MEMORANDUM

TO: Council, SSC and AP Members

FROM: Chris Oliver
Executive Director

DATE: December 4, 2003

SUBJECT: Groundfish Management

ESTIMATED TIME
12 HOURS
(all D-1 items)

ACTION REQUIRED

(b) Final action to approve the 2004 BSAI/GOA EA, BSAI Final Stock Assessment and Fishery Evaluation (SAFE) report, and approve final BSAI groundfish specifications for 2004:
1. Acceptable Biological Catch (ABC), and annual Total Allowable Catch (TAC);
2. Seasonal apportionment of the fixed gear Pacific cod TAC; and
3. Bycatch allowances, and seasonal apportionments of Pacific halibut, red king crab, Tanner crab, opilio crab, and herring to target fishery (PSC) categories.
4. Approve halibut discard mortality rates for the 2004-2006 non-CDQ and 2004 CDQ groundfish fisheries.

BACKGROUND

At this meeting, the Council makes final recommendations on groundfish and bycatch specifications as listed above to manage the 2004 Bering Sea Aleutian Islands (BSAI) groundfish fisheries.

BSAI SAFE Document

The BSAI Groundfish Plan Team met in Seattle on November 18-20, 2003 to prepare the final BSAI SAFE reports. This SAFE report forms the basis for BSAI groundfish specifications for the 2004 fishing year. Note that there are three sections to the SAFE report: a stock assessment section, a fishery evaluation section ("economic SAFE"), an ecosystems considerations section (which now contains an ecosystem assessment). These three sections, together with the GOA SAFE report, are incorporated into the Environmental Assessment for the 2004 groundfish specifications. The SAFE reports were mailed on November 26 and the EA was mailed on December 1. SSC and AP recommendations will be provided to the Council during the meeting.

ABCs, TACs, and Apportionments

At this meeting, the Council will establish final catch specifications for the 2004 fisheries. Item D-1(b)(1) reports biomass levels and BSAI Plan Team recommendations for overfishing levels (OFLs) and Allowable Biological Catches (ABCs). The sum of recommended ABCs by the Plan Team for 2004 is 3,664,065 mt, more than 350,000 mt above that in 2003.

Overall, the status of the stocks continues to appear relatively favorable, although biomass for some stocks has declined due to below average recruitment. The 2003 Eastern Bering Sea bottom trawl survey estimated a pollock biomass of 8,510,000 t, an increase of 77% relative to the 2002 estimate and the highest estimate in the entire time series. The model estimate of pollock biomass for 2004 is nearly the same as in 2003. A new assessment model for Aleutian Islands pollock was previewed, and will be considered for managing that stock next year. The 2003 bottom trawl survey resulted in a Pacific cod biomass estimate of 606,000 t, down 2% from the 2002 estimate and near the minimum for the time series (534,000 t). The 2002 Aleutian Islands survey resulted in a pacific cod biomass estimate that was down 39% from 2000 and is the lowest value of the time series. Overall estimates of Pacific cod abundance are almost unchanged from last year. The sablefish survey abundance index decreased 7% from 2002 to 2003. This decrease follows recent increases, so that relative abundance in 2003 is 10% higher than in 2000. The fishery abundance index for sablefish also generally increased and is 6% higher in 2002 than in 2000. The 2003 bottom trawl survey resulted in a yellowfin biomass estimate of 2,280,000 t, an increase of 14% from 2002. The yellowfin sole stock had been declining since the mid-1980s, due to the low recruitment in the last decade. However, the stock may be more stable in the near future, due in part to a possibly above average 1995 year class. The Greenland turbot biomass estimate increased modestly in 2003, but may decline in the long-term due to continued lack of recruitment. The arrowtooth flounder biomass estimate increased 56% in 2003; rock sole increased by 12%; Pacific ocean perch declined by 7%; Atka mackerel declined by 20%. None of the BSAI groundfish stocks are overfished or approaching an overfished condition.

Adopt Seasonal Apportionments of the Pacific Cod TAC Allocated to Fixed Gear

Amendment 24 allows seasonal apportionment of the Pacific cod TAC allocated to hook-and-line or pot sectors. Under Amendment 46, 2% of the TAC is reserved for jig gear, 51% for fixed gear, and 47% for trawl gear. The trawl apportionment is split equally between catcher vessels and catcher processors. Under Amendment 64, the fixed gear apportionment is allocated as follows: 80% to freezer longline vessels; 0.3% to longline catcher vessels; 18.3% to pot gear vessels; and 1.4% to catcher vessels (longline or pot) less than 60 feet length overall. These allocations will be continued under Amendment 77.

For non-trawl gear the first season is allocated 60 percent of the TAC and the second season is allocated 40 percent of the TAC. No seasonal harvest constraints are imposed for catcher vessels less than 60 feet (18.3 m) LOA using hook-and-line or pot gear. For trawl gear, the first season is allocated 60 percent of the TAC and the second and third seasons are each allocated 20 percent of the TAC. The trawl catcher vessel allocation is further allocated as 70 percent in the first season, 10 percent in the second season and 20 percent in the third season. The trawl catcher/processor allocation is allocated 50 percent in the first season, 30 percent in the second season and 20 percent in the third season. Any unused portion of a seasonal Pacific cod allowance will be reapportioned to the next seasonal allowance. Season dates in 2003 for longline and jig gear were January 1 - June 10 and June 10 - December 31. Season dates for pot gear were January 1 - June 10 and September 1 - December 31. Item D-1(b)(2) lists the 2003 gear and seasonal apportionments of the Pacific cod TAC.

Adopt Prohibited Species Catch limits of Pacific halibut, crab, and herring

Halibut Trawl Fisheries: A 3,675 mt limit on halibut mortality has been established for trawl gear. This limit can be apportioned to the trawl fishery categories as shown in the adjacent box. Under Amendment 46, the trawl halibut PSC mortality cap for Pacific cod is limited to 1,600 mt.

Categories used for prohibited species catch (PSC) apportionment in trawl fisheries

1. Greenland turbot, arrowtooth flounder and sablefish
2. rock sole and "other flatfish"
3. yellowfin sole
4. rockfish
5. Pacific cod
6. pollock, Atka mackerel and "other species"

Halibut Fixed Gear Fisheries: A 900 mt non-trawl gear halibut mortality can be apportioned to the fishery categories listed in the adjacent box. Under Amendment 46, the hook-and-line halibut PSC mortality cap for Pacific cod is capped at 900 mt. Item D-1(b)(3) lists the 2003 PSC allocations and seasonal apportionments for the trawl and non-trawl fisheries. Item D-1(b)(4) is a current summary of PSC bycatch accounting for BSAI non-CDQ fisheries.

