

GMT REPORT ON BYCATCH MODELING AND TRIP-LIMIT RECOMMENDATIONS, #1

Figure 1.--Overview of approach for evaluating discards of over-fished species in the 2003 groundfish trawl fishery

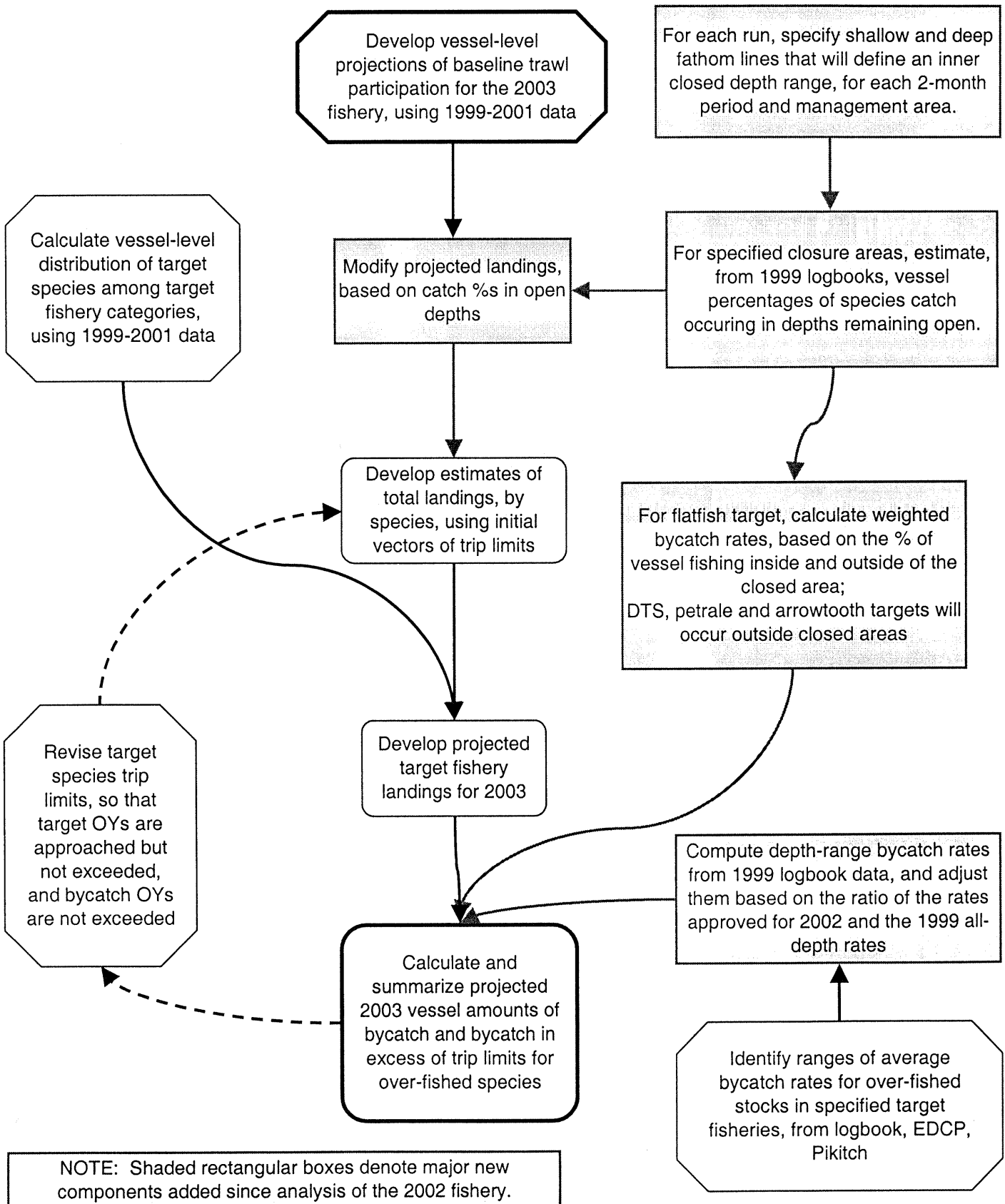
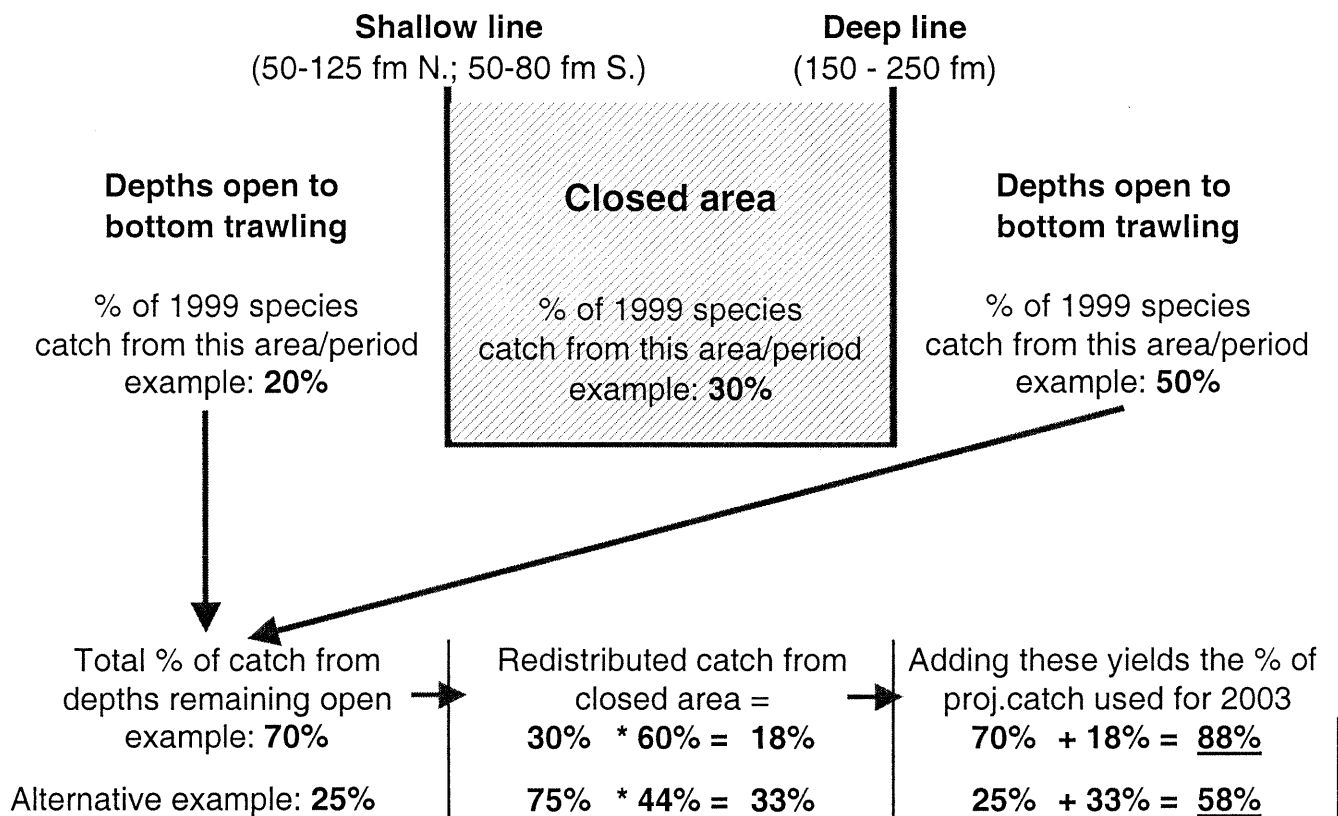


