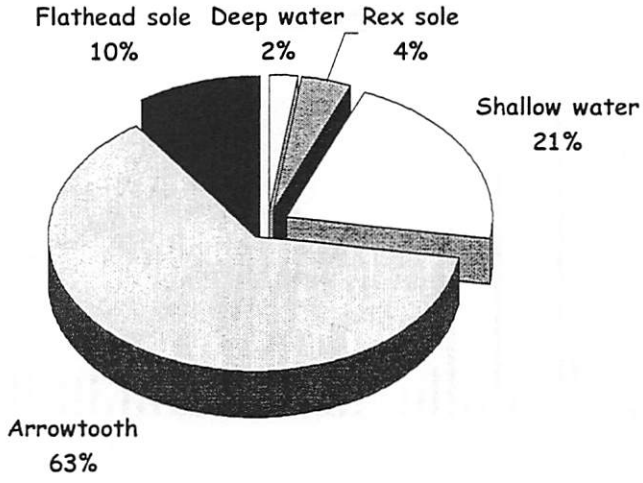
Arrowtooth flounder



Gulf of Alaska Groundfish Plan Team

Flatfish 2002 ABC's

86,590 tons total



Gulf of Alaska Groundfish Plan Team

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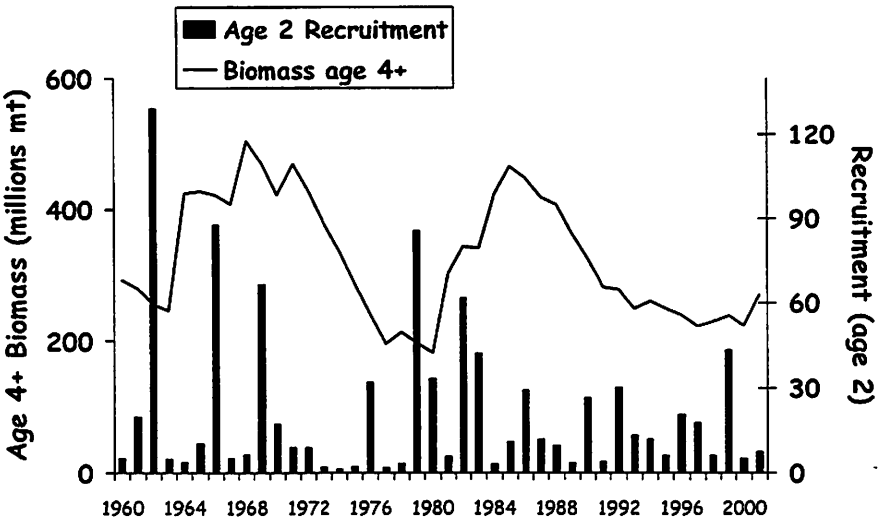
Gulf of Alaska Groundfish Plan Team

Sablefish



Gulf of Alaska Groundfish Plan Team

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Atka Mackerel	600	Same	(0%)
Total	394,780	Down 52,930	(12%)

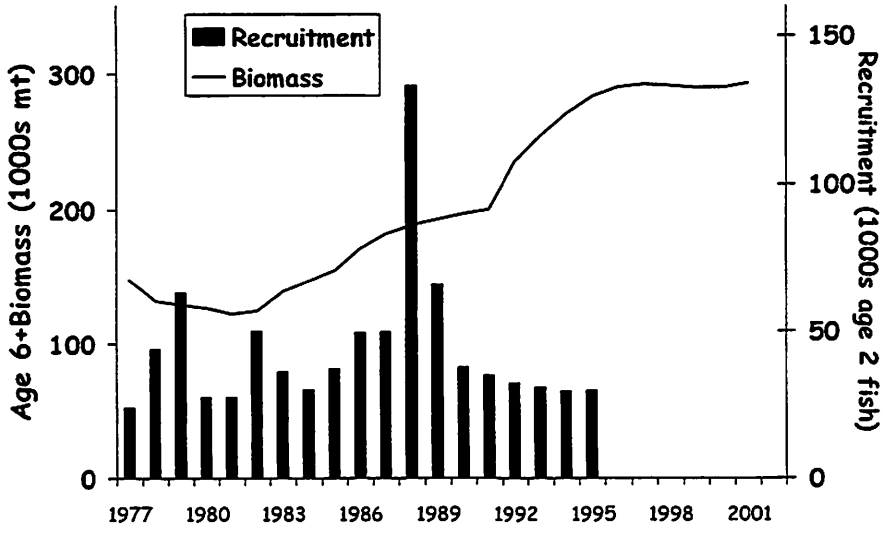
Gulf of Alaska Groundfish Plan Team

Sablefish spawning biomass

- **Spawning biomass (1,000's tons)**
  - *2002 = 193
  - *$B_{40\%}$ = 221

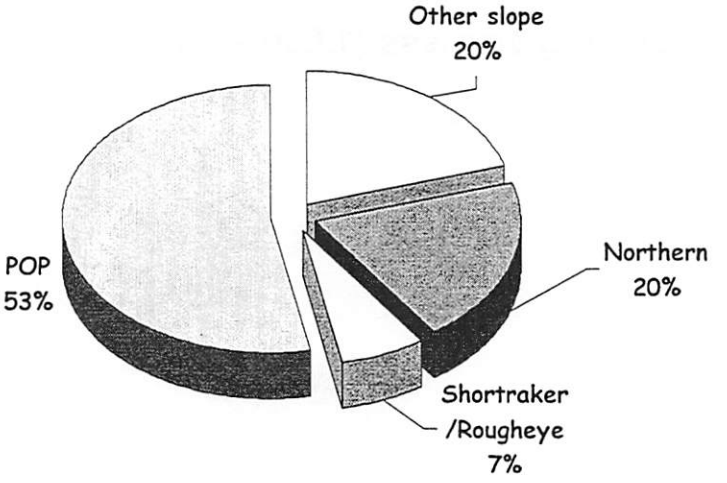
Gulf of Alaska Groundfish Plan Team

Pacific ocean perch



Gulf of Alaska Groundfish Plan Team

Slope Rockfish 2002 ABC's 24,830 tons total



Gulf of Alaska Groundfish Plan Team

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Total	394,780	Down 52,930	(12%)