Categories used for PSC apportionment in non-trawl fisheries

1. Pacific cod
2. Other non-trawl (longline sablefish and rockfish, and jig gear)
3. Groundfish pot (exempt in recent years)

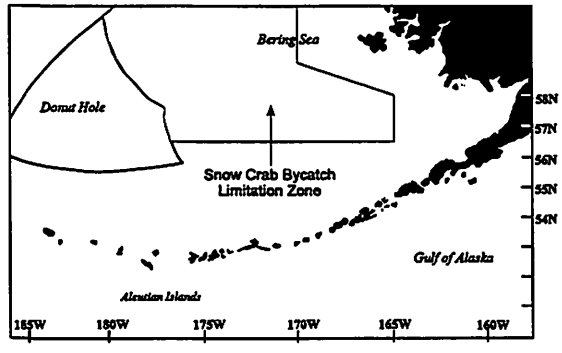
Crab: Prescribed bottom trawl fisheries in specific areas are closed when PSC limits of *C. bairdi* Tanner crab, *C. opilio* crab, and red king crab are taken. Amendment 37 established a stairstep procedure for determining PSC limits for red king crab taken in Zone 1 trawl fisheries. PSC limits are based on abundance of Bristol Bay red king crab as shown in the adjacent table. Amendment 57 reduced red king crab bycatch by an additional 3,000 crabs. Based on the 2003 estimate of effective spawning biomass (60.7 million pounds), and the 3,000 crab reduction, the PSC limit for 2004 will be 197,000 red king crabs. The regulations also specify that up to 35% of the PSC apportioned to the rock sole fishery can be used in the 56° - 56°10'N strip of the Red King Crab Savings Area. The red king crab cap has generally been allocated among the pollock/mackerel/other species, Pacific cod, rock sole, and yellowfin sole fisheries. Once a fishery exceeds its red king crab PSC limit, Zone 1 is closed to that fishery for the remainder of the year, unless further allocated by season.

PSC limits for red king crab and *C. bairdi* Tanner crab

Species	Zone	Crab Abundance	PSC Limit
Red King Crab	Zone 1	Below threshold or 14.5 million lbs of effective spawning biomass (ESB)	35,000
		Above threshold, but below 55 million lbs of ESB	100,000
		Above 55 million lbs of ESB	200,000
Tanner Crab	Zone 1	0-150 million crabs	0.5% of abundance
		150-270 million crabs	750,000
		270-400 million crabs	850,000
		over 400 million crabs	1,000,000
Tanner Crab	Zone 2	0-175 million crabs	1.2% of abundance
		175-290 million crabs	2,100,000
		290-400 million crabs	2,550,000
		over 400 million crabs	3,000,000

Under Amendment 41, PSC limits for *bairdi* in Zones 1 and 2 are based on total abundance of *bairdi* crab as indicated by the NMFS trawl survey. These limits are further reduced by 50,000 as prescribed by proposed Amendment 57. Based on 2003 abundance (448.78 million crabs), and the Amendment 57 adjustment, the PSC limit for *C. bairdi* in 2004 will be 980,000 (1,000,000 minus 20,000) *bairdi* crabs in Zone 1 and 2,970,000 (3,000,000 minus 30,000) crabs in Zone 2.

Under Amendment 40, PSC limits for snow crab (*C. opilio*) are be based on total abundance of *opilio* crab as indicated by the NMFS standard trawl survey. The snow crab PSC cap is set at 0.1133% of the Bering Sea snow crab abundance index, with a minimum PSC of 4.5 million snow crab and a maximum of 13 million snow crab. This number is further reduced by 150,000 crabs as part of Amendment 57. Based on the 2003 survey estimate of 2.63 billion crabs, the 2004 *opilio* crab PSC limit will be 4,350,000 snow crabs (4,500,000 minus 150,000).



Location of the *C. opilio* bycatch limitation zone

Snow crab taken within the "Snow Crab Bycatch Limitation Zone"accrue towards the PSC limits established for individual trawl fisheries. Upon attainment of a snow crab PSC limit apportioned to a particular trawl target fishery, that fishery is prohibited from fishing within the snow crab zone.

Herring: Amendment 16a established an overall herring PSC bycatch cap of 1 percent of the EBS biomass of herring. This cap is to be apportioned to the same six PSC fishery categories listed above, plus a seventh group, mid-water pollock. The 2002 herring assessment data for abundance forecasts have not yet been analyzed. For the largest stock (Togiak) aerial observation conditions were poor during the spring 2002 spawning season and ADFG did not get an abundance estimate for use in the age-structured assessment analysis. Age composition estimates indicate the 1997 year class is of at least moderate size and should continue to support the present biomass levels. Preliminary analysis of the data indicate that the biomass estimates will not change much from last year. The 2002 biomass estimate of 152,574 mt was the basis for setting the 2003 herring PSC limit of 1,526 mt. ADF&G will provide a revised herring biomass estimate prior to the Council action.

Seasonal Apportionment of bycatch limits

The Council may also seasonally apportion the bycatch allowances. Regulations require that seasonal apportionments of bycatch allowances be based on information listed in the adjacent box. Additional information on PSC limits and apportionments is presented in BSAI SAFE Report Appendix B.

Factors to be considered for seasonal apportionment of bycatch allowances.

1. Seasonal distribution of prohibited species;
2. Seasonal distribution of target groundfish species relative to prohibited species distribution;
3. Expected prohibited species bycatch needs on a seasonal basis relevant to change in prohibited species biomass and expected catches of target groundfish species;
4. Expected variations in bycatch rates throughout the fishing year;
5. Expected changes in directed groundfish fishing seasons;
6. Expected start of fishing efforts; and
7. Economic effects of establishing seasonal prohibited species apportionments on segments of the target groundfish industry.

Halibut Discard Mortality Rates

In 2001, 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. These rates are now due to be revised.

The DMRs used in 2003 and proposed rates for 2004-2006 for non-CDQ fisheries and for 2004 CDQ fisheries are attached as Item D-1(b)(5). In the BSAI, six rates decreased, five rates increased, and four did not change. Changes in the mean DMRs were small in most cases, on the order of 1-3 percent. The BSAI trawl rockfish rate increased from 69 to 74%, largely due to high DMRs in 1999-2001. The BSAI longline rockfish rate declined from 25% to 16% on the strength of lower DMRs since 2000. The fishery is fairly small, contributing to highly variable DMRs.

CDQ trawl effort in 2002 was focused on pollock, Atka mackerel, and yellowfin sole. Mean DMRs are recommend for the 2004 Atka mackerel and pollock CDQ trawl fisheries, as viability data have been collected for four and five years, respectively. CDQ fishing for yellowfin sole has been sporadic, occurring only twice in the past four years. In cases like this, IPHC staff recommended that the 2004 fishery be managed using the most recent DMR until three years of data have been collected, at which time an average would be used. The long-term mean DMRs for 1993-2002 open access fisheries are recommended for any remaining targets in the CDQ fisheries.