Illustration of method used to estimate effort shifts from closed areas



Where 1999 logbook data were unavailable for a permit in the projected fleet, average percentage distributions inside and outside of closed areas were substituted, using all vessels from the same:

- 1) Period : Vessel length group : State
- 2) Period : Vessel length group
- 3) Period

To calculate bycatch percentages for the flatfish target fishery, percentages of flatfish species inside and outside of closed area were used to weight bycatch rates for each bycatch species. These weighted rates were then summed and multiplied by projected target tonnage.

	Inside		Outside		Total
% of total catch in open area	20%	+	50%	=	70%
Converted to % of open area	29%	+	71%	=	100%
Bycatch rate	1.5%		0.3%		
Weighted bycatch rate	0.43%	+	0.21%	=	0.643%
Flatfish target mts (example)					6
Estimated bycatch mts (weighted bycatch rate times target mts)					0.039

Formula used to calculate the effect of closed areas on tonnage of species harvested

A % of species lbs caught in depths remaining open	C Adjustment used to reflect fishing effort relocated to open areas $(A\#*100)^{0.3/6}$	E % that is added to the original open area % $(C\#*(1-A\#))$	Resulting percentage applied to existing effort estimate for vessel $E\#+A\#$
95%	65%	3%	98%
90%	64%	6%	96%
85%	63%	9%	94%
80%	62%	12%	92%
75%	61%	15%	90%
70%	60%	18%	88%
65%	58%	20%	85%
60%	57%	23%	83%
55%	55%	25%	80%
50%	54%	27%	77%
45%	52%	29%	74%
40%	50%	30%	70%
35%	48%	31%	66%
30%	46%	32%	62%
25%	44%	33%	58%
20%	41%	33%	53%
15%	38%	32%	47%
10%	33%	30%	40%
5%	27%	26%	31%
0%			
	Percentages in this column area multiplied by the percentage of catch from closed areas	These %s are added to the original %s from areas remaining open	These percentages are then multiplied by the projected all-depth tonnages for each species for 2003 BEFORE trip limits are applied

Illustration of the process used for specifying depth-range bycatch rates for use in modeling 2003 fishery alternatives.
 This case represents lingcod bycatch in the flatfish target fishery.

In the fall of 2001, the PFMC selected one of three sets of bycatch rates, for each bycatch species being modeled. The three options were constructed from analysis of three data sources north of 40°10' and logbook data alone south of 40°10'. Two of the data sources had few enough observations that they were of limited use in informing depth-range bycatch rates, across the number of target fisheries and bi-monthly periods. The following approach was used to create depth-based bycatch rates, from logbook data only, that remain consistent with the "all-depth" bycatch rates adopted for use by the PFMC in 2001.