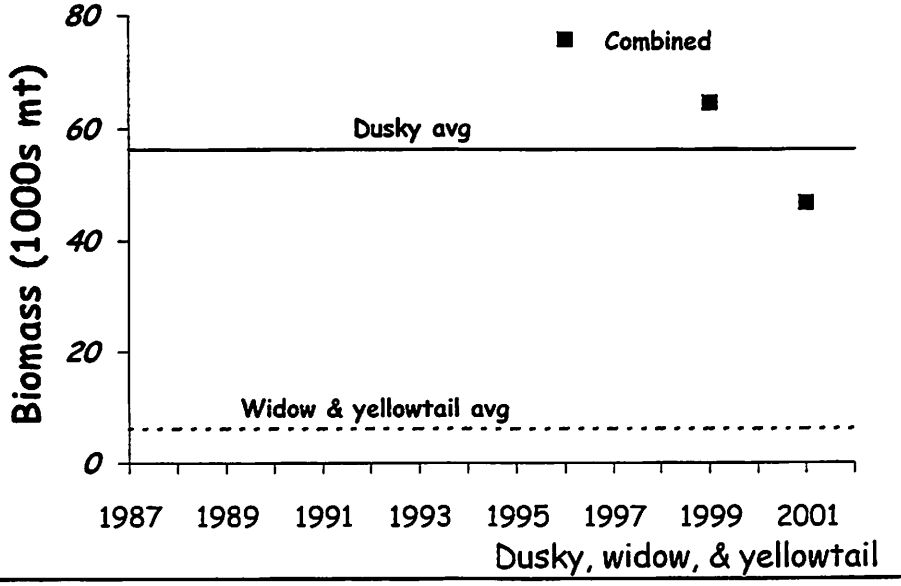
Gulf of Alaska Groundfish Plan Team

Rockfish spawning biomass

- **Spawning biomass (1,000's tons)**
  - ✱POP:
    - 2002 = 107
    - $B_{40\%}$ = 99
  - ✱Northern:
    - 2002 = 40
    - $B_{40\%}$ = 23

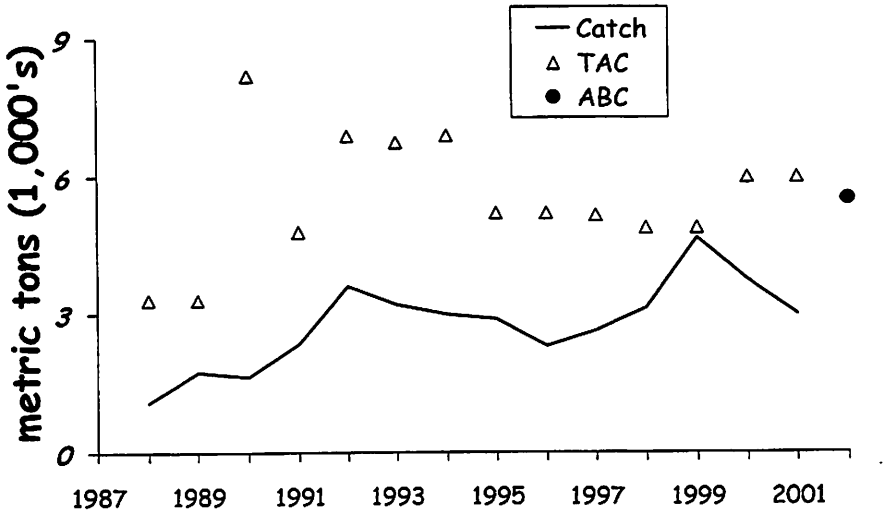
Gulf of Alaska Groundfish Plan Team

Pelagic shelf rockfish: biomass



Gulf of Alaska Groundfish Plan Team

Pelagic shelf rockfish: catch



Dusky, widow, & yellowtail

Gulf of Alaska Groundfish Plan Team

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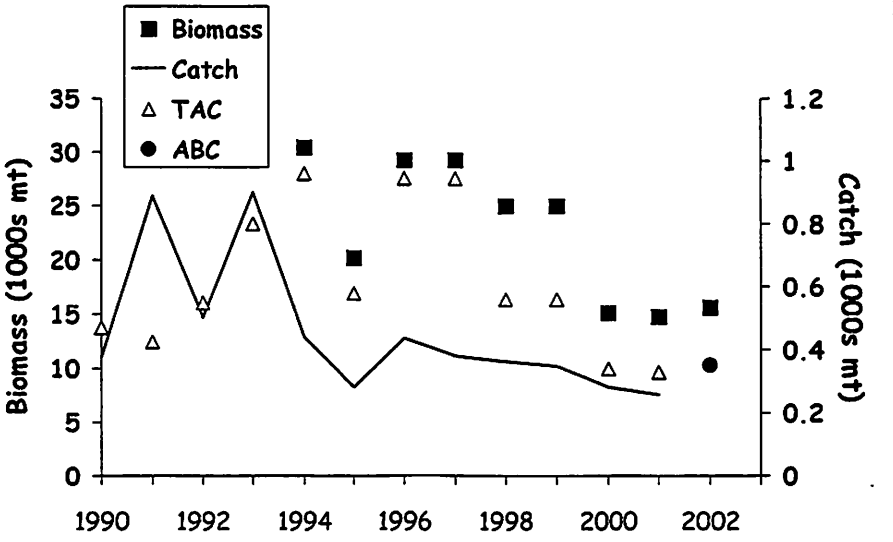
Other slope rockfish	5,040	Down 140	(3%)
Pelagic shelf rockfish	5,490	Down 490	(8%)
Demersal shelf rockfish	350	Up 20	(6%)
Thornyheads	1,990	Down 320	(14%)
Atka Mackerel	600	Same	(0%)
Total	394,780	Down 52,930	(12%)