Bering Sea/Aleutian Island Groundfish Plan Team Recommendations

2003 Specifications and Recommendations for 2004 Final Specifications (mt)

Species	Area	2003 Biomass	2003 OFL	2003 ABC	2003 TAC	2003 *Catch	2004 Biomass	2004 OFL	2004 ABC
Pollock	EBS	11,100,000	3,530,000	2,330,000	1,491,760	1,489,419	11,000,000	2,740,000	2,560,000
	AI	175,000	52,600	39,400	1,000	1,641	175,000	52,600	39,400
	Bogoslof	227,000	45,300	4,070	50	24	198,000	39,600	29,700
Pacific cod	BSAI	1,680,000	324,000	223,000	207,500	186,314	1,660,000	350,000	223,000
Yellowfin sole	BSAI	1,550,000	136,000	114,000	83,750	78,738	1,560,000	135,000	114,000
Greenland turbot	BSAI	112,000	17,800	5,880	4,000	3,017	132,000	19,300	4,740
	BS			3,920	2,680	2,368			3,162
	AI			1,960	1,320	649			1,578
Arrowtooth flounder	BSAI	597,000	139,000	112,000	12,000	12,556	696,000	142,000	115,000
Rock sole	BSAI	877,000	132,000	110,000	44,000	35,832	1,160,000	166,000	139,000
Flathead sole	BSAI	550,000	81,000	66,000	20,000	14,053	505,000	75,200	61,900
Alaska plaice	BSAI	1,080,000	165,000	137,000	10,000	9,896	1,050,000	258,000	203,000
Other flatfish	BSAI	107,000	21,400	16,000	3,000	2,818	90,300	18,100	13,500
Sablefish	EBS	31,000	4,290	2,900	2,900	948	32,000	4,020	3,010
	AI	39,000	4,590	3,100	3,100	1,076	39,000	4,620	3,450
Pacific Ocean Perch	BSAI	375,000	18,000	15,100	14,100	15,644	349,000	15,800	13,300
	BS			2,410	1,410	1,196			2,128
	AI			12,690	12,690	14,448			11,172
	Eastern			3,500	3,500	3,934			3,059
	Central			3,340	3,340	4,120			2,926
	Western			5,850	5,850	6,394			5,187
Northern rockfish	BSAI	156,000	9,468	7,101			142,000	8,140	6,880
	BS				121	74			19
	AI				5,879	4,828			6,861
Shortraker/rougheye	BSAI	32,000	1,289	967					
	BS				137	112			
	AI				830	298			
Shortraker	BSAI						23,400	701	526
Rougheye	BSAI						10,400	259	195
Other rockfish	EBS	18,300	1,280	960	960	314	18,300	1,280	960
(incl. sharpchin)	AI	12,100	846	634	634	393	12,100	846	634
Atka mackerel	BSAI	358,300	99,700	63,000	60,000	57,875	286,000	78,500	66,700
	Eastern			10,650	10,650	11,425			11,240
	Central			29,360	29,360	27,512			31,100
	Western			22,990	19,990	18,938			24,360
Squid	BSAI	n/a	2,620	1,970	1,970	1,274	n/a	2,620	1,970
Other Species	BSAI	695,000	81,100	43,300	32,309	25,437			
Sharks							29,300	2,640	1,980
Skates							484,000	48,400	36,300
Sculpins							212,000	31,800	23,800
Octopi							4,980	1,490	1,120
BS/AI TOTAL		19,771,700	4,867,283	3,311,482	2,012,690	1,957,029	19,868,780	4,196,916	3,664,065

BSAI = Bering Sea & Aleutians
BS = Bering Sea
*through11/08/03 including CDQ harvest

EBS = eastern Bering Sea
AI = Aleutian Islands

OFL = overfishing level
ABC = acceptable biological catch
TAC = total allowable catch

TABLE 5.–2003 GEAR SHARES AND SEASONAL APPORTIONMENTS OF THE BSAI PACIFIC COD TAC
[Amounts are in mt]

Gear Sector	Percent	Share of Gear Sector Total (mt)	Subtotal percentages for Gear Sectors	Share of Gear Sector Total (mt)	Seasonal apportionment[1]	
					Date	Amount (mt)
Total hook-and-line and pot gear allocation of Pacific cod TAC	51	97,888				
Incidental Catch Allowance				500		
Catcher/Processor and Catcher Vessel sub-total		97,388				
Hook-and-line Catcher/Processors			80	77,911	Jan 1 - Jun 10 Jun 10 - Dec 31	46,747 31,164
Hook-and-line Catcher Vessels			0.3	292	Jan 1 - Jun 10 Jun 10 - Dec 31	175 117
Pot Gear Vessels			18.3	17,822	Jan 1 - Jun 10 Sept 1 - Dec 31	10,693 7,129
Catcher Vessels < 60 feet LOA using hook-and-line or pot gear			1.4	1,363		
Trawl gear total	47	90,211				
Trawl Catcher Vessel			50	45,105	Jan 20 - Apr 1 Apr 1 - Jun 10 Jun 10 - Nov 1	31,574 4,510 9,021
Trawl Catcher/Processor			50	45,105	Jan 20 - Apr 1 Apr 1 - Jun 10 Jun 10 - Nov 1	22,553 13,531 9,021
Jig	2	3,839			Jan 1 - Jun 10 Jun 10 - Dec 31	2,303 1,536
Total	100	191,938				

[1] For non-trawl gear the first season is allocated 60 percent of the TAC and the second season is allocated 40 percent of the TAC. No seasonal harvest constraints are imposed for the Pacific cod fishery by catcher vessels less than 60 feet (18.3 m) LOA using hook-and-line or pot gear. For trawl gear, the first season is allocated 60 percent of the TAC and the second and third seasons are each allocated 20 percent of the TAC. The trawl catcher vessels' allocation is further allocated as 70 percent in the first season, 10 percent in the second season and 20 percent in the third season. The trawl catcher/processors' allocation is allocated 50 percent in the first season, 30 percent in the second season and 20 percent in the third season. Any unused portion of a seasonal Pacific cod allowance will be reapportioned to the next seasonal allowance.

TABLE 7.–PROHIBITED SPECIES CATCH ALLOWANCES
FOR THE BSAI TRAWL AND NON-TRAWL FISHERIES[1]