1) A ratio was calculated by dividing the PFMC-selected rate by the logbook rate included in the 2001 analysis.

2) Bycatch rates for depth ranges were calculated from 1999 logbooks

2-month period	Analysis for 2002 fishery		New logbook rates for modeling 2003 options, by depth ranges (fm)							
	Selected by PFMC	Logbook rate (1999)	Ratio of selected-to-LB rate	0-1000	0-50	0-75	0-100	0-125	150-1000	180-1000
1	0.35%	0.10%	3.59	0.06%	0.36%	0.33%	0.45%	0.49%	0.04%	0.04%
2	1.75%	0.49%	3.59	0.42%	0.68%	1.34%	1.73%	1.64%	0.18%	0.11%
3	1.75%	1.52%	1.15	1.35%	0.30%	0.83%	1.38%	1.81%	0.55%	0.33%
4	2.00%	1.16%	1.73	1.23%	0.44%	0.80%	1.16%	1.47%	0.44%	0.27%
5	2.40%	0.88%	2.72	0.87%	0.23%	0.70%	0.87%	1.09%	0.37%	0.22%
6	1.20%	0.44%	2.74	0.39%	1.02%	1.33%	1.01%	1.03%	0.26%	0.18%

3) New logbook rates are multiplied by the ratios, for each target/area/period

2-month period	Adjusted bycatch rates for use in the model					
	0-1000	0-50	0-75	0-100	0-125	150-1000
1	0.21%	1.39%	1.30%	1.18%	1.61%	1.75%
2	1.49%	2.44%	2.75%	4.83%	6.22%	5.89%
3	1.56%	0.35%	0.95%	1.59%	2.10%	2.10%
4	2.12%	0.77%	1.38%	2.02%	2.55%	2.53%
5	2.37%	0.62%	1.90%	2.37%	2.97%	3.07%
6	1.08%	2.80%	3.65%	2.78%	2.82%	3.50%

4) Trawl survey depth distributions for bycatch species are used to set rates for some ranges to 0

Summary of depth and trip-limit management alternatives for the 2003 groundfish trawl fishery.
 Council Meeting Draft #1, 9-10-02

Region/ Option/ Species Group	Target species trip limits under this option (lbs/2-mo)						Proj. target species mts	
	Jan/Feb	Mar/Apr	May/June	Jul/Aug	Sep/Oct	Nov/Dec	In this area	Coastwide
North of 40°10'								
No depth mgmt. / Allocation Comm. Preferred OY								
Shallow line (fm)	150	150	150	150	150	150		
Deep line (fm)	150	150	150	150	150	150		
Sablefish	10,000	6,000	2,000	2,000	1,500	6,000	1,158	1,473
Longspines	10,000	7,000	2,000	2,000	1,500	7,000	974	1,370
Shortspines	4,000	2,600	1,500	1,500	1,000	2,600	523	686
Dover sole	30,000	20,000	8,000	5,000	4,000	20,000	3,736	4,729
Arrowtooth	60,000	20,000	8,000	3,000	3,000	60,000	1,017	1,024
Petrals sole	60,000	20,000	4,000	2,000	3,000	60,000	1,393	1,630
Other Flatfish	50,000	50,000	8,000	4,000	6,000	50,000	1,162	1,569
Proj. coastwide ex-vessel revenue from all species							\$ 29,594,510	
Proj. coastwide bycatch (mt)	Lingcod 64	Canary 12	POP 156	Darkblot. 143	Widow 21	Bocaccio 14		
Allocation Committee Preferred-OY Alternative								
Shallow line (fm)	100	100	100	75	100	100		
Deep line (fm)	150	150	250	250	150	150		
Sablefish	5,000	5,000	5,000	5,000	5,000	4,000	1,536	1,885
Longspines	8,000	9,000	9,000	9,000	9,000	7,000	1,466	1,999
Shortspines	2,300	2,300	2,400	2,400	2,300	2,100	572	741
Dover sole	22,000	24,000	24,000	24,000	24,000	22,000	5,382	6,957
Arrowtooth	No limit		60,000	60,000	60,000	No limit	1,554	1,558
Petrals sole	No limit		30,000	30,000	30,000	No limit	1,626	1,786
Other Flatfish	100,000	100,000	100,000	100,000	100,000	100,000	1,624	2,235
Proj. coastwide ex-vessel revenue from all species							\$ 34,422,328	
Proj. coastwide bycatch (mt)	Lingcod 80	Canary 12	POP 136	Darkblot. 138	Widow 17	Bocaccio 3		
Low OYs								
Shallow line (fm)	75	75	75	50	75	75		
Deep line (fm)	150	150	250	250	250	150		
Sablefish	3,500	3,500	4,600	4,600	4,600	4,000	1,297	1,602
Longspines	8,000	8,000	8,000	8,000	8,000	6,000	1,496	2,032
Shortspines	2,300	2,300	2,400	2,400	2,400	1,800	572	744
Dover sole	24,000	24,000	28,000	28,000	28,000	15,000	5,370	7,003
Arrowtooth	No limit	80,000	40,000	40,000	40,000	No limit	929	929
Petrals sole	No limit	40,000	30,000	30,000	30,000	No limit	1,384	1,384
Other Flatfish	90,000	90,000	90,000	90,000	90,000	90,000	1,336	1,336
Proj. coastwide ex-vessel revenue from all species							\$ 29,815,295	
Proj. coastwide bycatch (mt)	Lingcod 33	Canary 6	POP 90	Darkblot. 90	Widow 9	Bocaccio 0		
High OYs								
Shallow line (fm)	100	100	100	75	100	100		
Deep line (fm)	150	150	250	250	150	150		
Sablefish	9,000	10,000	11,000	11,000	10,000	8,000	2,449	2,936
Longspines	8,500	8,500	8,700	8,700	8,500	7,600	1,467	2,003
Shortspines	2,200	2,300	2,400	2,400	2,300	2,100	569	738
Dover sole	23,000	23,000	24,000	24,000	23,000	23,000	5,377	6,952
Arrowtooth	No limit	No limit	60,000	60,000	60,000	No limit	1,554	1,554
Petrals sole	No limit	No limit	25,000	25,000	25,000	No limit	1,614	1,775
Other Flatfish	90,000	90,000	90,000	90,000	90,000	90,000	1,624	2,235
Proj. coastwide ex-vessel revenue from all species							\$ 39,144,207	
Proj. coastwide bycatch (mt)	Lingcod 81	Canary 11	POP 141	Darkblot. 146	Widow 17	Bocaccio 3		