Gulf of Alaska Groundfish Plan Team

Demersal shelf rockfish



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ABC Summary

Species	2002 ABC	Change	
Pollock	58,250	Down 47,560	(45%)
Pacific Cod	57,600	Down 10,200	(15%)
Flatfish	86,590	Up 7,720	(10%)
Arrowtooth flounder	146,260	Down 1,890	(1%)
Sablefish	12,820	Down 20	(0.2%)
POP	13,190	Down 320	(2%)
Northern rockfish	4,980	Down 100	(2%)
Shortraker/Rougheye	1,620	Down 110	(6%)
Other slope rockfish	5,040	Down 140	(3%)
Pelagic shelf rockfish	5,490	Down 490	(8%)
Demersal shelf rockfish	350	Up 20	(6%)
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Total	394,780	Down 52,930	(12%)

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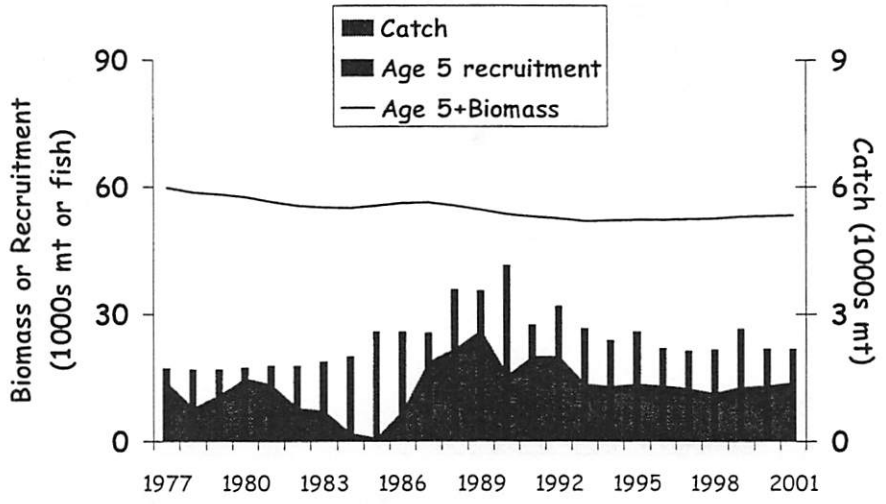
Thornyheads



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Atka Mackerel	600	Same	(0%)
Total	394,780	Down 52,930	(12%)

Gulf of Alaska Groundfish Plan Team

Thornyhead spawning biomass

- **Spawning biomass (1,000's tons)**
  - *2002 = 87
  - *$B_{40\%}$ = 78

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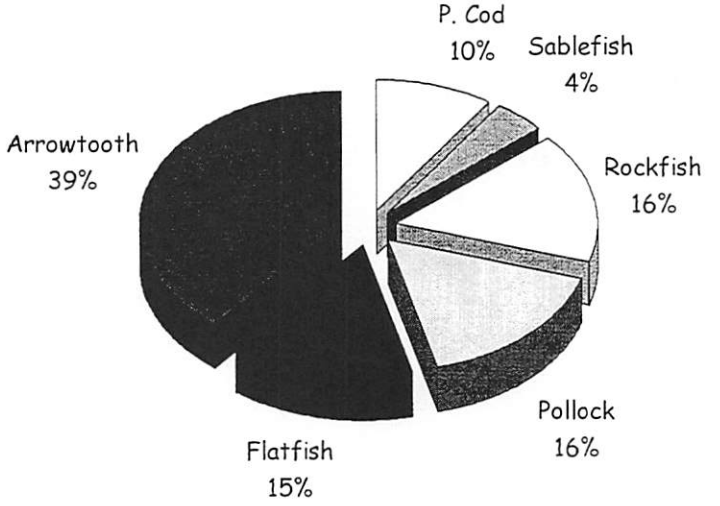
Summary by biomass

Gulf of Alaska Groundfish Plan Team

Projected biomass by species

4.48 million tons total



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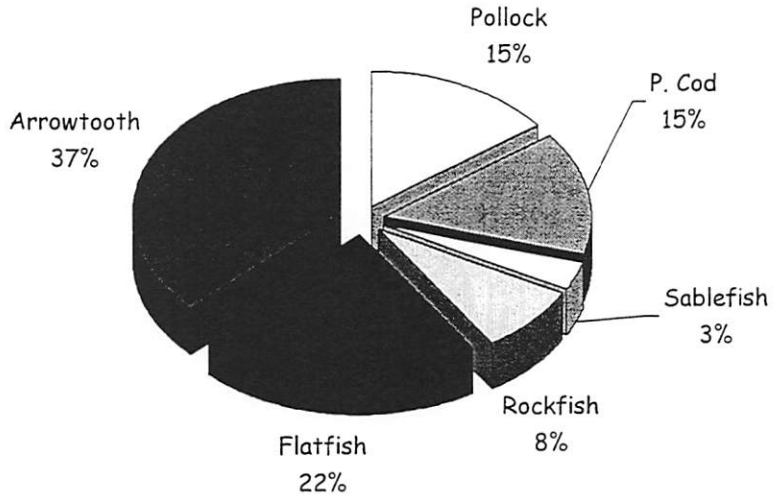
Summary by ABC's

Gulf of Alaska Groundfish Plan Team

Projected ABC's by species

394 thousand tons total



Agenda D-1(b) 4

Recommendations for Preseason Assumed DMRs for monitoring halibut bycatch mortality in 2002. These represent no change from 2001 for open access fisheries. CDQ values represent data from 2000, except for BSAI Longline turbot, which is the observed value for the 2000 open access turbot fishery.