TRAWL FISHERIES	Prohibited Species and Zone					
	Halibut mortality (mt) BSAI[6]	Herring (mt) BSAI	Red King Crab (animals) Zone 1	C. opilio (animals) COBLZ[2]	C. bairdi (animals) Zone 1	C. bairdi (animals) Zone 2
Yellowfin sole	886	139	16,664	2,776,981	340,844	1,788,459
January 20 - April 1	262	.....	.....	.....	.....	.....
April 1 - May 21	195	.....	.....	.....	.....	.....
May 21 - June 29	49	.....	.....	.....	.....	.....
June 29 - December 31	380	.....	.....	.....	.....	.....
Rock sole/flat. sole/other flatfish[3]	779	20	59,782	969,130	365,320	596,154
January 20 - April 1	448	.....	.....	.....	.....	.....
April 1 - June 29	164	.....	.....	.....	.....	.....
June 29 - December 31	167	.....	.....	.....	.....	.....
RKCSS[3]			20,924			
Turbot/sablefish/arrowtooth[4]	.....	9	.....	40,238	.....	.....
Rockfish (June 29 - Dec. 31)	69	7	.....	40,237	.....	10,988
Pacific cod	1,434	20	13,079	124,736	183,112	324,176
Pollock/Atka/other[5]	232	146	200	72,428	17,224	27,473
Midwater trawl pollock	.....	1,184	.....	.....	.....	.....
TOTAL TRAWL PSC	3,400	1,526	89,725	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 & jig	Exempt					
Sablefish hook-&-line	Exempt					
TOTAL NON-TRAWL	833					
PSQ RESERVE[7]	342	.....	7,275	326,250	73,500	222,750
GRAND TOTAL	4,575	1,526	97,000	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] The Council at its December 2002 meeting recommended that red king crab bycatch for trawl fisheries within the RKCSS be limited to 35 percent of the total allocation to the rock sole, flathead sole, and other flatfish fishery category (§ 679.21(e)(3)(ii)(B)). "Other flatfish" for PSC monitoring includes all flatfish species, except for Pacific halibut (a prohibited species), greenland turbot, rock sole, yellowfin sole and arrowtooth flounder.

[4] Greenland turbot, arrowtooth flounder, and sablefish fishery category.

[5] Pollock other than pelagic trawl pollock, Atka mackerel, and "other species" fishery category.

[6] With the exception of the non-trawl Pacific cod directed fishery, any unused halibut PSC apportionment may be added to the following season's apportionment. Any unused halibut PSC apportioned to the non-trawl Pacific cod directed fishery during the January 1 through June 10 time period will not be available until August 15.

[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.

Bering Sea Aleutian Islands Prohibited Species Report

Through: 15-NOV-03

National Marine Fisheries Service
Alaska Region, Sustainable Fisheries
Catch Accounting

Chinook Salmon

Trawl Gear

Seasons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
	Pollock (Pelagic)	Count	44,703	30,525	-14,178	146%	0
Total:			**44,703**	**30,525**	**-14,178**	**146%**	**0**

Halibut Mortality

Non-Trawl Gear

Seasons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
X	Pacific Cod (Hook-and-Line)	MT	460	775	315	59%	15
	Non-Pacific Cod (Hook-and-Line)	MT	22	58	36	38%	0
Total:			**482**	**833**	**351**	**58%**	**15**

Trawl Gear

Seasons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
	Pacific Cod	MT	1,209	1,434	225	84%	0
	Rockfish	MT	67	69	2	97%	0
X	Rock Sole, Flathead Sole, Other Flatfish (Trawl)	MT	882	779	-103	113%	0
	Pollock, Atka Mackerel, Other Species	MT	160	232	72	69%	0
X	Yellowfin Sole (Trawl)	MT	935	886	-49	105%	0
	Turbot/Sablefish/Arrowtooth Flounder	MT	54	0	-54	0%	0
Total:			**3,306**	**3,400**	**94**	**97%**	**0**

Herring

Trawl Gear

Seasons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
	Pacific Cod	MT	14	20	6	68%	0
	Rockfish	MT	0	7	7	0%	0
	Rock Sole, Flathead Sole, Other Flatfish	MT	1	20	19	7%	0
	Pollock, Atka Mackerel, Other Species	MT	19	146	127	13%	0
	Pollock Pelagic	MT	1,035	1,184	149	87%	0
	Yellowfin Sole	MT	38	139	101	27%	0
	Greenland Turbot, Arrowtooth, Sablefish	MT	0	9	9	1%	0
Total:			**1,107**	**1,525**	**418**	**73%**	**0**

Opilio (Tanner) Crab - COBLZ

Trawl Gear

Report run on: November 20, 2003 6:28 AM

Opilio (Tanner) Crab - COBLZ

Trawl Gear

Seasons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
	Pacific Cod	Count	59,881	124,736	64,855	48%	0
	Rockfish	Count	0	40,237	40,237	0%	0
	Rock Sole, Flathead Sole, Other Flatfish	Count	179,304	969,130	789,826	19%	0
	Pollock, Atka Mackerel, Other Species	Count	954	72,428	71,474	1%	0
	Yellowfin Sole	Count	377,152	2,776,981	2,399,829	14%	0
	Greenland Turbot, Arrowtooth, Sablefish	Count	1,699	40,238	38,539	4%	0
Total:			**618,990**	**4,023,750**	**3,404,760**	**15%**	**0**

Bairdi Crab, Zone 1

Trawl Gear

Seasons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
	Pacific Cod	Count	52,574	183,112	130,538	29%	0
	Rock Sole, Flathead Sole, Other Flatfish	Count	224,361	365,320	140,959	61%	0
	Pollock, Atka Mackerel, Other Species	Count	2,079	17,224	15,145	12%	0
	Yellowfin Sole	Count	32,309	340,844	308,535	9%	0
Total:			**311,323**	**906,500**	**595,177**	**34%**	**0**

Bairdi Crab, Zone 2

Trawl Gear

Seasons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
	Pacific Cod	Count	102,676	324,176	221,500	32%	0
	Rockfish	Count	0	10,988	10,988	0%	0
	Rock Sole, Flathead Sole, Other Flatfish	Count	221,403	596,154	374,751	37%	0
	Pollock, Atka Mackerel, Other Species	Count	2,007	27,473	25,466	7%	0
	Yellowfin Sole	Count	277,335	1,788,459	1,511,124	16%	0
Total:			**603,422**	**2,747,250**	**2,143,828**	**22%**	**0**

Red King Crab, Zone 1

Trawl Gear

Seasons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
	Pacific Cod	Count	1,114	13,079	11,965	9%	0
	Rock Sole, Flathead Sole, Other Flatfish	Count	52,254	59,782	7,528	87%	0
	Pollock, Atka Mackerel, Other Species	Count	34	200	166	17%	0

Red King Crab, Zone 1

Trawl Gear

Sea-sons	Account	Units	Total Catch	Limit	Remaining	% Taken	Last Wk Catch
	Yellowfin Sole	Count	22,873	16,664	-6,209	137%	0
Total:			**76,275**	**89,725**	**13,450**	**85%**	**0**

This report does not include the CDQ allocated catch.

"Other flatfish" for PSC monitoring: all flatfish species, except for Pacific halibut (a prohibited species), Greenland turbot, rock sole, yellowfin sole, arrowtooth flounder.

COBLZ: C. Opilio Crab Bycatch Limitation Zone. 50 CFR 679.21(e) and Figure 13.

Zone 1: Federal Reporting Areas 508, 509, 512, 516.

Zone 2: Federal Reporting Areas 513, 517, 521.

Data is based on observer reports, extrapolated to total groundfish harvest. Estimates for all weeks may change due to incorporation of late or corrected data.