Summary of depth and trip-limit management alternatives for the 2003 groundfish trawl fishery (cont.).
 Council Meeting Draft #1, 9-10-02

Region/ Option/ Species Group	Target species trip limits under this option (lbs/2-mo)						Proj. target species mts	
	Jan/Feb	Mar/Apr	May/June	Jul/Aug	Sep/Oct	Nov/Dec	In this area	Coastwide
South of 40°10'								
No depth mgmt. / upper-mid darkblotched OY								
Shallow line (fm)	150	150	150	150	150	150		
Deep line (fm)	150	150	150	150	150	150		
Sablefish	10,000	6,000	2,000	2,000	3,000	6,000	315	1,473
Longspines	10,000	7,000	2,000	2,000	3,000	7,000	396	1,370
Shortspines	4,000	2,600	1,500	1,500	2,000	2,600	163	686
Dover sole	15,000	15,000	8,000	8,000	8,000	15,000	993	4,729
Arrowtooth	6,000	8,000	8,000	8,000	8,000	6,000	7	1,024
Petrale sole	15,000	4,000	4,000	4,000	4,000	15,000	237	1,630
Other Flatfish	6,000	6,000	8,000	8,000	8,000	6,000	407	1,569
Proj. coastwide ex-vessel revenue from all species							\$ 29,594,510	
Proj. coastwide bycatch (mt)	Lingcod 64	Canary 12	POP 156	Darkblot. 143	Widow 21	Bocaccio 14		
Allocation Committee Preferred-OY Alternative								
Shallow line (fm)	50	50	50	50	50	50		
Deep line (fm)	150	150	250	250	150	150		
Sablefish	5,000	5,000	5,000	5,000	5,000	4,000	349	1,885
Longspines	8,000	9,000	9,000	9,000	9,000	7,000	533	1,999
Shortspines	2,300	2,300	2,400	2,400	2,300	2,100	170	741
Dover sole	22,000	24,000	24,000	24,000	24,000	22,000	1,575	6,957
Arrowtooth	No limit	No limit	1,000	1,000	1,000	No limit	4	1,558
Petrale sole	No limit	No limit	10,000	10,000	10,000	No limit	161	1,786
Other Flatfish	50,000	50,000	50,000	50,000	50,000	50,000	611	2,235
Proj. coastwide ex-vessel revenue from all species							\$ 34,422,328	
Proj. coastwide bycatch (mt)	Lingcod 80	Canary 12	POP 136	Darkblot. 138	Widow 17	Bocaccio 3		
Low OYs								
Shallow line (fm)	0	0	0	0	0	0		
Deep line (fm)	250	250	250	250	250	250		
Sablefish	3,500	3,500	4,600	4,600	4,600	4,000	53	1,602
Longspines	8,000	8,000	8,000	8,000	8,000	6,000	82	2,032
Shortspines	2,300	2,300	2,400	2,400	2,400	1,800	28	744
Dover sole	24,000	24,000	28,000	28,000	28,000	15,000	194	7,003
Arrowtooth	0	0	0	0	0	0	0	929
Petrale sole	0	0	0	0	0	0	0	1,384
Other Flatfish	0	0	0	0	0	0	0	1,336
Proj. coastwide ex-vessel revenue from all species							\$ 29,815,295	
Proj. coastwide bycatch (mt)	Lingcod 33	Canary 6	POP 90	Darkblot. 90	Widow 9	Bocaccio 0		
High OYs								
Shallow line (fm)	50	50	50	50	50	50		
Deep line (fm)	150	150	250	250	150	150		
Sablefish	9,000	10,000	11,000	11,000	10,000	8,000	487	2,936
Longspines	8,500	8,500	8,700	8,700	8,500	7,600	536	2,003
Shortspines	2,200	2,300	2,400	2,400	2,300	2,100	169	738
Dover sole	23,000	23,000	24,000	24,000	23,000	23,000	1,576	6,952
Arrowtooth	No limit	No limit	1,000	1,000	1,000	No limit	0	1,554
Petrale sole	No limit	No limit	10,000	10,000	10,000	No limit	161	1,775
Other Flatfish	50,000	50,000	50,000	50,000	50,000	50,000	611	2,235
Proj. coastwide ex-vessel revenue from all species							\$ 39,144,207	
Proj. coastwide bycatch (mt)	Lingcod 81	Canary 11	POP 141	Darkblot. 146	Widow 17	Bocaccio 3		