BSAI Target	Recommendations for 2002	GOA Target	Recommendations for 2002
Trawl		*Trawl*	
Atka mackerel	75	Atka mackerel	70
Bottom pollock	76	Bottom pollock	61
Pacific cod	67	Pacific cod	61
Other Flatfish	71	Deep water flatfish	60
Rockfish	69	Shallow water flatfish	69
Flathead sole	67	Rockfish	69
Other species	67	Flathead sole	58
Pelagic pollock	84	Other species	61
Rock sole	76	Pelagic pollock	72
Sablefish	50	Sablefish	66
Turbot	70	Arrowtooth flounder	62
Yellowfin sole	81	Rex sole	61
Pot		*Pot*	
Pacific cod	8	Pacific cod	14
Other species	8.	Other species	14
Longline		*Longline*	
Pacific cod	12	Pacific cod	14
Rockfish	25	Rockfish	8
Other species	12	Other species	14
Turbot	18		
CDQ Trawl			
Atka mackerel	89		
Bottom pollock	90		
Pelagic pollock	88		
Flathead sole	83		
CDQ Longline			
Pacific cod	13		
Turbot *	14		
CDQ Pot			
Pacific cod	7		
Sablefish	38		

G. Williams, IPHC
Dec 7, 2001

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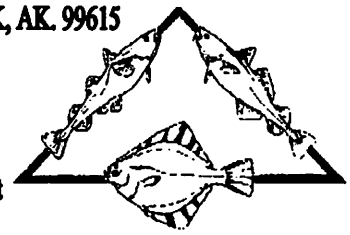

AGDB COMMENTS – DECEMBER COUNCIL MEETING

POLLOCK

Conservative 2002 Pollock Quotas: The Gulf of Alaska Pollock quotas recommended by the Plan Team for 2002 are ultra conservative. Not only was the 1999 year class down graded from a strong year class to average by the assessment authors, even though the 2001 Shelikof Strait hydroacoutic survey estimated the 1999 year class as the highest on record, but further reduced the Pollock ABC due to assessment uncertainty. Both these conservative actions dramatically reduced the maximum possible ABC for 2002 – a possible high ABC of 94,010 MT to the plan team recommended ABC of 53,490 MT.

Table 5. Gulf Pollock catch Projections

	Average 1999 year class		Estimated 1999 year class	
Harvest policy	02 fish mrt rate	2002 catch	02 fish mrt rate	2002 catch
$F_{40\%}$ adjusted -Constant buffer	0.17	53,490 t	0.19	78,520 t
$F_{40\%}$ adjusted -Max permissible	0.20	64,110 t	0.23	94,010 t
$F_{35\%}$ adjusted -F_{OFL}	0.24	75,480 t	0.27	110,770 t

The members of AGDB do not endorse the process used to arrive at the lower ABC for 2002. We request that the Plan team reevaluate the process next year based on new information about the Pollock stock next year when setting the 2003 Gulf Pollock TAC and not be gridlocked into this year's mindset when setting next year's quotas.

Recommendation: Reevaluate the ABC setting process next year, based on new information available for the Gulf Pollock stocks.

West Yakutat Pollock Fishery & EGOA Pacific cod: The materials laid out in the description of Alternative 4 in the SEIS for BIOP4 need to be clarified by NMFS. There is some confusion with regard to seasonal structure for both these fisheries. They should both be annual allocations not quarterly for West Yakutat Pollock or split into an A/B season for Eastern Gulf Pacific cod.

Recommendations: Have the Agency clarify alternative 4 with respect to West Yakutat Pollock and the Eastern Gulf Pacific cod for the record.

Pollock Quota Distribution Across the Gulf by Season: The 2001 RPAs require apportionment of Pollock among Gulf of Alaska management areas 610, 620, and 630 based on the seasonal distribution of biomass. Based on this requirement, the plan team has allocated Pollock quota for the A/B season based on the winter hydroacoustic survey and the C/D season based on the summer bottom trawl survey.

The Gulf hydroacoustic survey surveys the Shumagins in mid-February and the Shelikof Strait in mid-March. There is little if any survey information available for other spawning aggregations outside these areas or during different time periods of the year. See Appendix Table 1, which shows the available data that the Pollock assessment authors used to allocate Pollock quota by area. Since the survey information is for the Shelikof Strait (virtually all the Shelikof Strait survey was conducted within area 620) and Shumagins the net result is that there is very little quota allocated to the Kodiak area (area 630). See Table 6 for proposed allocations by area for 2002. The future allocation of quota for the Kodiak area looks grim since no winter biomass survey occurs for this area and at present very little biomass is assumed to be present within the area.

Table 6. Proposed 2002 Central / Western Gulf pollock quotas by area

Season	Shumagin (610)	Chirikof (620)	Kodiak (630)	Total
A	2,916	8,618	1,122	12,656
B	2,916	8,618	1,122	12,656
C	5,949	2,905	3,803	12,657
D	5,949	2,904	3,803	12,656
Total	17,730	23,045	9,850	50,625

The Shelikof is only one of several known Gulf spawning areas; Davidson Banks, Sanak, Prince William Sound, Eastside of Kodiak and West Yakutat are also sites of known spawning Pollock biomasses, which either never have been surveyed or not consistently surveyed.

Analysis of the age class structure over time indicates strongly that starting around age five an increasingly smaller proportion of the older year classes return to Shelikof. The assumption is that the older fish spawn outside Shelikof, possibly in small aggregations known as haystacks.

For 2002, the A season Pollock fishery starts on January 20 while the B season starts on March 10. The Shelikof survey takes place in mid-March. The distribution of Pollock in the Gulf would be much different on January 20 than what would be seen in the Shelikof Strait hydroacoutic survey in mid-March. Using the mid-March biomass distribution assumes that the spawning biomass of Pollock in Shelikof Strait remains in the Strait during the entire A/B season. The reality is that the spawning biomass moves into and out of the Strait and no ones knows from where the fish come from or where the fish go – Western Gulf? Bering Sea? Dispersed around Kodiak Island?