Bering Sea Aleutian Islands Seasonal Prohibited Species Report	National Marine Fisheries Service Alaska Region, Sustainable Fisheries Catch Accounting
Through: 15-NOV-03 **Account:** ALL	

Non-Chinook Salmon, CVOA

Trawl Gear

Season	Begin	End	Units	Total Catch	Limit	Remaining	% Taken
Non-Chinook Salmon CVOA	15-AUG-03	14-OCT-03	Count	94,343	38,850	-55,493	243%
Total:				**94,343**	**38,850**	**-55,493**	**243%**

Halibut Mortality

Pacific Cod (Hook-and-Line)

Season	Begin	End	Units	Total Catch	Limit	Remaining	% Taken
1st Season	01-JAN-03	10-JUN-03	MT	195	320	125	61%
2nd Season	10-JUN-03	15-AUG-03	MT	0	0	0	0%
3rd Season	15-AUG-03	31-DEC-03	MT	265	455	190	58%
Total:				**460**	**775**	**315**	**59%**

Rock Sole, Flathead Sole, Other Flatfish (Trawl)

Season	Begin	End	Units	Total Catch	Limit	Remaining	% Taken
1st Season	20-JAN-03	01-APR-03	MT	694	448	-246	155%
2nd Season	01-APR-03	29-JUN-03	MT	0	164	164	0%
3rd Season	29-JUN-03	31-DEC-03	MT	187	167	-20	112%
Total:				**882**	**779**	**-103**	**113%**

Yellowfin Sole (Trawl)

Season	Begin	End	Units	Total Catch	Limit	Remaining	% Taken
1st Season	20-JAN-03	01-APR-03	MT	269	262	-7	103%
2nd Season	01-APR-03	21-MAY-03	MT	132	195	63	68%
3rd Season	21-MAY-03	29-JUN-03	MT	185	49	-136	378%
4th Season	29-JUN-03	31-DEC-03	MT	349	380	31	92%
Total:				**935**	**886**	**-49**	**105%**

This report does not include the CDQ allocated catch.

CVOA: Catcher Vessel Operational Area. 50 CFR 679.22(a)(5) and Figure 2.

Other flatfish for PSC monitoring: all flatfish species, except for Pacific halibut (a prohibited species), Greenland turbot, rock sole, yellowfin sole, arrowtooth flounder.

Data is based on observer reports, extrapolated to total groundfish harvest. Estimates for all weeks may change due to incorporation of late or corrected data.

Report run on: November 20, 2003 6:31 AM

Table 10. Recommended Pacific halibut discard mortality rates (DMRs) for calculating bycatch mortality in the 2004-2006 groundfish fisheries off Alaska.

Bering Sea/Aleutians			Gulf of Alaska		
Gear/Target	Used In 2001-2003	Recommendation for 2004-2006	Gear/Target	Used In 2001-2003	Recommendation for 2004-2006
Trawl			***Trawl***		
Atka mackerel	76	78	Atka mackerel	70	60
Bottom pollock	76	76	Bottom pollock	61	59
Pacific cod	68	68	Pacific cod	61	61
Other Flatfish	71	71	Deep wtr flats	60	57
Rockfish	69	74	Shallow wtr flats	69	68
Flathead sole	67	67	Rockfish	69	67
Pelagic pollock	84	85	Flathead sole	58	62
Rock sole	76	77	Pelagic pollock	72	75
Sablefish	50	49	Sablefish	66	62
Turbot	70	72	Arrowtooth fldr	62	69
Yellowfin sole	81	78	Rex sole	62	62
Pot			***Pot***		
Pacific cod	9	8	Pacific cod	14	17
Longline			***Longline***		
Pacific cod	12	11	Pacific cod	14	13
Rockfish	25	16	Rockfish	8	8
Turbot	16	15			
	Used in 2003	**Recommendation for 2004**			
CDQ Trawl					
Atka mackerel	80	85			
Bottom pollock	90	85			
Flathead sole	90	90			
Pelagic pollock	89	89			
Rockfish	90	90			
Yellowfin sole	81	82			
CDQ Longline					
Pacific cod	11	11			
Turbot	-	4			
CDQ Pot					
Pacific cod	2	2			
Sablefish	46	36			

STATE OF ALASKA

FRANK MURKOWS.

AGENDA D-1(b)
Supplemental
DECEMBER 2003

DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

P.O. BOX 25526
JUNEAU, AK 99802-5526
PHONE: (907) 465-4150
FAX: (907) 465-2604

December 5, 2003

Mr. Chris Oliver, Executive Director
North Pacific Fishery Management Council
604 West 4th Avenue, Suite 306
Anchorage, AK 99501-2252

Dear Chris:

This letter provides an estimate of the 2004 spawning biomass of Pacific herring (*Clupea harengus*) in the eastern Bering Sea for the purposes of establishing bycatch caps per Amendment 16A of the Bering Sea/Aleutians Islands Groundfish FMP. The department's estimate of the 2004 biomass is 206,846 short tons, equivalent to 187,648 metric tons. This estimate is the sum of the spawning location estimates contained in the attached table.

Sincerely,

Doug Mecum, Director

Table 1. Projections of Pacific herring spawning biomass for spawning aggregations in the eastern Bering Sea, Alaska in 2004.

Spawning area	short tons	metric tons
Norton Sound	28,787	26,115
Cape Romanzof	3,500	3,175
Nunivak Island	4,739	4,299
Nelson Island	5,085	4,613
Cape Avinof	3,369	3,056
Goodnews Bay	7,744	7,025
Security Cove	9,698	8,798
Togiak	143,124	129,840
Port Moller/Port Heiden	800	726
Total	206,846	187,648

PUBLIC TESTIMONY SIGN-UP SHEET FOR AGENDA ITEM D-1 (b) BSAI Specs

reverse order

	NAME (PLEASE PRINT)	AFFILIATION
1	Whit Sheard	The Ocean Conservancy
2	Dave Fraser	Muir Milad
3	ED RILHAMSON	POLLOCK CONSERVATION COOPERATIVE
4	CLEM TILLION	ALEUT CORPORATION
5	SANDRA MOLLER	ALEUT ENTERPRISE CORP.
6	TERRY LEITZELL	ICICLE
7	Bob Alverson	FVOA Seattle
8	Jeff Stephan	UFMA
9	GERRY MERRIGAN	PROWLER FISHERIES
10	JOHN WINTHER	" "
11	Trevor McCabe/~~Paul Macbay~~	APA
12	GLENN REES	PSPA
13	DAVE LITTLE	CLIPPER SEDS
14	ED LUTTREL/LORI SWANSON	GFF
15	BILL ORR	IQUIQUE US
16	SUSAN RUBINSTEIN	FISHERMAN'S FINEST
17	Bob Storrs	Unalaska Native Fishermen's Assoc.
18	THORN SMITH	NPCA
19	Paul MacGregor	APA
20		
21		
22		
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.