Summary of depth and trip-limit management alternatives for the 2003 groundfish trawl fishery (cont.).
 Council Meeting Draft #1, 9-10-02

Options/ Region/ Species Group	Target species trip limits under this option (lbs/2-mo)						Proj. target species mts	
	Jan/Feb	Mar/Apr	May/June	Jul/Aug	Sep/Oct	Nov/Dec	In this area	Coastwide
Difference between Allocation Committee Preferred Alternatives and No depth management.								
North								
Sablefish	-5,000	-1,000	3,000	3,000	3,500	-2,000	378	412
Longspines	-2,000	2,000	7,000	7,000	7,500	0	492	629
Shortspines	-1,700	-300	900	900	1,300	-500	48	55
Dover sole	-8,000	4,000	16,000	19,000	20,000	2,000	1,646	2,228
Arrowtooth	No limit under		52,000	57,000	57,000	No limit w/	537	534
Petrale sole	Alloc. Comm. Alt.		26,000	28,000	27,000	Al. Comm.	232	156
Other Flatfish	50,000	50,000	92,000	96,000	94,000	50,000	462	666
South								
Sablefish	-5,000	-1,000	3,000	3,000	2,000	-2,000	34	412
Longspines	-2,000	2,000	7,000	7,000	6,000	0	137	629
Shortspines	-1,700	-300	900	900	300	-500	7	55
Dover sole	7,000	9,000	16,000	16,000	16,000	7,000	582	2,228
Arrowtooth	No limit under		-7,000	-7,000	-7,000	No limit w/	-3	534
Petrale sole	Alloc. Comm. Alt.		6,000	6,000	6,000	Al. Comm.	-77	156
Other Flatfish	44,000	44,000	42,000	42,000	42,000	44,000	204	666
Proj. coastwide ex-vessel revenue from all species							\$ 4,827,818	

Difference between Allocation Committee Preferred Alternatives and Low OYs.								
North								
Sablefish	1,500	1,500	400	400	400	0	239	282
Longspines	0	1,000	1,000	1,000	1,000	1,000	-31	-33
Shortspines	0	0	0	0	-100	300	-0	-3
Dover sole	-2,000	0	-4,000	-4,000	-4,000	7,000	12	-46
Arrowtooth	0	No limit w/	20,000	20,000	20,000	0	625	628
Petrale sole	0	Al. Comm.	0	0	0	0	242	403
Other Flatfish	10,000	10,000	10,000	10,000	10,000	10,000	288	899
South								
Sablefish	1,500	1,500	400	400	400	0	295	282
Longspines	0	1,000	1,000	1,000	1,000	1,000	451	-33
Shortspines	0	0	0	0	-100	300	142	-3
Dover sole	-2,000	0	-4,000	-4,000	-4,000	7,000	1,381	-46
Arrowtooth	0	0	1,000	1,000	1,000	0	4	628
Petrale sole	0	0	10,000	10,000	10,000	0	161	403
Other Flatfish	50,000	50,000	50,000	50,000	50,000	50,000	611	899
Proj. coastwide ex-vessel revenue from all species							\$ 4,607,032	

Difference between Allocation Committee Preferred Alternatives and High OYs.								
North								
Sablefish	-4,000	-5,000	-6,000	-6,000	-5,000	-4,000	-913	-1,052
Longspines	-500	500	300	300	500	-600	-2	-5
Shortspines	100	0	0	0	0	0	2	3
Dover sole	-1,000	1,000	0	0	1,000	-1,000	5	4
Arrowtooth	0	0	0	0	0	0	0	4
Petrale sole	0	0	5,000	5,000	5,000	0	11	11
Other Flatfish	10,000	10,000	10,000	10,000	10,000	10,000	0	0
South								
Sablefish	-4,000	-5,000	-6,000	-6,000	-5,000	-4,000	-139	-1,052
Longspines	-500	500	300	300	500	-600	-3	-5
Shortspines	100	0	0	0	0	0	1	3
Dover sole	-1,000	1,000	0	0	1,000	-1,000	-1	4
Arrowtooth	0	0	0	0	0	0	4	4
Petrale sole	0	0	0	0	0	0	0	11
Other Flatfish	0	0	0	0	0	0	0	0
Proj. coastwide ex-vessel revenue from all species							-\$ 4,721,880	