Possible solutions:

(1) Survey Pollock biomass in January to determine the appropriate distribution to be used during the A season.
(2) Survey other areas for pollock biomasses besides the Shumagins and Shelikof Strait.
(3) Begin research projects that look at pollock movement across the Gulf of Alaska – possibly some kind of tagging study.
(4) Allow the fleet to fish a continual A/B season as occurs in the Bering Sea, thus allowing the fleet to fish the known spawning concentrations.
(5) Remove the 15-day stand-down period between seasons so that the A season harvests can take place on the surveyed biomass in Shelikof in late February / early March.

Appendix Table 1. Estimates of percent pollock in management areas 610-630 during winter EIT surveys in the Gulf of Alaska.

Survey	Year	Model estimates of total 2+ biomass at spawning	Survey biomass estimate[1]	Percent	Percent of biomass by management area			Percent of total biomass		
					Area 610	Area 620	Area 630	Area 610	Area 620	Area 630
Shelikof Strait	1992	1,027,620	681,400	66.3%						
Shelikof Strait	1993	1,141,040	408,200	35.8%						
Shelikof Strait	1994	1,143,030	467,300	40.9%						
Shelikof Strait	1995	951,795	618,300	65.0%						
Shelikof Strait	1996	852,269	745,400	87.5%						
Shelikof Strait	1997	778,359	570,100	73.2%	0.0%	98.8%	1.2%			
Shelikof Strait	1998	647,288	489,900	75.7%	0.0%	97.5%	2.5%			
Shelikof Strait	2000	528,085	334,900	63.4%	0.0%	97.8%	2.2%			
Shelikof Strait	2001	646,484	369,600	57.2%	0.0%	98.3%	1.7%			
Shelikof Strait	Average			62.8%	0.0%	98.1%	1.9%	0.0%	61.6%	1.2%
Shumagin	1995	951,795	290,100	30.5%	90.0%	10.0%	0.0%	27.4%	3.0%	0.0%
Shumagin	2001	646,484	108,791	16.8%	84.8%	15.2%	0.0%			
Shumagin	Average			23.7%	87.4%	12.6%	0.0%	20.7%	3.0%	0.0%
Shelf break/east side Kodiak	1990	1,045,880	96,610	9.2%	14.9%	6.2%	78.9%	1.4%	0.6%	7.3%
Total				95.66%				22.05%	65.12%	8.48%
Rescaled total				100.00%				23.05%	68.08%	8.87%

1. The biomass of age-1 pollock was not included in Shelikof Strait survey biomass in 1995 and 2000.

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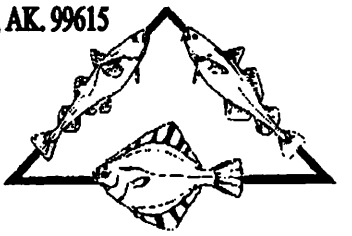


AGDB COMMENTS – DECEMBER COUNCIL MEETING

PACIFIC COD -- GULF ALLOCATION BY AREA

Plan Team Recommendations: According to the 2002 Gulf of Alaska Plan Team SAFE summary -- Page 10: "Apportionment of Pacific cod by area has been based on the most recent survey results which have been relatively consistent from survey to survey, with 36%, 57%, and 7% in the Western, Central, and Eastern areas, respectively in the 1999 survey. In the 2001 survey the apportionment changed somewhat with 47%, 45% and 8% in the Western, Central, and Eastern areas respectively. Pacific cod are believed to move sufficiently from area to area, such that any harvest apportionment within the range of the 1999 or 2001 survey results as needed to address other concerns would be biologically acceptable to Pacific cod."

Area apportionment alternatives (MT)

Based on:	Western	Central	Eastern
2001 Survey	27,070	25,920	4,610
1999 Survey	20,735	32,830	4,030
96, 99, & 01 ave	22,465	31,680	3,455

Historical Distribution of Pacific cod: It is important to note that the distribution of Pacific cod has remainder relatively stable across the Gulf for the life of the fishery.

Table 1. History of allocation (in percentage terms) by regulatory area within the GOA

	Regulatory Area			
Year(s)	Western	Central	Eastern	Total
1977-1985	28	56	16	100
1986	40	44	16	100
1987	27	56	17	100
1988-1989	19	73	8	100
1990	33	66	1	100
1991	33	62	5	100
1992	37	61	2	100
1993-1994	33	62	5	100
1995-1996	29	66	5	100
1997-1999	35	63	2	100
2000-2001	36	57	7	100
2002-2003	47	45	8	100
Aver 3 sury	39	55	6	100

Treatment of Pollock distribution across the Gulf: In 2000, the Gulf of Alaska pollock fishery quotas were distributed across the Gulf based on the average distribution of the last 4 bottom trawl surveys. (See attachment - appendix B from the SAFE for the 2000 fisheries). Rational for using an average for spatial distribution for pollock would also seem applicable for using an average for Pacific cod spatial distribution.

Rational for using the 4 bottom trawl survey average for Pollock include:

Observation error: Biomass estimates will be larger or smaller that the true biomass because of sampling variability.
Auto correlation: The predictable tendency for the true biomass distribution to be similar from one year to the next.
Process error: The random variability of the true biomass ditribution from one year to the next.
Projection: Because the surveys occur infrequently, there is a lag between the most recent survey and year when the ABC is apportioned. If process error is large, the projected biomass distribution will become increasingly uncertain as more time elapse.

All which would be applicable to the Pacific cod fishery.