	SSC ABCs		AP Initial Motion		AP Final Motion		AP [illegible] Motion x 0.5% reduction	
Margin within 2M OY Cap	***-1,647,739***		***11,065***		***0***		***10,000***	
Species								
Pollock-EBS	2,560,000		**1,491,760**		**1,491,760**		**1,484,301**	
Pollock-AI	***39,400***		***1,000***		***2,240***		***2,229***	
Pollock-Bogoslof	29,700		50		50		50	
Pacific Cod-BSAI	223,000		**207,500**		**215,000**		**213,925**	
Yellowfin Sole-BSAI	114,000		**83,750**		**86,075**		**85,645**	
Greenland Turbot-BSAI	4,740		3,500		3,500		3,483	
BS		3,162		2,700		2,700		2,700
AI		1,578		800		800		800
Arrowtooth Flounder-BSAI	115,000		12,000		12,000		11,940	
Rock Sole-BSAI	139,000		41,000		41,000		40,795	
Flathead Sole-BSAI	61,900		19,000		19,000		18,905	
Alaska Plaice-BSAI	203,000		10,000		10,000		9,950	
Other Flatfish-BSAI	13,500		3,000		3,000		2,985	
Sablefish-EBS	3,010		2,900		2,900		2,886	
Sablefish-AI	3,450		*3,100*		*3,100*		3,085	
Pacific Ocean Perch-BSAI	13,300		12,580		12,580		12,517	
BS		2,128		*1,410*		*1,410*		*1,410*
EAI		3,059		*3,059*		*3,059*		*3,059*
CAI		2,926		*2,926*		*2,926*		*2,926*
WAI		5,187		*5,187*		*5,187*		*5,187*
Northern Rockfish-BSAI	6,880		5,000		5,000		4,975	
Shortraker-BSAI	526		526		526		523	
Rougheye-BSAI	259		195		195		194	
Other Rockfish-EBS	960		460		460		458	
Other Rockfish-AI	634		634		634		631	
Atka Mackerel-AI	66,700		63,000		63,000		62,685	
EAI		11,240		*11,240*		*11,240*		*11,240*
CAI		31,100		*31,100*		*31,100*		*31,100*
WAI		24,360		*20,660*		*20,660*		*20,660*
Squid-BSAI	1,970		1,275		1,275		1,269	
Other Species-BSAI	46,810		26,705		26,705		26,571	
Total	3,647,739		1,988,935		2,000,000		1,990,000	
	2,000,000	OY CAP	2,000,000	OY CAP	2,000,000	OY CAP	2,000,000	OY CAP

D-16
Dave Fraser

D-16
Ed Richardson

Species BSAI "Split the Baby" Proposal

Species	ABC	By Area	AP Motion	By Area	Change	Proposed Extra Tonnage Split
Pollock-BS	2,560,000		1,491,760		3,950	1,495,710
Pollock-AI	39,400		2,240		-1,240	1,000
Pollock-Bogoslof	2,570		50			50
Pacific Cod-BSAI	223,000		215,000		-3,550	211,450
Yellowfin Sole-BSAI	114,000		86,075			86,075
Greenland Turbot-BSAI	4,740		3,500			3,500
BS		3,162		2,700		
AI		1,578		800		
Arrowtooth Flounder-BSAI	115,000		12,000			12,000
Rock Sole-BSAI	139,000		41,000			41,000
Flathead Sole-BSAI	61,900		19,000			19,000
Alaska Plaice-BSAI	203,000		10,000			10,000
Other Flatfish-BSAI	13,500		3,000			3,000
Sablefish-BS	3,000		2,900			2,900
Sablefish-AI	3,450		3,100			3,100
Pacific Ocean Perch-BSAI	13,300		12,580			12,580
BS		2,128		1,410		
AI		11,172		11,170		
Eastern		3,059		3,059		
Central		2,926		2,926		
Western		5,187		5,185		
Northern Rockfish-BSAI	6,880		5,000			5,000
Shortraker-BSAI	526		526			526
Rougheye-BSAI	195		195			195
Other Rockfish-BS	960		460			460
Other Rockfish-AI	634		634			634
Atka Mackerel-BSAI	66,700		63,000			63,000
Eastern		11,240		11,240		
Central		31,100		31,100		
Western		24,360		20,660		
Squid-BSAI	1,970		1,275			1,275
Other Species-BSAI	46,810		26,705		840	27,545
	3,620,535		2,000,000			2,000,000

D-1b
Jerry Leitzell

shall establish a pilot program that recognizes the historic participation of fishing vessels (1996 to 2002, best 5 of 7 years) and historic participation of fish processors (1996 to 2000, best 4 of 5 years) for pacific ocean perch, northern rockfish, and pelagic shelf rockfish harvested in Central Gulf of Alaska. Such a pilot program shall (1) provide for a set-aside of up to 5 percent for the total allowable catch of such fisheries for catcher vessels not eligible to participate in the pilot program, which shall be delivered to shore-based fish processors not eligible to participate in the pilot program; (2) establish catch limits for non-rockfish species and non-target rockfish species currently harvested with pacific ocean perch, northern rockfish, and pelagic

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mation is used to determine eligibility for or compliance with an individual processing quota program.

''(9) The provisions of sections 308, 310, and 311 shall apply to the processing facilities and fish products of any person holding individual processing quota, and the provisions of subparagraphs (D), (E), and (L) of section 307(l) shall apply to any facility owned or controlled by a person holding individual processing quota.''.

SEC. 803. ALEUTIAN ISLANDS FISHERIES DEVELOPMENT.

(a) ALEUTIAN ISLANDS POLLOCK ALLOCATION.—Effective January 1, 2004 and thereafter, the directed pollock fishery in the Aleutian Islands Subarea [AI] of the BSAI (as defined in 50 CFR 679.2) shall be allocated to the Aleut Corporation (incorporated pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.)). Except with the permission of the Aleut Corporation or its authorized agent, the fishing or processing of any part of such allocation shall be prohibited by section 307 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1857), subject to the penalties and sanctions under section 308 of such Act (16 U.S.C. 1858), and subject to the forfeiture of any fish harvested or processed.

(b) ELIGIBLE VESSELS.—Only vessels that are 60 feet or less in length overall and have a valid fishery endorsement, or vessels that are eligible to harvest pollock under section 208 of Title II of Division C of Public Law 105–277, shall be eligible to form partnerships with the Aleut

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Corporation (or its authorized agents) to harvest the allocation under subsection (a). During the years 2004 through 2008, up to 25 percent of such allocation may be

harvested by vessels 60 feet or less in length overall. During the years 2009 through 2013, up to 50 percent of such allocation may be harvested by vessels 60 feet or less in length overall. After the year 2012, 50 percent of such allocation shall be harvested by vessels 60 feet or less in length overall, and 50 percent shall be harvested by vessels eligible under such section of Public Law 105–277.

(c) GROUNDFISH OPTIMUM YIELD LIMITATION.—The optimum yield for groundfish in the Bering Sea and Aleutian Islands Management Area shall not exceed 2 million metric tons. For the purposes of implementing subsections (a) and (b) without adversely affecting current fishery participants, the allocation under subsection (a) may be in addition to such optimum yield during the years 2004 through 2008 upon recommendation by the North Pacific Council and approval by the Secretary of Commerce (if consistent with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.)).