Table 3. Preliminary Trip Limits^{1/} and Gear Requirements^{2/} for Limited Entry Trawl Gear

9/10/02

line	Species/groups	JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
1	Minor slope rockfish						
2	North: lines TBA			1,800 lb/ 2 months			
3	South						
4	40°10' - 38° N. lat.: lines TBA			1,800 lb/ 2 months			
5	South of 38° N. lat. z/			30,000 lb/ 2 months			
6	Splitnose - South						
7	40°10' - 38° N. lat.: lines TBA			1,800 lb/ 2 months			
8	South of 38° N. lat. z/			30,000 lb/ 2 months			
9	Pacific ocean perch - North^{6/} : lines TBA			3,000 lb/ 2 months			
10	Chilipepper - South^{6/}						
12	small footrope trawl	To be specified					
13	large footrope trawl						
14	DTS complex - North	To be specified					
15	Sablefish						
16	Longspine thornyhead						
17	Shortspine thornyhead						
18	Dover sole						
19	DTS complex - South						
20	Sablefish ^{9/}						
21	Longspine thornyhead						
22	Shortspine thornyhead						
23	Dover sole						
24	Flatfish - North	To be specified					
25	All other flatfish ^{3/}						
26	Petrale sole						
27	Rex sole						
28	Arrowtooth flounder						
29	Flatfish - South	To be specified					
30	All other flatfish ^{3/}						
31	Petrale sole						
32	Rex sole						
33	Arrowtooth flounder						
35	Whiting^{4/}	20,000 lb/ trip		Primary Season		10,000 lb/ trip	

CONTINUED

Table 3. Preliminary Trip Limits^{1/} and Gear Requirements^{2/} for Limited Entry Trawl Gear

line	Species/groups	JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
37	Minor shelf rockfish						
38	North	To be specified					
39	South						
40	Canary rockfish						
	North	200 lb/ 2 months		600 lb/ 2months		200 lb/ 2 months	
	South						
	Widow rockfish						
41	North						
42	mid-water trawl	To be specified	During primary whiting season, in trips of at least 10,000 lb of whiting: combined widow and yellowtail limit of 500 lb/ trip, cumulative widow limit of 1,500 lb/ month			To be specified	
43	small footrope trawl	1,000 lb/ month					
	South						
	mid-water trawl	To be specified	During primary whiting season, in trips of at least 10,000 lb of whiting: combined		To be specified		
	small footrope trawl	1,000 lb/ month					
44	Yellowtail - North ^{6/}						
45	mid-water trawl	To be specified	During primary whiting season, in trips of at least 10,000 lb of whiting: combined widow and yellowtail limit of 500 lb/ trip, cumulative yellowtail limit of 2,000 lb/ month			To be specified	
46	small footrope trawl	In landings without flatfish, 1,000 lb/ month. As flatfish bycatch, per trip limit is the sum of 33% (by weight) of all flatfish except arrowtooth flounder, plus 10% (by weight) of arrowtooth flounder. Combined with and without flatfish, not to exceed 30,000 lb/ 2 months.					
47	Bocaccio - South ^{6/}	CLOSED ^{7/}					
48	Cowcod	CLOSED ^{7/}					
49	Minor nearshore rockfish						
50	North	To be specified					
51	South						
	Lingcod ^{8/}						
	North	800 lb/ 2 months		1,000 lb/ 2 months		800 lb/ 2 months	
	South			1,000 lb/ 2 months			
52	Other Fish ^{10/}	To be specified					

1/ Trip limits apply coastwide unless otherwise specified. "North" means 40°10' N. lat. to the U.S.-Canada border. "South" means 40°10' N. lat. to the U.S.-Mexico border. 40°10' N. lat. is about 20 nm south of Cape Mendocino, CA.

2/ Gear requirements and prohibitions are explained above. See IV.A.(14).

3/ "Other" flatfish means all flatfish at 50 CFR 660.302 except those in this Table 3 with species specific management measures, including trip limits.

4/ The whiting "per trip" limit in the Eureka area inside 100 fm is 10,000 lb/trip from January 1 - August 31, 2002.

From September 1 - December 31, 2002, the whiting fishery is closed.

5/ Small footrope trawl means a bottom trawl net with a footrope no larger than 8 inches (20 cm) in diameter. In areas where trawl gear is restricted, only one type of trawl gear is allowed on board at any one time. See above.

6/ Yellowtail rockfish in the south and bocaccio and chilipepper rockfishes in the north are included in the trip limits for minor shelf rockfish in the appropriate area. POP in the south and splitnose rockfish in the north are included in the trip limits for minor slope rockfish in the appropriate area.

7/ Closed means that it is prohibited to take and retain, possess, or land the designated species in the time or area indicated. See IV.A.(7).

8/ The minimum size limit for lingcod is 24 inches (61 cm) total length.

9/ The minimum size requirement for sablefish is 22 inches (56 cm) total length. No more than 500 lb of undersized sablefish may be landed per trip.