Example of sampling variability -- 2001 Bottom trawl Survey: One of the scientist's involved with the 2001 bottom trawl survey pointed out that the progression of this year survey was slowed than in past surveys because only 2 vessels where on charter instead of the usual 3 vessels. A gross view of survey timing shows that the 2001 survey timing was anywhere from 11 to 26 days later than the last two bottom trawl surveys. Whether this can explain the difference in this year's survey distribution across the Gulf is impossible to determine.

Table 2. Gulf of Alaska Area by Longitude degrees

	Longitude		
Area	Start	End	# of degrees
Area 610	170	159	11
Area 620	159	154	5
Area 630	154	147	7
Area 640	147	140	7
Area 650	140	133	7

Table 3. Bottom Trawl survey time frame

Year	Start	End	EGOA survey	rate*
2001	17-May	23-Jul	no	2.91
1999	10-May	28-Jul	yes	2.14
1996	18-May	31-Jul	yes	1.95

Note: The actual log, which shows tows by lat and long, was unavailable. The rate* listed assumes that the vessels moved across the Gulf at a constant rate per degree of longitude and is expressed in days per longitude. In 2001, two vessels were on contract for the survey while in 1999 and 1996 three vessels were used.

Table 4. Comparison of when the Gulf areas were surveyed using the average rate of days per longitude during the 2001, 1999, and 1996 survey

	2001		1999		1996		Delay Days – 2001	
Area	Start	End	Start	End	Start	End	1999	1996
Area 610	17-May	18-Jun	10-May	2-Jun	18-May	8-Jun	17	11
Area 620	18-Jun	2-Jul	2-Jun	13-Jun	8-Jun	18-Jun	20	15
Area 630	2-Jul	23-Jul	13-Jun	28-Jun	18-Jun	1-Jul	26	22
Area 640	No survey		28-Jun	13-Jul	1-Jul	15-Jul	N/A	N/A
Area 650	No survey		13-Jul	28-Jul	15-Jul	29-Jul	N/A	N/A

Economic Ramifications for Gulf areas - point estimate vs. 3 bottom trawl average:

Table 5. Comparison of ABC distribution across the Gulf – point estimate vs. 3 bottom trawl average

		point est		3 survy ave	
Area	2001 ABC	2002 ABC	% change	2002 ABC	% change
WGOA	24400	27070	11%	22465	-8%
CGOA	38650	25920	-33%	31680	-18%
EGOA	4750	4610	-3%	3455	-27%
Total	67800	57600	-15%	57600	-15%

Table 6. Comparison of State GHL for 2002 – point estimate vs. 3 bottom trawl average

				point est		3 yr ave dis		2001
Area	ABC zone	% of ABC	2001 GHL	2002 GHL	% change	2002 GHL	% change	Catch
Peninsula	WGOA	25.00%	6100	6768	11%	5664	-7%	6109
Kodiak	CGOA	12.50%	4831	3240	-33%	3960	-18%	2125
Chignik	CGOA	7.00%	2706	1814	-33%	2218	-18%	1138
Cook Inlet	CGOA	2.25%	870	583	-33%	713	-18%	362
PWS	EGOA	25.00%	1188	1152	-3%	816	-31%	0
Total	N/A	N/A	15694	13558	-14%	13370	-15%	9734

Table 7. Comparison of Federal TAC for 2002 – point estimate vs. 3 bottom trawl average

	2001	point est		3 yr ave dis		2001
Area	Total TAC	2002 TAC	% change	Total TAC	% change	Catch
WGOA	18300	20304	11%	16992	-7%	13685
CGOA	30244	20282	-33%	24790	-18%	27136
EGOA	3563	3456	-3%	2448	-31%	132
Total	52106	44042	-15%	44230	-15%	40953

Using the 2001 bottom trawl survey point estimate means that even though there was a 15% overall reduction in Pacific cod ABC, that the Western Gulf will actually get an 11% increase in quota while the Central Gulf would receive a 33% reduction in quota when compared to 2001. With the 3-bottom trawl average the 15% ABC reduction is spread more evenly amongst the Gulf areas. It is important to note that in the EGOA that the available ABC is never harvested.

Recommendation: Allocate Gulf Pacific cod by area based on the average of the last three bottom trawl surveys.

Appendix B. Apportioning the Gulf pollock ABC

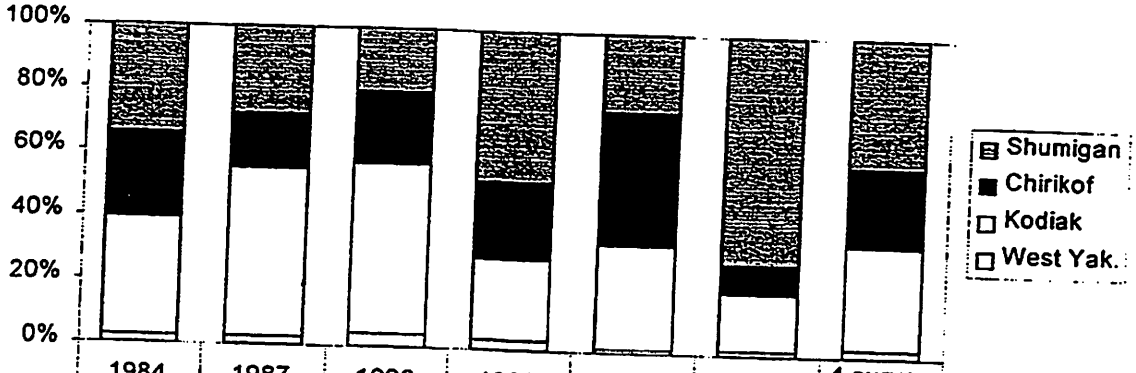
Since 1994, the Gulf pollock ABC has been apportioned between areas 610, 620 and 630 based on the most recent trawl survey biomass. Because the assessment boundary has been shifted east to include all of area 640, it should be included when apportioning the 2000 ABC. Both single species and ecosystem considerations provide the rationale for ABC apportioning. From an ecosystem perspective, apportioning the ABC will spatially distribute the effects of fishing on other pollock consumers (i.e., sea lions), thus reducing the overall intensity of adverse interactions..