(d) MANAGEMENT AND ALLOCATION.—For the purposes of this section, the North Pacific Fishery Management Council shall recommend and the Secretary shall ap-

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prove an allocation under subsection (a) to the Aleut Corporation for the purposes of economic development in Adak, Alaska pursuant to the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.).

SEC. 804. A Council or the Secretary may not consider or establish any program to allocate or issue an individual processing quota or processor share in any fishery of the United States other than the crab fisheries of the Bering Sea and Aleutian Islands.

This division may be cited as the "Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 2004".

NEW ENGLAND GROUNDFISH

SEC. 105. (a) None of the funds made available under this Act may be obligated or expended to implement any measures to reduce overfishing and promote rebuilding of

1048

fish stocks managed under the Management Plan other than such measures set out in the final rule.

(b) In this section:

D-16
Gerry Merrigan
John Winther

2004 BSAI P-Cod:

Rationale:

- P-cod is utilized by more gear groups and variety of vessels than any other BSAI species. Sectors include longline CVs, longline CPs, pot CVs, pot CPs, trawl CVs, trawl CPs, and jig as well as participation by CDQ groups. Approximately 300 vessels participate in the directed BSAI p-cod fisheries ranging in size from jig boats to pollock catcher-processors. Additional vessels such as halibut boats harvest p-cod incidentally.

- From 1986 to 2001, the BSAI p-cod TAC has been set lower than ABC for every year when ABC was estimated to be less than 249,300 mt. TAC was equal to ABC in 1991, 1992, 1993, 1994, 1998, 1999, 2000, and 2001. Only in 2002 and 2003 was TAC set less than ABC (when ABC was less than 229,000 mt).

- In 2002, TAC was set less than ABC to address uncertainty over the estimation of the 1999 age class. In 2003, TAC was set less than ABC due to the limitations of the 2 million ton cap and an increasing pollock TAC.

- From 1998-03, TAC has been 97% of ABC. P-cod is fully utilized, all of the cod TAC will be used in 2003. From 1998-03, the catch has been 94% of TAC.

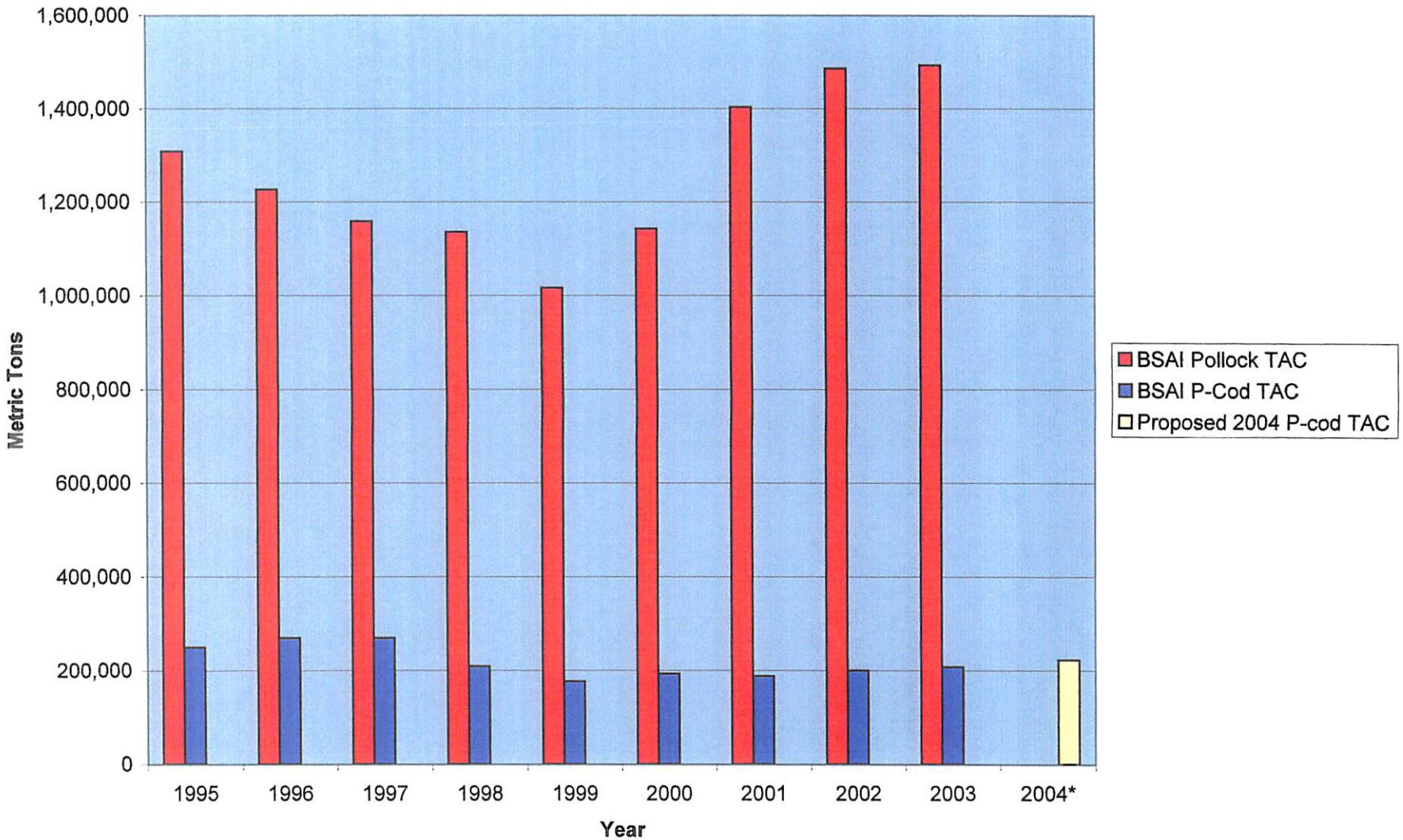
- The all gear p-cod fishery TAC is approximately 10% of the BSAI cap and has increased slightly from 1999 to 2003. (1999 TAC =177,000 mt; 2000 TAC = 193,000 mt; 2001 TAC = 188,000 mt; 2002 TAC = 200,000 mt; 2003 TAC = 207,500 mt).

- For the same time period, the EBS pollock TAC has increased from 992,000 mt in 1999 (50% of the BSAI cap) to 1,491,000 mt in 2003 (75% of the BSAI cap).

Assessment Results

- Recommended 2004 ABC = 223,000 mt (same as 2003 & 2002).
- Recommended 2004 OFL = 350,000 mt (+8% from 2003).
- Estimated 2004 maximum permissible ABC (F max = F 39% in Tier 3a) = 297,000 mt.
- Recommended 2004 ABC is 25% below F max.
- Estimated 2004 female spawning biomass is +3% from the 2003 estimate and exceeds B 40.
- Biomass estimate from 2003 trawl survey is -2% from the 2002 survey.
- In the latest assessment, stock has been upgraded to Tier 3a from 3b.