10/ Other fish are defined at 50 CFR 660.302, as those groundfish species or species groups for which there is no trip limit, size limit, quota, or harvest guideline.

To convert pounds to kilograms, divide by 2.20462, the number of pounds in one kilogram.

x/ restricted to outside of 100 ftn, or inside 27 ftn south of 46°16'

z/ restricted to outside of 150 ftn or inside 20 ftn

Table 4. Preliminary Trip Limits^{1/} for Limited Entry Fixed Gear

9/10/02

line	Species/groups	JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
1	Minor slope rockfish						
2	North of 40°10' N. lat. x/	1,800 lb/ 2 months		5,000 lb/ 2 months maybe as a percentage			1,800 lb/ 2 months
3	40°10' - 38° N. lat. z/	1,800 lb/ 2 months		5,000 lb/ 2 months maybe as a percentage			1,800 lb/ 2 months
3	South of 38° N. lat. z/			30,000 lb/ 2 months			
6	Splitnose - South						
7	North of 40°10' N. lat. x/			1,800 lb/ 2 months			
7	40°10' - 38° N. lat. z/			1,800 lb/ 2 months			
8	South of 38° N. lat. z/			20,000 lb/ 2 months			
9	Pacific ocean perch - North^{3/}			1,800 lb/ 2 months			
10	Sablefish						
11	North of 40°10' N. lat. x/		300 lb/ day, or 1 landing per week of up to 800 lb, not to exceed 2,400 lb/ 2 months				
11	40°10' - 38° N. lat. z/		300 lb/ day, or 1 landing per week of up to 800 lb, not to exceed 2,400 lb/ 2 months				
12	South of 36° N. lat. z/			350 lb/ day, or 1 landing per week of up to 1,050 lb			
	Longspine thornyhead						
13	North of 40°10' N. lat. x/			9,000 lb/ 2 months			
13	South of 40°10' N. lat. z/			9,000 lb/ 2 months			
	Shortspine thornyhead						
14	North of 40°10' N. lat. x/			2,000 lb/ 2 months			
14	South of 40°10' N. lat. z/			2,000 lb/ 2 months			
15	Dover sole						
16	Arrowtooth flounder						
17	Petrale sole			5,000 lb/month, North of 40°10' x/; South of 40°10' z/			
18	Rex sole						
19	All other flatfish^{2/}						
20	Whiting^{3/}			10,000 lb/ trip, North of 40°10' x/; South of 40°10' z/			
21	Shelf rockfish, including minor shelf rockfish, chilipepper, widow and yellowtail rockfish^{5/}						
22	North x/			200 lb/ month			
23	South z/						
24	40°10' - 34°27' N. lat.			4:1 ratio with nearshore poundage, when nearshore open			
25	South of 34°27' N. lat.			4:1 ratio with nearshore poundage, when nearshore open			
26	Canary rockfish			CLOSED ^{4/}			
27	Yelloweye rockfish			CLOSED ^{4/}			
28	Cowcod			CLOSED ^{4/}			
29	Bocaccio - South^{5/}						
30	40°10' - 34°27' N. lat.			CLOSED ^{4/}			
31	South of 34°27' N. lat.			CLOSED ^{4/}			
35	Minor nearshore rockfish						
36	North x/			3,000 lb/ 2 months, no more than 900 lb of which may be species other than black or blue rockfish ^{6/}			
37	South						
38	40°10' - 34°27' N. lat. z/			To be specified			
39	South of 34°27' N. lat. z/						
40	Lingcod^{7/}						
41	North x/		CLOSED ^{4/}	400 lb/ month			CLOSED ^{4/}
42	South z/						
43	40°10' - 34°27' N. lat.		CLOSED ^{4/}	400 lb/ month, when nearshore open			CLOSED ^{4/}
44	South of 34°27' N. lat.		CLOSED ^{4/}	400 lb/ month, when nearshore open			CLOSED ^{4/}

1/ Trip limits apply coastwide unless otherwise specified. *North* means 40°10' N. lat. to the U.S.-Canada border. *South* means 40°10' N. lat. to the U.S.-Mexico border. 40°10' N. lat. is about 20 nm south of Cape Mendocino, CA.

2/ *Other flatfish* means all flatfish at 50 CFR 660.302 except those in this Table 4 with species specific management measures, including trip limits.

3/ The whiting "per trip" limit in the Eureka area inside 100 fm is 10,000 lb/ trip throughout the year. Outside Eureka area, the 20,000 lb/ trip limit applies.

4/ Closed means that it is prohibited to take and retain, possess, or land the designated species in the time or area indicated. See IV.A.(7).

5/ Yellowtail rockfish and widow rockfish coastwide and bocaccio and chilipepper rockfishes in the north are included in the trip limits for shelf rockfish in the appropriate area. POP in the south and splitnose rockfish in the north are included in the trip limits for minor slope rockfish in the appropriate area.

6/ For black rockfish north of Cape Alava (48°09'30" N.lat.), and between Destruction Island (47°40'00" N.lat.) and Leadbetter Point (46°38'10" N.lat.), there is an additional limit of 100 lbs or 30 percent by weight of all fish on board, whichever is greater, per vessel, per fishing trip.