The triennial trawl survey occurs every three years in the summer months, and thus provides a "snapshot" of a highly dynamic stock. For example, ABC apportionment in 1999 was based on a survey three years earlier. It is important to consider how to make best use of limited information on biomass distribution from the trawl survey when apportioning the ABC. The spatial distribution of pollock biomass will have the following properties:

- Observation error: Biomass estimates will be larger or smaller than the true biomass because of sampling variability.
- Autocorrelation: The predictable tendency for the true biomass distribution to be similar from one year to the next.
- Process error: The random variability of the true biomass distribution from one year to the next.
- Projection: Because the surveys occur infrequently, there is a lag (one to three years) between the most recent survey and year when the ABC is apportioned. If process error is large, the projected biomass distribution will become increasingly uncertain as more time elapses.

The above description identifies the components of a proposed state space model for biomass distribution (Harvey 1990). A similar approach was introduced in an appendix to the Gulf of Alaska Other Species Assessment (Gaichas and Ianelli 1999). The qualitative characteristics of projections using a state space model include 1) a tendency to down weight more recent observations in favor a value closer to the long-term average state, especially if the recent observations are highly uncertain, 2) projected values asymptotically approach the long-term average state in the absence of new observations. Simpler *ad hoc* alternatives are 1) using only the most recent survey, 2) using a long-term average of the surveys, 3) intermediate approaches, e.g., using a weighted average with emphasis on the most recent surveys. The relative merits of each *ad hoc* approach depend on the ratio of process error to observation error, and on the strength of autocorrelation.

Two time series of biomass distribution for Gulf pollock are available: the triennial survey time series, and the annual ADF&G survey (Figs. 1.23-1.24). Although the surveys are designed with different strata, the Shumagin area closely corresponds to the ADF&G South Peninsula area. Both time series indicate that pollock biomass distribution in the 1990s has been highly variable, however the annual ADF&G survey does suggest that pollock biomass distribution is autocorrelated at lags of several years. Focusing on the Shumagin/South Peninsula area only, the ADF&G survey suggests that triennial surveys during the 1990s have tended to occur during the extremes of the biomass distribution, i.e., when the biomass in the Shumagin area was higher than average, or lower than average. With a three-year survey cycle, apportioning the ABC based on the most recent survey could induce a "wobble" in the population dynamics. Areas with higher than usual biomass in one survey could be subjected to higher harvest rates for a three year period, producing lower than usual biomass in the following survey.



	1984	1987	1990	1993	1996	1999	4 survey average
Shumigan	33.9%	27.6%	20.0%	47.6%	24.7%	71.8%	41.0%
Chirikof	26.7%	17.4%	23.1%	24.0%	41.7%	8.6%	24.4%
Kodiak	37.0%	52.5%	52.8%	25.1%	32.3%	18.3%	32.1%
West Yak.	2.5%	2.5%	4.1%	3.3%	1.2%	1.3%	2.5%

Figure 1.23. Percent distribution of Gulf pollock biomass west of 140° W long as measured by triennial trawl surveys in 1984-99. The percent in West Yakutat in 1984 and 1987 was set equal to the mean percent in 1990-99.

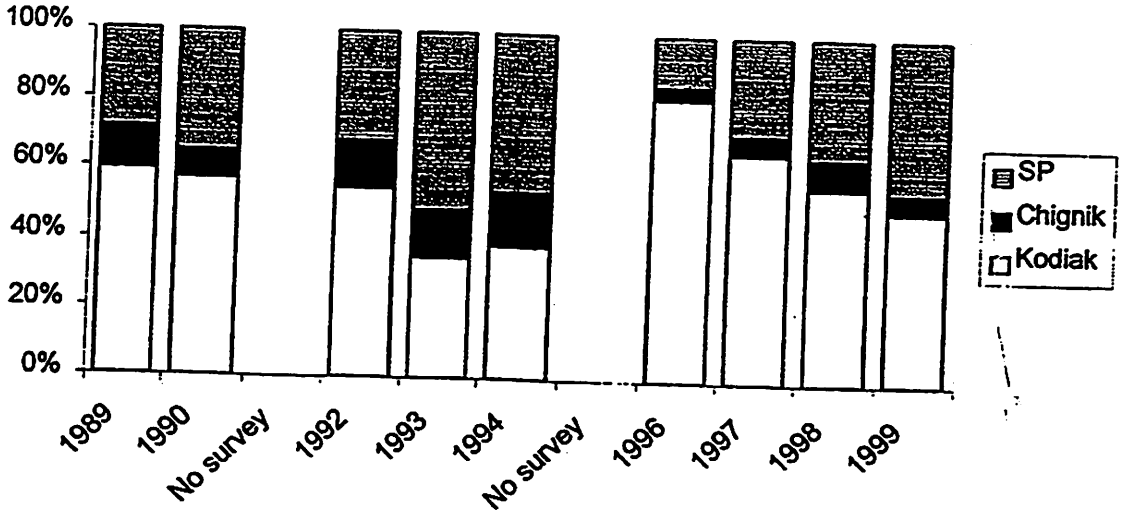


Figure 1.24. Percent distribution of Gulf pollock biomass by strata in the ADF&G coastal survey during 1989-99.

The percent of the biomass in the South Peninsula area is correlated with the fraction of older fish (age 4+) in the population (Fig. 1.25), suggesting that ontogenetic shifts in summer foraging habitat can account for some of the variability in biomass distribution. Without quantitative modeling, the objective should be to apportion the 2000 ABC in a way that is risk averse to potential overharvest within any area. The apparent mobility of Gulf pollock shown in the annual ADF&G survey and poor track record of the most recent trawl survey in predicting future biomass distributions would argue that a multi-year average would be more appropriate than the current method. The sensitivity of the 1999 biomass distribution to an extremely large

tow in the Shumagin area is also a concern (i.e., large observation error). A four-survey average (1990-99) would capture any changes in average biomass distribution during the 1990s while reducing the potential for overharvest within any area.