BSAI Pollock and BSAI P-cod TAC, 1995-2003



	2003 TAC	AP Motion		Alternative Proposal	
		2004 TAC	plus/minus	2004 TAC	plus/minus
Pollock-BS	1,491,760	1,491,760	0	1,495,710	3,950
Pacific Cod-BSAI	207,500	215,000	7,500	211,450	3,950

D-16
Steve McCalla
Paul MacGregor

BSAI TAC, ITAC and Catch

	2000	2001	2002	2003						
	Catch**	Catch**	Catch**	TAC	ITAC	Catch***	ITAC - Catch	AP proposed TAC	ITAC	04 ITAC - '03 Catch
Pollock BS	1,019,067	1,246,587	1,331,416	1,491,760	1,342,584	1,341,188	1,396	1,491,760	1,342,584	1,396
Pollock AI	1,174	788	1,134	1,000	900	1,653	-753	2,240	2,016	363
Pollock Bogoslof	29	61	22	50	45	24	21	50	45	21
Pacific Cod	177,435	164,204	183,200	207,500	191,938	191,486	452	215,000	198,875	7,389
Sablefish BS	681	835	992	2,900	2,683	892	1,791	2,900	2,465	1,573
Sablefish AI	950	1,004	1,005	3,100	2,868	996	1,872	3,100	2,635	1,639
Atka mackerel	42,440	56,534	42,042	60,000	55,500	54,093	1,407	63,000	58,275	4,182
Yellowfin sole	83,850	63,395	72,999	83,750	71,188	74,418	-3,231	86,075	73,164	-1,254
Rock sole	49,264	29,255	41,331	44,000	37,400	35,326	2,074	41,000	34,850	-476
Arrowtooth flounder	12,929	13,908	11,540	12,000	10,200	12,707	-2,507	12,000	10,200	-2,507
Flathead sole	19,983	17,586	15,108	20,000	17,000	13,772	3,228	19,000	16,150	2,378
Other flatfish	16,403	9,939	2,570	3,000	2,775	2,751	24	3,000	2,550	-201
Alaska Plaice			12,176	10,000	9,250	9,778	-528	10,000	8,500	-1,278
Greenland Turbot	6,641	5,247	3,526	4,000	3,400	2,954	446	3,500	2,975	21
POP BS	451	888	630	1,410	1,304	1,180	124	1,410	1,199	19
POP AI	8,577	7,924	9,899	12,690	11,738	12,760	-1,022	11,170	9,495	-3,266
Northern BS		153	112	121	112	72	40	5,000	4,250	-403
Northern AI	4,737	5,978	3,601	5,879	5,438	4,581	857			
Shortraker/rougheye BS		42	104	137	127	104	23	105	89	-15
Shortraker/rougheye AI	443	704	463	830	768	274	494	616	524	250
Other Rockfish BS	232	295	398	960	888	334	554	460	391	57
Other Rockfish AI	563	592	518	634	586	385	201	634	539	154
Squid	333	1,401	784	1,970	1,822	1,273	549	1,275	1,084	-189
Other species total	24,030	25,482	26,296	32,309	29,886	25,276	4,610	26,705	22,699	-2,577
TOTAL	1,470,457	1,652,802	1,761,866	2,000,000		1,788,277		2,000,000		

** Non-CDQ Catch

***Non-CDQ Catch as of December 6, 2003

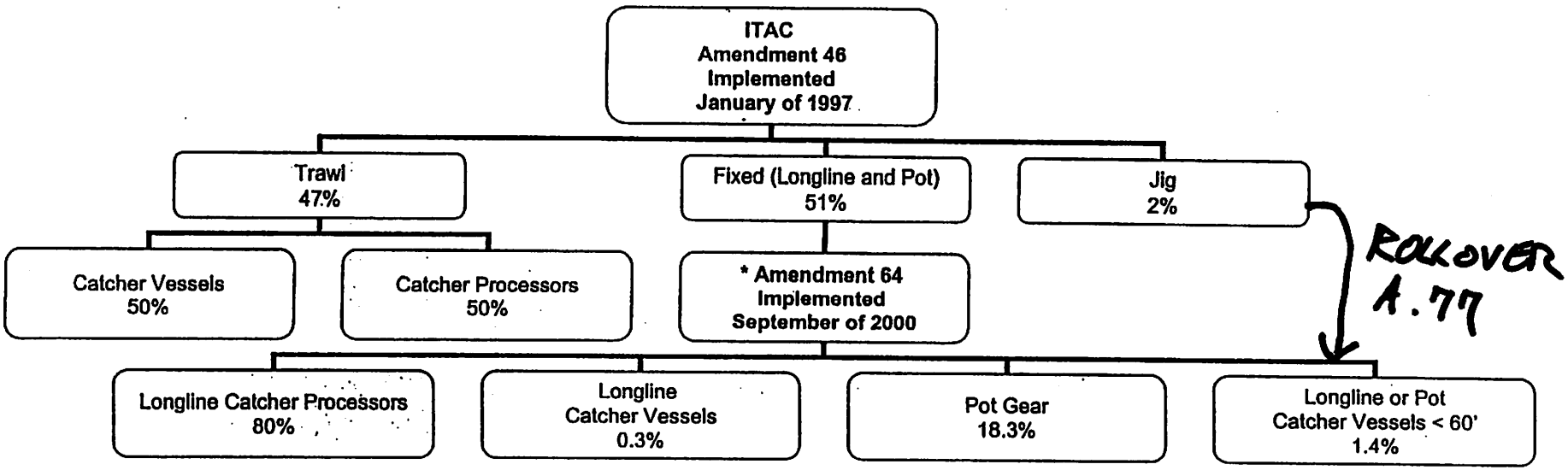
ITAC = TAC - (CDQ + Reserve)
Pollock, Pacific Cod, Atka mackerel and some other species' reserves are added back up front, so the ITAC = TAC - CDQ

Source: NMFS Alaska Region Website

D-16
Ed Luttrell
Lori Swanson

Exhibit 1

Bering Sea and Aleutian Islands Pacific Cod Allocations



* Amendment 64 sunsets December 31st, 2003

D-16
Thom Smith

BSAI PACIFIC COD

	1998	1999	2000	2001	2002	2003
ABC	210,000	177,000	193,000	188,000	223,000	223,000
TAC	210,000	177,000	193,000	188,000	200,000	207,500
INITIAL						
CP TRAWL	45,649	38,475	41,953	40,867	43,475	45,105
CV TRAWL	45,649	38,475	41,953	40,867	43,475	45,105
H&L CP				70,551	75,080	77,911
H&L CV				265	282	292
POT				16,139	17,175	17,822
FIXED<60 ft				1,235	1,314	1,363
H&L and POT	99,068	83,500	91,048			
JIG	3,885	3,275	3,571	3,478	3,700	3,839
INC. CATCH				500	500	500
CDQ	15,750	13,275	14,475	14,100	15,000	15,563