7/ The minimum size limit for lingcod is 24 inches (61 cm) total length.

8/ The minimum size requirement for sablefish is 22 inches (56 cm) total length between 40°10' N. lat. and 36° N. lat.

To convert pounds to kilograms, divide by 2.20462, the number of pounds in one kilogram.

x/ restricted to outside of 100 ftn, or inside 27 ftn south of 46°16'

z/ restricted to outside of 150 ftn or inside 20 ftn

Table 5. Preliminary Trip Limits^{1/} for Open Access Gears

9/10/02

line	Species/groups	JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC
1	Minor slope rockfish						
2	North /x		Per trip, no more than 25% of weight of the sablefish landed				
4	40°10' - 38° N. lat. z/		Per trip, no more than 25% of weight of the sablefish landed				
5	South of 38° N. lat. z/		10,000 lb/ 2 months				
6	Splitnose - South z/		200 lb/ month				
7	Pacific ocean perch - North ^{4/x}		100 lb/ month				
8	Sablefish						
9	North of 40°10' N. lat. x/		300 lb/ day, or 1 landing per week of up to 800 lb, not to exceed 2,400 lb/ 2 months				
	40°10' - 38° N. lat. z/		300 lb/ day, or 1 landing per week of up to 800 lb, not to exceed 2,400 lb/ 2 months				
10	South of 36° N. lat. z/		350 lb/ day, or 1 landing per week of up to 1,050 lb				
11	Thornyheads						
12	North of 34° 27' N. lat.		CLOSED ^{3/}				
13	South of 34° 27' N. lat. z/		50 lb/ day, no more than 2,000 lb/ 2 months				
14	Dover sole						
15	Arrowtooth flounder						
16	Petrale sole		3,000 lb/month, no more than 300 lb of which may be species other than Pacific sanddabs, North of 40°10' x/; South of 40°10' z/				
17	Rex sole						
18	All other flatfish ^{2/}						
19	Whiting		300 lb/ month, North of 40°10' x/; South of 40°10' z/				
20	Shelf rockfish, including minor shelf rockfish, chilipepper, widow and yellowtail rockfish ^{5/}						
21	North x/		200 lb/ month				
22	South						
23	40°10' - 34°27' N. lat. z/		4:1 ratio with nearshore poundage, when nearshore open				
24	South of 34°27' N. lat. z/		4:1 ratio with nearshore poundage, when nearshore open				
25	Canary rockfish		CLOSED ^{3/}				
26	Yelloweye rockfish		CLOSED ^{3/}				
27	Cowcod		CLOSED ^{3/}				
28	Bocaccio - South ^{4/}						
29	40°10' - 34°27' N. lat.		CLOSED ^{3/}				
30	South of 34°27' N. lat.		CLOSED ^{3/}				
34	Minor nearshore rockfish						
35	North x/		3,000 lb/ 2 months, no more than 900 lb of which may be species other than black or blue rockfish ^{6/}				
36	South						
37	40°10' - 34°27' N. lat. z/		To be specified				
38	South of 34°27' N. lat. z/						
39	Lingcod ^{6/}						
40	North x/		CLOSED ^{3/}		300 lb/ month		CLOSED ^{3/}
41	South z/						
42	40°10' - 34°27' N. lat.		CLOSED ^{4/}		300 lb/ month, when nearshore open		CLOSED ^{4/}
43	South of 34°27' N. lat.		CLOSED ^{4/}		300 lb/ month, when nearshore open		CLOSED ^{4/}

1/ Trip limits apply coastwide unless otherwise specified. "North" means 40°10' N. lat. To the U.S.-Canada border. "South" means 40°10' N. lat. To the U.S.-Mexico border. 40°10' N. lat. is about 20 nm south of Cape Mendocino, CA.

2/ "Other flatfish" means all flatfish at 50 CFR 660.302 except those in this Table 5 with species specific management measures, including trip limits.

3/ Closed means that it is prohibited to take and retain, possess, or land the designated species in the time or area indicated. See IV.A.(7).

4/ Yellowtail rockfish in the south and bocaccio and chilipepper rockfishes in the north are included in the trip limits for minor shelf rockfish in the appropriate area. Pop in the south and splitnose rockfish in the north are included in the trip limits for minor slope rockfish in the appropriate area.

5/ For black rockfish north of Cape Alava (48°09'30" N.lat.), and between Destruction Island (47°40'00" N.lat.) and Leadbetter Point (46°38'10" N.lat.), there is an additional limit of 100 lbs or 30 percent by weight of all fish on board, whichever is greater, per vessel, per fishing trip.

6/ The size limit for lingcod is 24 inches (61 cm) total length.

7/ The minimum size requirement for sablefish is 22 inches (56 cm) total length between 40°10' N. lat. and 36° N. lat.

To convert pounds to kilograms, divide by 2.20462, the number of pounds in one kilogram.

x/ restricted to outside of 100 ftn, or inside 27 ftn south of 46°16'

z/ restricted to outside of 150 ftn or inside 20 ftn