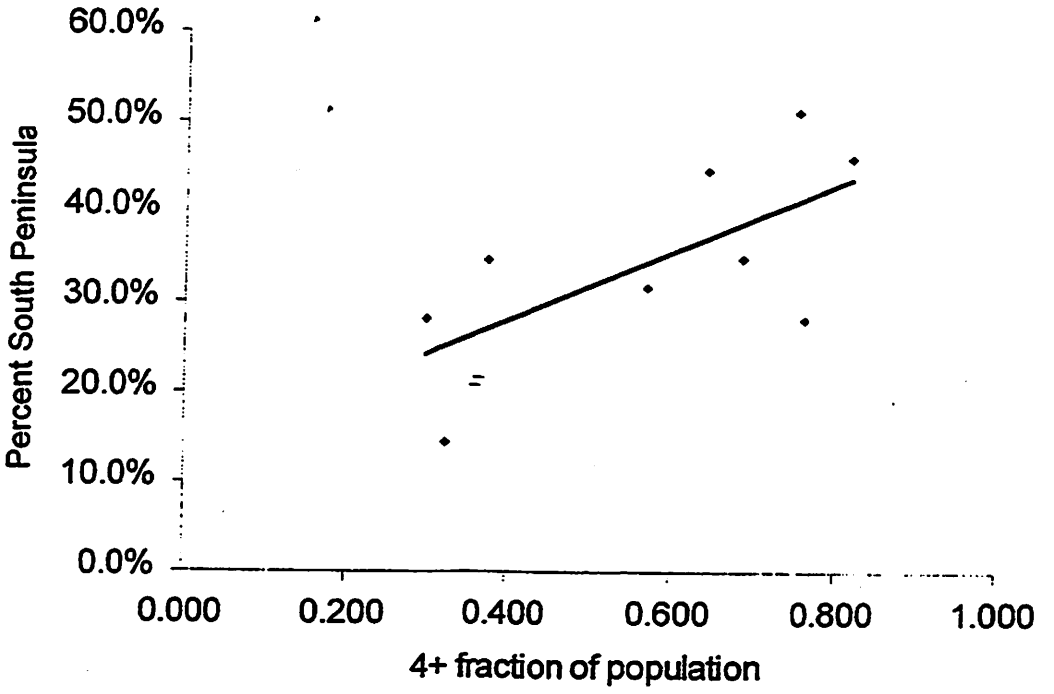


Figure 1.25. Percent of biomass in South Peninsula area in the ADFG survey as a function of the fraction of age 4 and older fish of the total population.

Did not appear

To: Joe Childers

From: Ken Roemhildt, Supt, North Pacific Processors, Inc., Cordova

Subject: Eastern Gulf Pollock Quota

I was unable to stay for the rest of the Council meetings because of press of the rebuilding work from our fire. If you can present this information to the Council in my behalf, I would surely appreciate it. Thanks.

Eastern Gulf 2002 Pollock Quota

The proposed Eastern Gulf quota seems to have been derived using formulas much the same as those used for the Central and Western Gulf areas. The assumption appears to have been made that the Eastern Gulf stock is a part of the "*one*" stock that covers the whole of the Gulf of Alaska. We **DO NOT** agree with this assessment.

1) This stock has always been managed as a separate stock.
2) The quota for the Eastern Gulf was split a few years ago, and was split into South East Outside and West Yakatat components – a tacit acknowledgement that it is a separate stock.
3) These fish are deep water spawners (250 – 325 fathoms), and there are no examples of other deep water spawners in the rest of the Gulf that we are aware of.
4) These fish head east after spawning as verified by the boats that have fished them over the years.

We request that honest consideration be given to increasing the 2002 Eastern Gulf Pollock quota.

1) We have good evidence that the Eastern Gulf stock is not part of a common "Gulf of Alaska" stock, and in several ways is not even similar.
2) Current split of this stock with South East Outside already ties up 75% of this stock, where it can't even be fished at all! This is already "Super Conservative" management.
3) In 1999, the plan team and NMFS proposed putting the WYAK – SEO quotas back together. The RPA process stopped this reasonable and prudent action.
4) No survey was done on this separate and different stock to support a lower quota.

I have two suggestions for the resolution of this problem:

1) Put the South Eastern Outside quota and the West Yakatat quota back together if the need to use reduction factors like those in the rest of the Gulf is necessary. That would yield a very conservative quota of about 4,500 mt.
2) Since there is no new information on the Eastern Gulf stock (no survey), it seems reasonable to maintain last year's quota of about 2,235 mt. This is still ultra conservative since this stock is not fished on anywhere else.

All of us considering this issue feel the effects of the lack of survey data in the Eastern Gulf this year. We need this information to make realistic decisions about management of this area. We feel that the Eastern Gulf needs to be surveyed on a regular schedule just like the rest of the Gulf and would urge those in control to make sure it happens.

Secondly, the Eastern Gulf should be surveyed acoustically this winter, as is done in other areas. The Prince William Sound Science Center has been surveying Prince William Sound acoustically for some years, and would be willing to survey the Eastern Gulf spawning aggregations as well. There is even a chance that some or all of the funding might be available from other sources.

Thank you for the opportunity to be heard on this issue.

IPHC staff report

2001 Exploitable biomass 481 million pounds

2C 56
3A 139
3B 130.6
4A 52.8
4B 51.4
4CDE 51.4

1.5 / 481 = .3%

- 2001. Total: Constant Exploitable Yield 96 million
total CEY > biological level for total removals

1.5 / 96 = 1.5%

So: For 2001 estimated halibut subsistence removals are:
1.5% of harvest
0.3% of biomass